

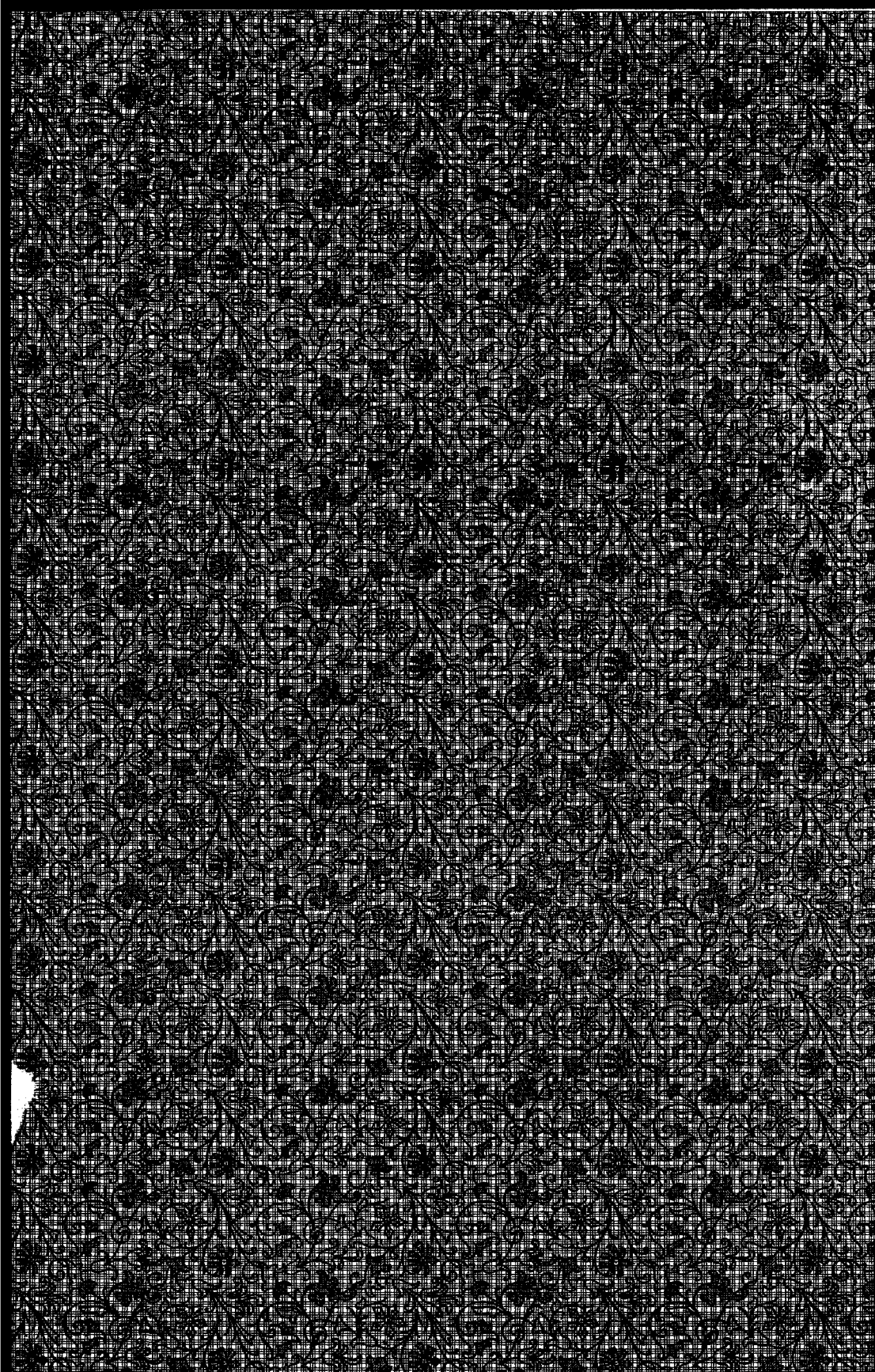
DEPARTMENT OF PARKS

CITY OF NEW YORK.

ANNUAL REPORT

FOR

Year Ending December 31, 1899.



Gattinger,

DEPARTMENT OF PARKS,

CITY OF NEW YORK.

ANNUAL REPORT

FOR THE

YEAR ENDING DECEMBER 31, 1899.

COMMISSIONERS:

GEORGE C. CLAUSEN (President),
Boroughs of Manhattan and Richmond.

AUGUST MOEBUS,
Borough of The Bronx.

GEORGE V. BROWER,
Boroughs of Brooklyn and Queens.

Landscape Architect,
JOHN DEWOLF.

Secretary,
WILLIS HOLLY.

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1900.

DEPARTMENT OF PARKS.

REPORT FOR THE YEAR ENDING DECEMBER 31, 1899.

DEPARTMENT OF PARKS—CITY OF NEW YORK, }
THE ARSENAL, CENTRAL PARK, }
January 2, 1900.

Hon. ROBERT A. VAN WYCK, Mayor:

SIR—I have the honor to send herewith the annual reports of the Commissioners of Parks, of the operations of the Department in the borough divisions over which they have administrative jurisdiction, for the year 1899.

Very respectfully yours,

WILLIS HOLLY, Secretary, Park Board.

SCHEDULE.

- | | |
|----------------------------|-------------------------|
| 1. Manhattan and Richmond. | 3. Brooklyn and Queens. |
| 2. The Bronx. | 4. Addenda. |

DEPARTMENT OF PARKS—CITY OF NEW YORK, }
THE ARSENAL, CENTRAL PARK, }
January 2, 1900.

Hon. ROBERT A. VAN WYCK, Mayor:

SIR—I have the honor to transmit herewith my report of the operations of the Department of Parks, Boroughs of Manhattan and Richmond, for the year 1899.

A notable administration feature of the year's work of the Department in these boroughs was the reception tendered by the citizens of New York to Admiral Dewey on his return from the Philippines. In this great popular demonstration the Department was vitally concerned, as the site of the memorial arch, erected in honor of the naval heroes, was within the jurisdiction of the Department and most of the stand provision, at the reviewing point and other places along the line of march, had to be made on ground belonging to the park system. It was feared that permanent injury was likely to result from the immense amount of work to be done and by the vast crowds attracted upon this occasion. But it was considered that the enthusiasm of the public generally and the possibilities of benefit in the direction of awakening it along lines of patriotic and artistic interest justified the risk.

The Citizens' Committee of Management and the committee representing the artists who, with so much devotion and self-sacrifice, gave themselves to the work, made many demands upon the Department. Everything was granted to them that did not seem calculated to do permanent damage to the parks and it must be said that scarcely anything was asked that could not be granted. The Department and the City are to be congratulated that the apprehensions in the matter proved unfounded and in a few weeks time all traces of the structures erected for the demonstration were removed, except in the case of the memorial arch, whose designers had calculated upon its enduring for a year.

An important feature of permanent improvement in Central Park was the completion of the range of green-houses, erected at a cost of about \$56,000. These were thrown open to the public on November 2, the opening display being of *chrysanthemums*. The popularity of the Conservatory was immediately demonstrated and visitors to it often number more than 12,000 a day. The collection of flowers and plants was rapidly added to during the remainder of the year by propagation, purchase and by generous contributions of cuttings of choice plants from various gardens, without cost to the Department.

In addition, work of the Landscape Gardener's force may be instanced, as follows :

Pruning.

This work was carried to completion throughout the Central and city parks early in the year. It was greatly delayed by the heavy snow storms in February and March, as all hands had to be put to work removing the snow. The snow also caused some direct damage to trees and evergreens. It was, however, shaken off in time to prevent any considerable breakage. The pruning was completed later than usual, owing to the delay mentioned.

Propagation.

The propagation of plants for summer display and for the new conservatories was carried on as extensively as the means would permit. Outside propagation of roses and vines, as well as herbaceous plants was also attended to, and a large quantity of these plants will be available in season.

Spring Bedding.

Pansies, daisies, forget-me-nots and other spring flowers were planted out on an unusually large scale, both in the Central and city parks. New beds were made, and the floral display was increased about one-third.

Bulbs and Herbaceous Plants.

The bulbs and herbaceous plants, planted in borders and lawns on a considerable scale during the previous season, developed satisfactorily and seemed highly appreciated by the visitors to the parks. The borders were in flower continuously from early spring until late in the fall. As the introduction of herbaceous plants became very popular with all classes of visitors, measures were taken to increase the beauty and variety of the display during the spring and summer of 1900.

Summer Bedding.

The summer bedding was also attended to and increased correspondingly although the facilities for floral display of the highest character were still lacking. More flowering plants were used and less foliage.

Lawns.

About one-third of the lawn area was enriched by means of various fertilizers distributed early in the season. All defective borders and lawns were put in good condition by means of seeding and sodding.

Grading.

Grading and seeding of many lawns and embankments and the restoration of lawns destroyed by excessive shade were also attended to.

Planting.

Planting was carried on extensively in Central and the city parks, especially in East river, Riverside and the smaller new parks.

Cultivation and Watering.

Cultivation and watering of newly planted trees and shrubs was done extensively during the summer months, and there was consequently very little loss in the new plantations, excepting such destruction by unruly boys as could not be prevented by the park employees.

Trenching.

The weeds infesting lawns and embankments in Central Park were removed and destroyed on a large scale, especially in the Ramble.

Rustic Features.

Many of the rustic shelters, bridges and fences were repaired and rebuilt. The repairs of all such structures in the Ramble were completed.

Contracts.

The various contracts for work in connection with planting, sodding and similar work were completed in a satisfactory manner.

Designing.

The work in the Office of Design was carried on satisfactorily, a large number of plans of new work being completed and submitted during the year.

Under the supervision of the Chief Engineer and the Engineering Corps, construction and other work was as follows :

Improvement of Riverside Park and Drive.

At the time the Riverside Drive was constructed it was found necessary, on account of the general slope of the ground to the west, to deposit heavy stone and other filling in place. Upon this filling the drainage system of the drive was built. Owing to the many washouts in the roadway or drive and the park an examination of this drainage system was ordered.

It revealed the fact that most of the westerly side of the drainage system had settled bodily that the drain-pipes were choked up with silt, that the brickwork of the basins was badly broken and cracked and in many cases the basins were without proper bottoms. The surface water, not having proper outlets, passed through the stone filling and dry rubble stone retaining wall continually, causing the washouts in the park and drive. In order to remedy this very serious defect I directed that the work of establishing an additional drainage system and repairing the defects in the existing system be done under contract. This work was completed in December. Walks were also laid out, crossing the lawns from the property road to the walk west of the drive, under the same contract. A detailed report of the amount of work performed is as follows :

- 500. cubic yards of earth excavation.
- 34.80 cubic yards of rock excavation.
- 19. cubic yards of rubble masonry laid.
- 184.52 cubic yards of mould furnished and laid.
- 17,451.16 square feet of sod furnished in place.
- 224.40 square feet of bluestone flagging furnished and laid.
- 492. square feet of bluestone flagging, old, relaid.
- 7,104.80 square feet of rock asphalt walk pavement laid.
- 507.04 square yards of gravel roadway constructed.
- 413.40 linear feet new bluestone curb furnished and set.
- 50.85 linear feet old bluestone curb reset.
- 160. linear feet bluestone steps furnished and set.
- 60.40 linear feet bluestone cheeks furnished and set.
- 349.50 linear feet 15-inch drain-pipe laid.
- 404.40 linear feet 12-inch drain-pipe laid.
- 296.50 linear feet 10-inch drain-pipe laid.
- 1,162.48 linear feet 8-inch drain-pipe laid.
- 415.45 linear feet 6-inch drain-pipe laid.
- 12. linear feet 12-inch drain-pipe laid at One Hundred and Fourteenth street.
- 53 road-basins built complete.
- 9 receiving-basins built complete.
- 1 city receiving-basin built.

Riverside Park and Drive, Planting and Developing.

Contracts for planting trees, shrubs, vines, etc., and shaping and sodding different sections of Riverside Park were executed and the work prosecuted to completion. The sections thus improved are :

- Seventy-second street to Seventy-sixth street.
- Seventy-ninth street to Eighty-sixth street.
- Eighty-sixth street to Ninety-sixth street.

This practically completes the Riverside Park from Seventy-second street to Ninety-sixth street.

Central Park.

The walk bordering on the east side of the North Meadow, from Ninety-second street to One Hundred and Second street, one of the main paths in the upper end of the park, was improved, and also the system of walks north of Conservatory Lake, and a new walk was constructed south of the Casino. These walks were formerly of gravel and clay superstructure and unfit for use in wet weather. They were regraded, rubbled and asphalted on a concrete base and drains were laid and basins built where necessary. The construction was more than a passing public benefit and amounted to 2,135 running feet of walk. The work done was as follows :

- 24,988.49 square feet of rock asphalt walk pavement laid.
- 11,924.29 square feet of sod furnished in place.
- 70.19 cubic yards of mould in place.
- 429. linear feet of 6-inch vitrified drain pipe furnished and laid.
- 6 walk basins built.

The walks around the menagerie buildings in Central Park were repaired. New edging was set, the walks were widened, basins were built to remedy defective drainage and rock asphalt walks were resurfaced, as follows :

- 463 linear feet of 3½-inch edging set.
- 5,800 square feet of asphalt walks laid.
- 2 basins built.

At the Plaza, One Hundred and Tenth street and Fifth avenue, 295 square yards of asphalt strips were laid. This improvement was of great benefit to the many bicyclists who use this thoroughfare.

Sewer from Swedish School-house in Central Park to Manhattan Square.

The Swedish School-house in the Central Park, near Seventy-ninth street, which for many years has been used as a storehouse or tool-house, is to be improved and repaired for public use. In order to properly drain the structure it was found necessary to lay a drain-pipe sewer from it to the main sewer in Manhattan square, over 1,450 feet. The work is being prosecuted under contract at this time, and its early completion is expected. The portion of the work already done is as follows :

- 375 linear feet of 10-inch drain-pipe sewer laid.
- 2 manholes built.
- 50 cubic feet of concrete in place.

East River Park and Extension.

To further improve this park a contract has been executed to reshape the lawns adjacent to the East End avenue sidewalk, as well as the Eighty-sixth street frontage. The old flagging has been taken up and a new walk pavement of asphalt laid in its place. The curb was reset to proper grade and line, the side slopes were sodded and the park inclosed with a pipe fence. The details of this work are :

- 201 cubic yards of earth excavation.
- 337 cubic yards of mould furnished in place.

14,791 square feet of walk pavement of rock asphalt laid.

733 linear feet of new bluestone curb furnished and set.

8,193 square feet of sod furnished and laid.

334 linear feet of pipe fence furnished and erected.

420 linear feet of old curbstone taken up and reset.

All of old fence taken down and reset to proper line and grade.

In addition 1,741 linear feet of new pipe fence was erected at East River Park.

Hamilton Fish Park.

The contract for the improvement of this park was executed in the latter part of 1897, but work was not begun until April, 1899. The work is now well advanced and should be completed at an early date, including the erection of a gymnasium building. The following has already been completed :

4,300 square feet of face masonry built.

6,000 cubic yards of filling furnished in place.

5,000 cubic yards of excavation.

2,575 linear feet of 6-inch curb furnished and set.

3,000 linear feet of 3-inch edging furnished and set.

1,000 linear feet of bluestone coping furnished and set.

26,000 square feet of asphalt pavement laid.

120 cubic feet of granite coping furnished and set.

180 cubic feet of granite steps furnished and set.

116 linear feet of balustrade built.

22 street washers furnished and set.

2 exedras built.

2 drinking-fountains built.

4 electric-light towers erected.

60,000 square feet of playground surfaced and graded.

8,000 cubic yards of mould furnished in place.

4,000 square feet of sod furnished and laid.

$\frac{3}{4}$ acre of lawn seeded.

1,500 linear feet of hedge furnished and set.

174 trees furnished and planted.

2,000 vitrified drain-pipe laid.

60 linear feet of 6-inch iron pipe laid.

40 linear feet of 4-inch iron pipe drainage.

920 linear feet of electric piping furnished and laid.

1,960 linear feet of galvanized water-pipe furnished and laid.

1,000 cubic yards of found masonry in walls and foundations for steps.

The work of erecting gymnasium is about three-quarters completed

Highbridge Park.

In order to widen the roadways leading to One Hundred and Seventy-eighth street, from the Harlem River Driveway about 1,500 cubic yards of earth excavation was placed as filling in the embankment.

Hancock Park.

Work upon this small park was begun in 1898 and completed in 1899. The statue of General Hancock is a feature of this park. The work consisted of the laying of cement walks, inclosing edging, new lawns and plantations. The detail work may be cited as follows:

- 106.67 cubic yards of excavation of all kinds.
- 106.67 cubic yards of mould furnished in place.
- 240.40 linear feet of bluestone edging set.
- 4,165.63 square feet of cement walk pavement laid.
- 6.00 cubic yards of fine gravel in place.
- 71.10 linear feet of five-inch bluestone curb set.
- 2,827.00 square feet of sod furnished and laid.

Park at One Hundred and Fourteenth Street, Morningside Avenue, East, and Manhattan Avenue.

This triangle was selected as a suitable location for the Washington-Lafayette statue, presented to the City by Mr. Charles Broadway Rouss. Plans for this triangle were prepared differing from those usually adopted for such triangular areas, the sidewalks being laid out on serpentine lines instead of the usual straight lines, thereby treating the space more as a park than is usually done in such cases. The work involved:

- 270.86 cubic yards of excavation, all kinds.
- 106.98 cubic yards of mould furnished in place.
- 331.15 linear feet of 5-inch bluestone curb furnished and set.
- 395.60 linear feet of 2½-inch bluestone edging furnished and set.
- 93.73 cubic yards of masonry laid in foundation.
- 2,699.04 square feet of rock asphalt walk pavement laid.
- 2,221.80 square feet of sod furnished and laid.

Public Library, Bryant Park.

A contract, in connection with the new public library building, was executed to take down and remove the reservoir at Forty-second street and Fifth avenue, and to excavate for the cellars of the building and the trenches for the foundations and to build the foundations of the building proper. This work is of such a character that progress is necessarily slow. It may, however, be of interest to note the work done to date, which is as follows:

- 64,000 cubic yards of excavation, of all kinds, removed.
- 1,078 linear feet of test borings made.

The following is a brief report of the work done by the laboring and mechanical forces under the supervision of the general foreman:

The ordinary routine work incident to the different seasons was performed. The skate ponds were opened for skating on January 12th, and skating continued, when the ice was in condition, until February 11th, the skating being enjoyed evenings until ten o'clock. Calcium lights were procured for this purpose, and the work necessary to keep the ice in the best possible condition performed.

During the winter, while the water was low, the shores and coves along the Lake were cleaned. Over five hundred loads of mud and refuse were removed to the dumps.

The frequent heavy snow storms in the early part of 1899 greatly increased the work, every effort being made to keep the paths and sidewalks adjacent to the parks in proper condition for public use. It was also found necessary to keep the walks sanded.

During the spring and summer the lawns were opened for picnics and games. Picnics, with attendance approximately as stated below, were held, viz. :

Ball ground, Central Park.....	25,000	Attendance
East Green, Central Park.	8,000	"
Ramble Lawn, Central Park.....	1,500	"
Peacock Lawn, Central Park.....	5,000	"
Cedar Hill, Central Park.....	15,000	"
Cherry Hill, Central Park.....	7,500	"
North Meadow, Central Park.....	35,000	"
	<hr/>	
	97,000	Attendance
Mount Morris Park.....	12,000	"
	<hr/>	
	109,000	Attendance
	<hr/>	

These picnics were held on Saturdays during May and June and on Decoration Day. The presence of such a large number of children in the parks greatly increased such work as the cleaning of lawns, etc.

Permits for games were issued as follows :

Lawn tennis.....	672
Croquet	294
Cricket.....	5
Football.....	312

The Department maintained one hundred and ninety-six tennis courts in the Central Park, situated on the north and south meadows. It was necessary to mark these courts anew several times during the season.

During the second quarter the park concerts began and were given during the summer as follows:

Monday evenings, Washington Square Park.....	13	Concerts.
Monday evenings, Corlears Hook Park.....	12	"
Tuesday evenings, Mount Morris Park.....	14	"

Tuesday evenings, Tompkins Square Park.....	14	Concerts.
Wednesday evenings, Abingdon Square Park.....	15	"
Wednesday evenings, Mulberry Bend Park.....	12	"
Thursday evenings, Madison Square Park.....	12	"
Thursday evenings, East River Park.....	13	"
Friday evenings, Battery Park.....	13	"
Friday evenings, Seward Park.....	11	"
Saturday afternoons, Central Park.....	15	"
Sunday afternoons, Central Park.....	15	"

In addition to the above, through private enterprise, concerts were rendered on seven Thursday evenings at Hudson Park.

The large attendance at these concerts increased the work of cleaning the parks to a considerable extent, and involved much labor in the preparation for the concerts. The guarding and storing of department property required especial watchfulness to prevent the destruction of shrubbery, etc., while the concerts were being rendered.

The park drives and bridle roads were kept in good condition ; about 2,800 cubic yards of shale being used on the drives. About 600 cubic yards of shale were stored for repairs. The bridle roads of Central Park were ploughed and the surface regraded. Clean sharp sand was used as an experiment in the resurfacing of these roads, and as the sand did not bond the experiment proved a success and the roads remained in good condition.

In the Borough of Richmond the small parks were cared for.

The mechanical force was engaged as follows :

Carpenters.

The carpenters were employed in necessary repairs to the various buildings connected with the Menagerie, the cottages, rolling stock, signs, settees, erection and removal of skate buildings and platforms, repairs of bridges, repairs and alterations of department stables, etc. In addition to the regular routine work of the carpenters, the repairing of the rustic structures in the Central Park was undertaken. The greater portion of such work was performed in the Ramble, but in addition to this, nearly ten thousand feet of rustic fences were erected in the Central Park.

Painters.

The painters were employed in painting, etc., repairs to cottages, buildings, rolling stock, signs, settees, etc., and in painting repairs made at the Menagerie and Aquarium buildings.

Masons.

In repairing and rebuilding basins and drainage, repairing and relaying flagging, repairing and resetting curbing, repairing cement walks, fountain basins, etc.

Other Mechanics.

In repairs of plumbing work, iron railings, attending steam-heating plant at the Arsenal building, repairing ironwork of rolling stock, settees, etc.

MENAGERIE.

The Menagerie in the Central Park retains its great popularity despite the installation of the New York Zoological Garden in Bronx Park. This is because the public realizes and appreciates the difference between the institutions, as well as the greater accessibility of the Central Park display. The difference referred to is that between a menagerie and a zoological garden. In a menagerie the sole purpose is display for a stated period of the day, arranged so as to give the animals opportunities for rest when the public is not admitted. Every movement of the animals is visible from the standpoint of the smallest child among the visitors. In a zoological garden, however, it is sought to approximate natural conditions, and dens and shelters have to be provided, so that a portion of the time the animals are not in sight.

The Central Park collection is as follows :

Opossum, two specimens.	<i>Marsupials.</i>
	<i>Ungulates.</i>
Hippopotamus, two specimens.	Mouflon, two specimens.
Peccary, two specimens.	Barbary wild sheep (Aoudad), five specimens.
Camel, two specimens.	Fat-tailed sheep, one specimen.
Llama, two specimens.	Brazilian sheep, eight specimens.
American elk, ten specimens.	Domestic sheep (Dorset breed), forty specimens.
Red deer, twenty-two specimens.	Indian water buffalo, eight specimens.
Fallow deer, eight specimens.	American bison, four specimens.
Axis deer, six specimens.	Hybrid bison, one specimen.
Hartebeest, one specimen.	Yak, one specimen.
Indian antelope, two specimens.	Zebu, eleven specimens.
Beisa antelope (Oryx), one specimen.	Ass, one specimen.
Nylghau, twelve specimens.	Rhinoceros, one specimen.
Angora goat, six specimens.	Elephant, two specimens.
	<i>Rodentia.</i>
Prairie dog, seventeen specimens.	Agouti, three specimens.
Coypu, two specimens.	Paca, one specimen.
Guinea pig, fifty-five specimens.	Rabbits, eighteen specimens.
	<i>Carnivora.</i>
Lion, nine specimens—two males, four females and three cubs.	Red fox, eight specimens.
Tiger, two specimens.	Gray fox, two specimens.
Leopard, two specimens.	Grizzly bear, two specimens.
Black leopard, two specimens.	Black bear, one specimen.
Puma, two specimens.	Cinnamon bear, one specimen.
Spotted hyena, four specimens.	Polar bear, two specimens.
Gray wolf, six specimens.	Raccoon, four specimens.
Alaska dog, two specimens.	Coati, four specimens.

Primates.

Pinche monkey, one specimen.
 Spider monkey, five specimens.
 Rhesus monkey, one specimen.

Pig-tailed monkey, two specimens.
 Green monkeys, sixteen specimens.

Birds.

2 ostriches.
 2 cassowaries.
 4 eagles.
 1 curassow.
 1 bearded vulture.
 2 condors.
 2 turkey buzzards.
 5 red-tail hawks.
 5 horned owls.
 1 barn owl.
 4 white pelicans.
 1 gray pelican.
 2 sandhill cranes.
 20 white swans.
 3 black swans.
 1 black-neck swan.
 4 wild geese.
 3 Chinese geese.
 3 snow geese.
 125 assorted ducks.
 5 sea gulls.
 4 silver pheasants.
 4 golden pheasants.
 7 ring-neck pheasants.
 8 Lady Amherst pheasants.
 4 Reeves pheasants.
 2 Japanese pheasants.
 2 quail.

4 pea-fowl.
 3 Guinea fowl.
 35 ring doves.
 125 pigeons.
 3 crows.
 1 jackdaw.
 3 magpies.
 11 macaws.
 6 cockatoos.
 16 parrots.
 1 grass parakeet.
 3 green parakeets.
 1 blue jay.
 1 blue robin.
 1 bobolink.
 30 canaries.
 4 Java sparrows.
 1 rose-breasted grosbeak.
 1 weaver-bird.
 1 goldfinch.
 2 cardinals.
 1 king-bird.
 2 rail-birds.
 8 robins.
 2 mocking-birds.
 2 starlings.
 3 brown thrushes.
 23 African finches.

Births in the Central Park Menagerie, 1899.

February—

1 water buffalo.
 8 nylghaus.
 1 zebu.

March—

2 Brazilian lambs.
 18 Dorset lambs.
 1 zebu.

May—

1 hippopotamus.
 1 American bison.

June—

1 fallow deer.
 6 red deer.

July—

1 water buffalo.

August—

- 1 water buffalo.

September—

- 1 American elk.
- 3 lion cubs.

October—

- 1 American elk.

November—

- 1 zebu.

December—

- 1 aoudad.

Donations, Central Park Menagerie, 1899.

January—

- 1 pigeon, donated by Dr. A. Wright.
- 1 owl, donated by C. J. Richards.
- 1 quail, donated by Mrs. H. B. Harding.
- 1 golden eagle, donated by James R. Dunbar.
- 1 magpie, donated by George Baker.
- 1 opossum, donor unknown.
- 2 opossums, donated by Edward Bell.
- 5 ring doves, donated by C. Mumford.

February—

- 1 alligator, donated by Irving J. Davis.
- 1 rabbit, donated by Hilda Holmes.
- 1 crow, donor unknown.
- 1 sea gull, donated by I. Fleckenstine.

March—

- 1 alligator, donated by A. R. Proctor.
- 3 finches, donated by Simon Ulman.
- 2 owls, donated by J. G. Stonesifer.
- 2 pigeons, donated by Miss Hulsey.
- 1 guinea pig, donor unknown.

April—

- 2 rabbits, donor unknown.
- 1 macaw, donated by E. Ahiejer.
- 1 rabbit, donor unknown.
- 1 shelldrake, donated by E. D. Lentilhon.
- 1 owl, donated by Miss M. Gerdts.
- 1 mocking bird, donated by H. W. Ford.
- 1 opossum, donated by G. Gelb.
- 1 parakeet, donated by Mrs. Bruehns.
- 1 hawk, donated by S. A. Sands.
- 1 parrot, donated by Alice Nicholas.
- 1 raccoon, donated by Mr. Markey.
- 2 mocking birds, donated by S. Alman.

May—

- 1 green monkey, donated by C. B. Weeks.
- 37 small birds, donated by Miss H. G. Ferguson.
- 1 cockatoo, donated by Dr. Van Vredenburg.
- 4 rabbits, donated by F. Regua.
- 2 guinea pigs, donated by F. Regua.
- 2 coypus, donated by W. S. Meagher.
- 1 parrot, donated by T. W. Spurgeon.
- 1 hawk, donor unknown.
- 37 fantail pigeons, donated by T. A. Have-meyer.
- 1 monkey, donated by C. B. Meeks.
- 2 rabbits, donated by J. M. Stewart.
- 1 robin, donor unknown.
- 2 rabbits, donated by C. E. Kenny.

June—

- 1 rail, donated by Adolph Roumer.
- 1 sea gull, donated by Alfred Pells.
- 1 guinea pig, donor unknown.
- 2 pigeons, donated by R. Ely.
- 1 golden eagle, donated by John Smith.
- 1 rabbit, donated by Amy Ashmead.
- 1 owl, donated by Mr. Numburg.
- 42 fan-tail pigeons, donated by T. A. Have-meyer.
- 2 pheasants, donated by H. M. Gartner.
- 1 civet cat, donated by Twenty-fifth Police Precinct.
- 1 bullfinch, donated by N. R. Harned.
- 1 owl, donor unknown.

July—

- 1 lemur, donated by B. F. Burdick.
- 1 mocking bird, donor unknown.

July—

- 2 rabbits, donated by F. M. Johnson.
- 3 muscovy ducks, donated by C. M. Smith.
- 1 canary bird, donated by Clara Ristoff.
- 3 bitterns, donated by Mrs. Downey.
- 1 cockatoo, donated by Mrs. Herbison.
- 1 raccoon, donated by Mr. Benedict.
- 1 mocking bird, donated by F. W. Brede.
- 2 guinea pigs, donor unknown.
- 1 owl, donated by Mr. Johnson.
- 1 nonpareil, donated by J. G. Jaffray.
- 1 crow, donated by Mrs. Williams.
- 2 alligators, donated by David Bell.

August—

- 4 red foxes, donated by John B. Simpson.
- 2 goats, donated by William R. Grace.
- 1 parrot, donated by Thomas L. Sturgis.
- 1 hawk, donated by Thomas Donohue.
- 1 rabbit, donor unknown.
- 1 raccoon, donated by Joseph T. Staff.
- 1 red fox, donated by H. Strauss.

September—

- 1 canary bird, donated by E. J. Gray.
- 1 macaw, donated by Mrs. J. Bunzel.
- 1 badger, donated by R. W. Stewart.
- 1 red fox, donated by A. Altman.
- 1 cardinal, donated by Miss L. C. Petten-gell.
- 1 rabbit, donated by Mrs. Ruckes.
- 1 rabbit, donated by Mrs. Dunn.

September—

- 11 alligators, donated by John B. Simpson.
- 1 monkey, donated by L. A. Clement.

October—

- 2 alligators, donor unknown.
- 1 hawk, donated by R. C. Koch.
- 1 rail, donated by George E. Jauzer.
- 2 rabbits, donated by C. J. Freedman.
- 2 red foxes, donated by C. H. Fisher.
- 1 rail, donated by Emma Baiel.
- 1 rabbit, donated by R. Demurias.
- 2 canaries, donated by Mrs. McNaughton.
- 1 marmoset, donated by W. H. Karrick.
- 2 gray foxes, donated by Joseph J. Kittle.
- 2 wild turkeys, donated by Joseph J. Kittle.
- 1 monkey, donated by J. C. Walker.

November—

- 1 hawk, donated by H. A. Walker.
- 1 alligator, donated by W. Shafer.
- 1 marmoset, donated by Mrs. Goin.
- 2 robins, donated by Mrs. Pinckney.
- 1 hawk, donated by Hoffman Nickerson.
- 1 owl, donated by Thomas H. Quinn.
- 2 rabbits, donated by J. C. Stone.
- 1 opossum, donor unknown.

December—

- 1 monkey, donated by J. J. Plumb.
- 1 owl, donated by T. H. Thomas.
- 1 monkey, donated by C. Smith.
- 1 ocelot, donated by Thomas H. Thomas.
- 1 monkey, donated by Gilbert Johnson.

THE AQUARIUM.

The Battery Park Aquarium was opened to the public in December, 1896.

Attendance.

1897.....	1,635,252
1898.....	1,670,085
1899.....	<u>1,841,330</u>

The large increase in attendance in the past year resulted from the improved condition of all the details of the establishment and the largely increased exhibition of the most interesting speci-

mens procurable without exceeding the appropriation. The daily attendance in 1899 was over five thousand (5,045).

During the past year five new and improved tanks were built at an expense of about \$800, replacing others that had become useless through faulty construction or wear. Quite extensive repairs in the way of tinning and painting were made to the roof and many of the outside windows have been provided with double sash and glass. The Fish Commissioners of New York State and of Maine, Vermont, Massachusetts and New Jersey have been generous in furnishing specimens of cold water fish.

Specimens.

40 salmon, three species.	1 drum.
153 trout, seven species.	5 sailor's choice.
25 carp, three species.	5 surgeon-fish.
35 catfish, four species.	7 file-fish.
68 goldfish.	7 trigger-fish.
20 suckers, two species.	3 cowfish.
11 pike perch, two species.	2 trunkfish.
59 black bass, two species.	3 four-eyed.
5 rock bass.	1 yellow grunt.
4 golden ide.	2 spiny box-fish.
7 tench.	9 crevalle.
34 roach, two species.	2 yellow mackerel.
10 calico bass.	1 pilot-fish.
1 pike.	23 bream.
18 pickeral, two species.	21 squirrel-fish.
2 white bass.	2 salmon rockfish.
15 white perch.	1 tiger rockfish.
23 yellow perch.	5 princess rockfish.
5 whitefish.	8 common rockfish.
5 muscalonge.	2 blue parrot-fish.
8 mudfish.	2 green parrot-fish.
40 sunfish, two species.	1 red parrot-fish.
9 paradise fish	2 amber-fish.
2 climbing perch.	27 hinds.
1 alligator gar.	2 coney.
5 bony gar.	6 moray (1 green, 5 spotted).
5 eels.	2 moonfish.
7 hellbenders.	27 striped grunts.
9 mud-puppies.	14 sergeant majors.
40 crayfish.	13 angel-fish.
200 anemones, four species.	12 spots.
8 turtles, fifteen species.	1 pompano.
2 silverside.	1 spotted bass.

47 newts, two species.	15 blackfish.
1 clarias magur.	4 muttonfish.
4 amphuma.	3 skates.
20 Bermuda hermit crabs.	11 bergall.
5 bull frogs.	4 menhaden.
Living coral, salt water.	3 sea raven.
1 seahorse, salt water.	1 sea robin.
Bermuda mussels, salt water.	7 sculpins.
6 zoanthus, salt water.	3 porgies.
1 alligator (small).	28 groupers.
2 serpula.	6 slimy toadfish.
36 striped bass.	2 soles.
2 sea bass.	3 barracuda.
8 weakfish.	25 stickleback, 3 species.
7 conger eels.	1 mantis shrimp, large.
7 sturgeon.	32 crabs, 3 species.
1 German loach.	5 lobsters, large.
2 sharks.	1 starfish.
12 dogfish.	3 harbor seals.
136 gray snappers.	1 West Indian seal.
29 spot snappers.	400 lebias.
5 red snappers.	Shrimps.
7 yellow-tail.	Killies.
2 spade-fish.	Soft-shell clams.

Summary of Exhibits.

Fish, 158 species.	2,024
Mammals.	4
Crustaceans.	37
Reptiles.	39

Statement, Balances of Appropriations, December 31, 1899.

TITLES OF APPROPRIATIONS.	AMOUNT OF AP- PROPRIATIONS.	PAYMENTS.	AMOUNT OF UNEX- PENDED BALANCES.
Salaries of Commissioners, Secretary and Employees of Board of Parks.	\$29,800 00	\$29,799 98	\$0 02

BOROUGH OF MANHATTAN AND RICHMOND.

TITLES OF APPROPRIATIONS.	AMOUNT OF AP- PROPRIATIONS.	PAYMENTS.	AMOUNT OF UNEX- PENDED BALANCES.
Administration	\$25,580 00	\$25,129 97	\$450 03
Labor, Maintenance and Supplies	483,000 00	.....	.....
Supplies.....	.....	92,345 80	.....
Pay-rolls.....	.....	390,043 97	610 23
Maintenance of Museums—			
American Museum of Natural History	95,000 00	95,000 00	.....
Metropolitan Museum of Art.....	95,000 00	95,000 00	.....
Zoological Department	32,500 00	.....	.....
Supplies .....	.....	16,571 84	.....
Pay-rolls.....	.....	15,926 c8	2 c8
Music	24,500 00	24,374 00	126 00
Surveys, Maps and Plans.....	2,000 00	1,998 59	1 41
Contingencies.....	3,000 00	2,308 00	692 00
Aquarium.....	37,000 00	.....	.....
Supplies.....	.....	11,656 04	.....
Pay-rolls.....	.....	25,250 26	93 70
Care Grant's Tomb.....	5,000 00	.....	5,000 00
Harlem River Driveway.....	20,000 00	19,776 87	223 13
Ambulance Service, Central Park	1,200 00	1,199 93	c7
Irrigation of Central Park.....	25,000 00	22,862 22	2,137 78

Receipts.

Rents, privileges, etc. \$80,278 04

EXPENDITURES, *Including Engineering, etc.*, 1899.

Riverside Park and Drive—Completion of construction, grading and construction of drainage and walks. \$13,083 41

Riverside Park and Drive— Completion of construction, planting and developing, from Seventy-ninth to Eighty-sixth streets..... 18,807 25

Riverside Park and Drive—Completion of construction ; construction of Viaduct over West Ninety-sixth street

Riverside Park and Drive—Completion of construction ; improvement of Riverside Park, between Eighty-sixth and Ninety-sixth streets..... 25,149 78

Riverside Park and Drive—Completion of construction ; planting between Seventy-second and Seventy-sixth streets..... 7,272 26

Riverside Park and Drive—Completion of construction ; constructing walks, etc., east of the westerly wall of drive, between Seventy-ninth and One Hundred and Fourth streets.	\$5,010 59
Riverside Park and Drive—Completion of construction, tree planting, etc., in Riverside Park, west of Riverside drive and north of Ninety-sixth street.	555 57
Riverside Park—Construction of, widening roadway on the easterly side of Riverside drive, between One Hundred and Twenty-ninth street and Claremont place....	1,963 40
Riverside Park—Construction of ; planting trees, shrubs and other work.	18 54
Improvement of Parks, Parkways and Drives.	323 75
Improvement of Parks, Parkways and Drives—Construction and improvement small park north of One Hundred and Fifty-third street, between Seventh avenue and Macomb's Dam road.	704 11
Improvement of Parks, Parkways and Drives—Central Park, improvement of ; paving and repaving with asphalt the walks.	1,690 13
Improvement of Parks, Parkways and Drives—Improvement, etc., Cooper Union Park.	6,305 57
Improvement of Parks, Parkways and Drives—Widening of roadway One Hundred and Fifty-third street, between Seventh avenue and Macomb's Dam road, and improving, etc., sidewalk north of One Hundred and Fifty-third street.	81 90
Improvement of Parks, Parkways and Drives—Central Park, improvement of ; paving the Circle, Fifty-ninth street and Eighth avenue.	890 22
Improvement of Parks, Parkways and Drives—Central Park, improvement of, erecting additional greenhouses, etc.	38,340 86
Improvement of Parks, Parkways and Drives—Paving sidewalk adjoining Central Park, on the west side of Fifth avenue, from Eighty-fifth to One Hundred and Tenth streets.	32 77
Improvement of Parks, Parkways and Drives—Improving principal entrance, Central Park, Fifty-ninth street and Fifth avenue.	344 03
Improvement of Parks, Parkways and Drives—Repaving with asphalt the roadway to Plaza, Fifty-ninth street and Fifth avenue.	10 65
Improvement of Parks, Parkways and Drives—Greenhouses in Central Park.	17,000 00
Improvement of Parks, Parkways and Drives—Paving with asphalt pavement, etc., the sidewalks of transverse roads 1, 2 and 3.	173 88
Improvement of Parks, Parkways and Drives—Paving with asphalt the easterly and westerly sidewalks of Manhattan square.	113 53
Improvement of Parks, Parkways and Drives—Central Park, Improvement of, completing sidewalks on Eighth avenue, from Fifty-ninth to One Hundred and Tenth street.	212 50
Improvement of Parks, Parkways and Drives—Asphalting in other localities in Central Park.	5,944 51
Improvement of Parks, Parkways and Drives—Improving Swedish School-house in Central Park, etc.	381 28

Improvement of Parks, Parkways and Drives—Laying asphalt walks, leveling playgrounds, etc., East River Park	\$57 67
Improvement of Parks, Parkways and Drives—Transverse Road No. 1, Improvement of, etc.....	49 50
Improvement of Parks, Parkways and Drives—Transverse Road No. 2, Improvement of, etc.....	27 76
Improvement of Parks, Parkways and Drives—Transverse Road No. 3, Improvement of, etc.....	10 56
Improvement of Parks, Parkways and Drives—Transverse Road No. 4, Improvement of, etc.....	179 64
Improvement of Parks, Parkways and Drives—Central Park, Improvement of, between Seventh and Eighth avenues, from One Hundred and Fourth to One Hundred and Tenth street.....	50 82
Improvement of Parks, Parkways and Drives—Fifth avenue, Paving with asphalt, from Fifty-ninth to Sixtieth street.....	89 26
Improvement of Parks, Parkways and Drives—Morningside Park, Improvement of north of One Hundred and Twentieth street, and completion of walks south of One Hundred and Twentieth street.....	36 40
Improvement of Parks, Parkways and Drives—Central Park, Improvement of, resurfacing walks with asphalt, from Fifty-ninth street to Transverse Road No. 3.	45 00
Improvement of Parks, Parkways and Drives—Fifth avenue, Repaving of, between Ninetieth and One Hundred and Tenth streets, Plaza, etc.....	1,457 05
Improvement of Parks, Parkways and Drives—Central Park, Improvement of, from Ninety-seventh to One Hundred and Second street, between Fifth avenue and East drive.....	69 01
Improvement of Parks, Parkways and Drives—Hancock Park, Improvement of....	1,361 78
Improvement of Parks, Parkways and Drives—Improvement and Construction of park at Hester, Essex and Canal streets and East Broadway, etc.....	55 24
Central Park, Construction of, laying asphalt walks.....	1,277 62
Eleventh Ward Park Fund, Hamilton Fish Park	113,423 98
Cathedral Parkway, Improvement and Completion of, etc.....	2,360 14
St. John's Park, Construction and Improvement of.....	1,298 45
Mulberry Bend Park, Construction of.....	2,884 10

Respectfully submitted,

GEORGE C. CLAUSEN,

Park Commissioner, Boroughs of Manhattan and Richmond.

BOROUGH OF THE BRONX.

NEW YORK, January 2, 1900.

Hon. ROBERT A. VAN WYCK, Mayor :

SIR—I have the honor to submit herewith my report of the operations of the Department of Parks, Borough of The Bronx, for the year 1899.

1. Financial.
2. Operations.
3. Recommendations.
4. Sub-Reports.

I. FINANCIAL EXPENDITURES.

(a) *Appropriation Accounts.*

TITLE OF APPROPRIATION.	AMOUNT OF APPROPRIATION.	EXPENDITURES.	BALANCES.
Maintenance and Construction	\$230,000 00	\$229,996 97	\$3 03
Administration	14,280 00	12,400 99	1,879 01
Maintenance of Botanical Gardens	30,000 00	29,998 50	1 50
Maintenance of Zoological Gardens	30,000 00	30,000 00	.....
Surveys, Maps and Plans.....	10,000 00	9,999 49	51
Music	9,100 00	9,060 00	40 00
Contingencies.....	1,500 00	1,499 95	05
Totals.....	\$324,880 00	\$322,955 90	\$1,924 10

(b) *Bond Accounts.*

TITLE OF ACCOUNT.	AMOUNT OF APPROPRIATION.	BALANCE ON HAND JANUARY 1, 1899.	EXPENDITURES, 1899.	BALANCES.
Bronx and Pelham Parkway, Construction of Roadway, etc.....	\$100,000 00	\$14,550 69	\$3,643 96	\$6,036 73
Bronx and Pelham Parkway, Extension through Bronx Park.....	44,000 00	19,254 89	14,978 78	4,276 11
St. Mary's Park, Improvement of.....	21,000 00	185 02	35 80	149 22
Improvement of Parks, Parkways and Drives.....	15,000 00	15,000 00	8,210 40	6,789 60
Constructing Driveways and Paths in Botanical Garden, etc.—Improving Bronx and Pelham Parkway, between Easterly line Bronx Park and Bear Swamp Road.....	50,000 00	19,217 72	18,977 24	240 48
Filling in, etc., certain lands, Van Cortlandt Park, for Colonial Garden.....	15,000 00	14 909 65	14,909 45	20
Claremont Park—Improving, etc.....	15,000 00	15,000 00	14,251 86	748 14
Constructing Cycle and Bridle Paths on Bronx and Pelham Parkway.....	75,000 00	56,109 40	45,468 35	10,641 05
Botanical Museum and Herbarium—Construction of...	500,000 00	325,381 57	193,961 95	131,419 62
Fund for Improving that portion of Crotona Park in which is located a Public Building.....	30,000 00	29,580 70	4,853 01	24,729 69

TITLE OF ACCOUNT.	AMOUNT OF APPROPRIATION.	BALANCE ON HAND JANUARY 1, 1899.	EXPENDITURES, 1899.	BALANCES.
Improving the small Park, westerly side of Fulton Avenue, between One Hundred and Sixty-ninth and One Hundred and Seventieth Streets.....	\$4,045 33	\$3,829 53	\$381 07	\$3,448 46
Spuyten Duyvil Parkway—Constructing and Improving of.....	150,000 00	148,833 43	65,946 16	82,887 27
New York Zoological Garden Fund.....	63,000 00	63,000 00	8,165 50	54,834 50
Construction and Maintenance of Public Parkways in Bronx Park—Improving, etc., Old Boston Road..	10,000 00	10,000 00	9,897 79	102 21
Construction and Maintenance of Public Parkways in Van Cortlandt Park—Improving Moshulu Avenue, from Grand to Jerome Avenue.....	6,000 00	6,000 00	2,998 67	3,001 33
Construction and Maintenance of Public Parkways in Van Cortlandt Park—Improving Grand Avenue, from Moshulu Avenue to Jerome Avenue,.....	4,500 00	4,500 00	3,896 24	604 76

RECEIPTS.

(c) For Rents and Privileges, 1899.

January.....	\$1,444 26
February.....	843 57
March.....	956 51
April.....	724 38
May.....	783 26
June.....	609 51
July.....	981 04
August.....	799 00
September.....	581 46
October.....	632 04
November.....	506 16
December.....	1,116 45
Total.....	\$9,978 24

Lists of Buildings in Respective Parks and their Uses.

TITLE.	LOCATION.	USE.
Zbrowski Mansion.....	Claremont Park.....	Offices of Park Department.
Stable.....	Claremont Park.....	Department stables.
Lorillard Mansion.....	Bronx Park.....	Police Department.
Lorillard stable.....	Bronx Park.....	Police stable.
.....	Pelham Bay Park.....	Police Department.
Stable.....	Pelham Bay Park.....	Police stable.
Van Cortlandt Manor house.....	Van Cortlandt Park.....	Society of Colonial Dames.
Hunter Mansion.....	Pelham Bay Park.....	Society of Little Mothers.
Firman Mansion.....	Pelham Bay Park.....	Society of St. Vincent de Paul.
One house.....	St. Mary's Park.....	Foreman and Keeper's house.
One cottage.....	Crotona Park.....	Department of Highways.

Houses Rented.

Pelham Bay Park.....	
Van Cortlandt Park.....	2
Claremont Park.....	1
Macomb's Dam Bridge Park.....	4
Bronx Park.....	12
Poe Park.....	1

Concerts—1899.

LOCATION.	LEADER.	NUMBER OF CONCERTS.	AVERAGE ATTENDANCE.
Saturdays—Van Cortlandt Park.....	Richard E. Sause.....	10	2,500
“ Crotona Park.....	George Friedgen.....	10	2,500
“ Cedar Park.....	Joseph H. Miller.....	10	1,000
Sundays—St Mary's Park.....	Frederick W. Hager.....	10	9,000
“ Claremont Park.....	Richard Helm.....	10	2,500
“ Bronx Park.....	Thomas F. Usher.....	10	8,000
“ Pelham Bay Park.....	August Stoeveer.....	10	2,000

Skating.

January	9, 1899.	Van Cortlandt Park, Attendance.....	2,000
“	10, “	“ “	3,000
“	11, “	“ “	1,500
“	12, “	“ “	2,000
“	13, “	“ “	1,000
“	19, “	“ “	2,000
“	20, “	“ “	3,000
“	21, “	“ “	4,000
“	22, “	“ “	3,000
“	23, “	“ “	1,000
“	26, “	“ “	1,000
“	27, “	“ “	2,000
“	28, “	“ “	4,000
“	29, “	“ “	10,000
“	30, “	“ “	3,000
February	1, “	“ “	1,500
“	2, “	“ “	2,000
“	3, “	“ “	1,000
“	3, “	“ “	1,000

February 6, 1899.	Van Cortlandt Park, Attendance.....	1,000
" 7, "	" " ".....	1,000
" 15, "	" " ".....	1,000
" 16, "	" " ".....	1,000
" 17, "	" " ".....	1,000
January 2, "	Crotona Park, Attendance.....	1,000
" 3, "	" " ".....	1,500
" 9, "	" " ".....	1,500
" 10, "	" " ".....	2,000
" 11, "	" " ".....	1,500
" 12, "	" " ".....	1,500
" 19, "	" " ".....	2,000
" 20, "	" " ".....	2,500
" 21, "	" " ".....	3,500
" 22, "	" " ".....	3,000
" 27, "	" " ".....	1,500
" 28, "	" " ".....	1,500
" 29, "	" " ".....	4,500
" 30, "	" " ".....	3,200
" 31, "	" " ".....	1,500
February 1, "	" " ".....	1,500
" 2, "	" " ".....	2,200
" 6, "	" " ".....	1,500
" 7, "	" " ".....	1,500
" 10, "	" " ".....	1,000
" 11, "	" " ".....	1,500

Permits.

PARK.	GOLF.	LAWN TENNIS.	BASE BALL.	FOOT BALL.
Van Cortlandt Park	1,892	10	7	5
Bronx Park .....	...	6	3	..
Ciaremont Park .....	...	28	10	2
Crotona Park.....	...	12	12	6
St. Mary's Park .....	...	6	1	..
Cedar Park.....	...	8	..	..
Total.....	1,892	60	23	13

For May parties in the several parks.....	820
For school picnics.....	246

For family and social outings.....	284
For miscellaneous purposes.....	222
Total	<u>1,572</u>
Grand total.....	<u>3,568</u>

Monthly Average of Employees.

MONTH.	OFFICE.	ENGINEERS, ETC.	SUPERIN- TENDENT, FOREMEN, ETC.	TEAMS.	MECHANICS.	LABORERS.
January	5	22	28	17	9	131
February	5	22	27	16	10	134
March.....	7	25	35	26	12	202
April.....	8	30	41	39	19	280
May	8	29	40	44	19	278
June.....	8	30	42	57	19	284
July	8	30	33	60	21	292
August	9	31	32	60	21	295
September	8	31	33	61	22	290
October.....	8	31	33	61	23	291
November.....	8	31	33	41	24	276
December.....	8	31	33	41	25	275

Total employees' average, 385.

OPERATIONS IN THE SEVERAL PARKS UNDER THE HEAD OF MAINTENANCE AND CONSTRUCTION.

The ordinary work of maintenance in the parks, including the repairing of all the roads, drives, avenues, parkways and paths, the cleaning of snow in the winter, the thorough cleaning of the same during the balance of the year, the sprinkling of all roads, avenues and drives during eight months of the year, the removal of all dead and dangerous trees, the pruning and care of trees, the cutting and trimming of all lawns, mowing of meadow lands, the painting and repairing of all settees and fixed benches, the painting and repairing of all railings and fences, repairing and painting of buildings, music stands, work boxes, signs, etc., repairing and cleaning of sewers, drains, culverts and basins; in full, all the ordinary work necessary for the care and maintenance of over four thousand acres of park lands.

In addition to the above the following work of incidental construction has been performed in the several parks:

Pelham Bay Park (Area, 1,756 acres).

This park has a water-front of seven miles upon Long Island Sound and Pelham Bay, and from its beautiful surroundings will eventually become a most popular resort.

During the year the following additional work has been performed :

On the road leading from the New Rochelle road opposite Hunter Island, a new piece of macadam road was constructed, 200 feet long and 13 feet wide, both sides of road, 200 feet long and 3 feet wide, graded and sodded.

Two cobble-stone gutters were also constructed, each 200 feet long and 2 feet wide.

One hundred feet cobble gutter on Monroe place.

Constructing a dirt road on Hunter Island, 2,008 feet long and 24 feet wide.

A new tennis court on Twin Island, 92 feet long, 56 feet wide.

A new telford road at Pelham bridge, 184 feet long, 24 feet wide.

A new macadam road, 692 feet long, 24 feet wide.

A new piece on road at Pelham bridge, macadam pavement, 158 feet long, 41 feet wide.

A cobble stone gutter for same 158 feet long, 2 feet wide.

A new piece of telford road at the bend, City Island road, 100 feet long, 20 feet wide.

Building a stone wall at Pelham Bridge, 384 feet long, 4 feet high, 3 feet wide.

Making two wings on New Rochelle road 1,400 feet long, each 11 feet wide.

Replanking and placing floor timbers, also building frames around abutments, also painting Pelham Bridge, building walk from Pelham Bridge 100 feet north.

Three barns torn down and removed.

Van Cortlandt Park (Area, 1,132 acres).

Is situated at the extreme northwest section of the city, and contains a deer range, parade ground, a lake of eleven acres, the golf links, baseball fields, tennis courts, football fields, and affords ample opportunity for all out-door sports.

The following work of additional construction has been performed : Macadam roads resurfaced, in length, 18,210 feet, 17 feet wide. Macadam and dirt paths resurfaced, in length 4,670 feet, 4 feet wide. New sidewalks constructed, in length 1,530 feet, 4 feet wide.

Under a special appropriation made by the Board of Estimate and Apportionment the swamp lands south of the Colonial Mansion were filled in, requiring 17,266 loads of filling.

Water was introduced in the men's toilet on the parade ground.

The old mill south of the lake was partially reconstructed for an engineer's office.

In the early part of the year the skate-house, a large and commodious structure, erected especially for the purpose, was entirely destroyed by fire, involving a loss of \$4,000. An old stable, situated just east of the burned building, was utilized for the purpose of constructing a temporary shelter, and will answer during the remainder of the winter.

It is proposed to construct a suitable and imposing structure early in the coming season.

By far the most important improvement in this park has been the reconstruction of the Golf Links from a course of nine holes to a full course of eighteen holes.

The experiment of laying out a full course of this magnitude, under municipal ownership and control has been a subject of interest throughout the country.

During the past season the course has been inspected by committees from many of the large cities, and in every case has been the subject of commendation and approval. I know of no enterprise of a similar character that has afforded so much recreation and pleasure to so large a number of people.

The full course was opened by a public tournament and competition for valuable trophies presented by James Gordon Bennett, Esq., on the 18th of November last.

I append the report of the expert in charge as follows :

"VAN CORTLANDT PARK, }
January 2, 1900. }

"PETER GECKS, Esq., *Superintendent* :

"Since taking hold here the work done by the men under my charge has been the building of an entirely new golf course of eighteen holes. The old nine-hole lay-out was abandoned entirely except in one instance, thus necessitating the making of $\frac{1}{8}$ of the entire course. The old course probably occupied 55 acres which had to be maintained. At the completion of the year 1899 we had fully 120 acres of land in a very fair condition.

"The work embraced the removal of stone fences of various kinds, the blowing up of multitudinous rocks and their removal. Trees had to be cut down and brush of all kinds had to be grubbed up. Considerable grading and filling up had to be done especially on the first six holes, and on the last three.

"Twenty cop bunkers and sand traps were built ranging in length from 80 feet to 150 feet long.

"To-day we stand in the position of having the longest, and I will say, as scientifically a laid out course as can be found in America ; its playing length being according to surveyor's measurement 6,060 yards, a trifle short of $3\frac{1}{2}$ miles, which means to the player a walk of fully 5 miles before he can complete his round of eighteen holes.

"The nature of the turf was vastly improved last year by continued rolling and cutting, and very considerable growth was manifested on those parts which seem to be impoverished, by the judicious seeding and top dressing which they received.

"Inclosed find map of course which will give you some idea of what has been done.

"Truly yours,

"(Signed) THOMAS BENDALOW."

On Grand and Mosholu avenues new telford pavements are in process of construction, and will be completed during the coming season.

Bronx Park (Area, 661.6 acres)

is situated in the northern central section of the borough. The extreme northwesterly section, containing 250 acres, has been assigned to the New York Botanical Society for botanical gardens. The Museum Building is substantially completed, and the Horticultural Building will be finished by spring. An appropriation of \$30,000 was made for the maintenance of the garden during the year 1899, which was increased to \$40,000 for the year 1900. The report of Dr. N. L. Britton, the Secretary and Director-in-Chief, is herewith appended.

The southeasterly section, containing 261 acres, has been assigned to the New York Zoological Society for the purposes of a zoological garden. The garden was formally opened to the public on November 8 last. The appropriation of \$125,000, authorized by the Legislature, for preparing the grounds, has been nearly all expended, and by early spring the work of the City will have been completed. An appropriation of \$30,000 was made for the maintenance of the garden for the year 1899, and one of \$40,000 for the year 1900.

The report of William T. Hornaday, Director for the year 1899, is herewith appended.

The remaining section of Bronx Park, situated between the two gardens, and containing 150 acres, is under the direct jurisdiction of this Department.

It contains the Lorillard Mansion (now used as a police station), the old snuff mill (now serving as a workhouse), and the nurseries and the temporary greenhouses of the department.

In addition to the ordinary work of maintenance, the following work was finished up :

Repairs to the Southern Boulevard, from Pelham avenue to park limit ; opened up and repaired 300 feet of sewer on Old Boston road ; filled in drain, 1,500 feet long, parallel to Zoological Garden ; re-made 500 feet of roadway of the Old Pelham avenue road ; remade the back road from Botanical Garden to Lorillard Mansion.

Replanking foot-walk and painting bridge crossing Bronx river at Pelham parkway.

Taking out the machinery from the old snuff mill (twenty-five tons of old iron), and altering the building for a department workshop. Work still in progress.

Crotona Park (Area, 154.6 acres)

is situated just east of Third avenue and running parallel therewith from a point north of One Hundred and Seventieth street to One Hundred and Seventy-seventh street. It contains the old Indian Lake, a popular resort for skating during the season.

The new Municipal Building is situated in the northwestern section, fronting on Third avenue and One Hundred and Seventy-seventh street.

In addition to the ordinary work, a large amount of road repairs and new work was finished up in this park.

The drive east of Crotona avenue, length 1,800 feet, width 20 feet, was thoroughly repaired.

The drive between bridge and One Hundred and Seventy-fifth street, length 2,100 feet, width 16 feet, placed in good condition.

The drive east of Wendover avenue, 600 feet long and 16 feet wide, practically rebuilt. This work required 5,000 yards of dirt and 2,000 yards of ashes.

Wherever necessary all the drives were placed in good condition with broken stone and earth filling.

A new walk was constructed east of Crotona avenue 500 feet long, 7 feet wide.

A new walk, from Boston avenue to skate house, 400 feet long, 5 feet wide.

New rustic fences were built at ice pond, 225 feet long ; west of Crotona avenue, 250 feet long ; at Ball field, 350 feet long, and also at bridge south of Music Stand, and at bridge north of One Hundred and Seventy-fifth street.

A new women's toilet was built 20 feet by 14 feet by 6 feet, and a new men's toilet 8 feet by 11 feet by 7 feet.

Claremont Park (Area, 38 acres).

Situated at the easterly end of Wendover avenue at its intersection with Webster avenue, and contains the Zbrowski Mansion, now used as the office building of the department, and the department stables.

The additional work consists of resurfacing driveways, 7,000 square feet ; resurfacing pathways, 18,600 square feet ; making 300 feet of cobble-stone gutter, 2 feet wide ; grading south-westerly end of park, and sodding 5,200 square feet ; building an addition to Department Stable, east end, and containing four roomy stalls.

Building a coach-house at west end of stable.

New Telford roads and asphalt walks were also constructed under contract, as per report of Engineer-in-Chief.

St. Mary's Park (Area, 28.7 acres).

Situated at St. Ann's avenue, from One Hundred and Forty-third street to One Hundred and Forty-ninth street. St. Mary's street at the easterly side has been rebuilt its entire length.

The southwest section was filled in to grade—3,000 loads of filling and sodded.

New walk constructed from shelter house leading southeast.

New walk constructed from shelter house leading north.

New men's and women's toilet constructed in basement of shelter house with running water.

Building eight sets of new stone and wooden steps.

The most important work in St. Mary's Park will be found embodied in the report of the Foreman Gardener.

Macomb's Dam Bridge Park (Area, 27 acres).

Situated at Jerome avenue and One Hundred and Sixty-first street, at the northerly entrance to Macomb's Dam Bridge.

10,000 yards of filling used.

400 feet of drain pipe constructed.

Four old buildings removed.

Cedar Park (Area, 17.47 acres).

Situated at Mott avenue, Walton avenue and One Hundred and Fifty-eighth street.

Placing 150 feet drain pipe.

Filling 8,000 cubic yards.

Resurfacing paths, 4,000 square feet.

New sodding, 5,200 square feet.

At St. James' Park, Washington Bridge Park, Poe Park, Fordham Park, all have been thoroughly put in order. In Fulton Park, new asphalt walks, fences, etc., are being placed under contract, as per report of Engineer-in-Chief.

The appropriations for the maintenance of the parks in the respective boroughs are as follows :

MANHATTAN AND RICHMOND.

Area, 1,288.287 acres. Appropriation, \$496,000 ; an average of \$385 per acre.

BROOKLYN AND QUEENS.

Area, 1,573.78 acres. Appropriation, \$469,000 ; an average of \$298 per acre.

THE BRONX.

Area, 4,057.880 acres. Appropriation, \$245,000 ; an average of \$63 per acre.

In view of the great amount of work yet to be performed in the comparatively undeveloped sections of The Bronx this comparison seems startling.

The attendance of visitors in our parks has increased more than tenfold in the past two years.

The improvements already made and those in progress have so stimulated real estate transactions that there have been more transfers recorded in two years of property adjoining our parks than there had been in the previous twenty years.

The time has arrived when small appropriations would seem extravagance and fairly adequate appropriations economy.

During the past two years I have so endeavored to administer the trust committed to my hands as to produce the best possible results.

I would, therefore, earnestly recommend a thorough investigation of the needs of this Department for the future, with the firm conviction that the results would be convincing that our great park system is in need of immediate development and improvement and would be of great and lasting benefit not only to our borough but to the entire City of New York.

All of which is respectfully submitted.

AUGUST MOEBUS, Commissioner of Parks, Borough of The Bronx.

(Copy).

NEW YORK, January 1, 1900.

Hon. AUGUST MOEBUS, *Commissioner of Parks, Borough of The Bronx* :

SIR—Herewith you will find annual report of work done under my supervision for the year ending December 31, 1899 :

Work was Completed on the Following Contracts, viz. :

1. Constructing a roadway and appurtenances in Bronx Park, connecting the Bronx and Pelham parkway with the Southern Boulevard, at Pelham avenue, in The City of New York.

William H. Masterson, Contractor. The contract was signed September 13, 1897, and was completed January 19, 1899, at a cost of \$31,211.28.

2. Constructing and improving a portion of the Bronx and Pelham parkway, for its full width of four hundred feet, between Bronx Park and Bear Swamp road, in The City of New York.

John B. McDonald, Contractor. The contract was signed December 9, 1897, and completed June 22, 1899, at a cost of \$46,399.10.

3. Furnishing all the materials and labor for erecting complete the wire fences as herein specified in zoological park in Bronx Park, in The City of New York.

Page Woven Wire Fence Company, Contractors. The contract was executed March 18, 1899, and completed June 30, 1899, at a cost of \$10,571.84.

4. Furnishing, delivering and repairing lawn mowers for parks in the Borough of The Bronx.

Twelve horse lawn mowers and 18 hand lawn mowers were delivered at a cost of \$725. All the above mowers and in addition 12 horse and 18 hand lawn mowers will be kept in repair for one year for the sum of \$200. Boldwell Lawn Mower Company, Contractor. The contract was signed June 23, 1899.

5. Furnishing and delivering one twelve-ton steam road roller.

Harrisburg Foundry and Machine Works, Contractor. This contract was signed May 4, 1899, and completed June 15, 1899, at a cost of \$1,685.

6. Furnishing and delivering three road sprinkling wagons and three road sprinkling carts.

Studebaker Brothers Manufacturing Company, Contractors. This contract was executed April 17, 1899, and completed May 25, 1899, at a cost of \$756.

7. Furnishing and delivering three hundred (300) park settees.

Patterson, Gottfried & Hunter, Limited, Contractors. This contract was executed April 17, 1899, and completed May 1, 1899, at a cost of \$1,317.

8. Constructing a roadway and appurtenances in Pelham Bay Park, extending the Bronx and Pelham parkway from Baychester avenue to the Eastern Boulevard, in The City of New York.

William H. Masterson, Contractor. This contract was executed December 30, 1898, and completed July 19, 1899, at a cost of \$6,054.48.

9. Furnishing and delivering broken stone of trap-rock and trap-rock screenings where required in Van Cortlandt and Bronx parks.

J. Frank Quinn, Contractor. This contract was executed June 23, 1899, and completed September 27, 1899. The contractor delivered 100 cubic yards of broken stone of trap-rock, 1,111.2 cubic yards of screenings of trap-rock, at a cost of \$1,925.80.

10. For repairs to iron work on Pelham Bridge, in Pelham Bay Park.

Augustus Smith, Contractor. This contract was executed July 22, 1899, and completed August 30, 1899, at a cost of \$575.

11. Constructing and improving grounds for use of New York Zoological Society in Bronx Park, in The City of New York.

Bart Dunn, contractor. This contract was executed December 30, 1898, and completed October 19, 1899, at a cost of \$30,970.48.

12. Furnish all the labor and furnishing and erecting all the material necessary to erect and complete, as specified, in the Botanical Gardens in Bronx Park, in The City of New York, the stone columns, cornices, etc., for principal entrance of Museum Building, etc.

John H. Parker Company, contractors; Robert W. Gibson, architect. This contract was executed June 9, 1899, and completed October 5, 1899, at a cost of \$12,985.

13. Furnishing and delivering broken stone of trap rock and trap-rock screenings, where required, on Boston road, in Bronx Park, Borough of The Bronx.

Samuel E. Bouker, Contractor. This contract was executed June 23, 1899, and was completed November 1, 1899. The contractor delivered 1,872.54 cubic yards broken stone of trap-rock, 844.46 cubic yards screenings of trap-rock, at a cost of \$4,483.05.

14. Furnishing all labor and all materials for constructing four toilet buildings in the New York Zoological Park in Bronx Park.

T. W. Timpson & Co. (Incorporated), Contractors. This contract was executed October 9, 1899, and completed November 11, 1899, at a cost of \$1,400.

15. The construction and improvement of a portion of Claremont Park, in the Borough of The Bronx, of The City of New York.

John B. Devlin, Contractor. This contract was executed May 20, 1899, and completed November 16, 1899, at a cost of \$12,023.41.

16. Furnishing and delivering trap-rock screenings, where required, on Grand avenue, in Van Cortlandt Park, Borough of The Bronx.

Jacob E. Conklin, Contractor. This contract was executed November 16, 1899, and was completed December 12, 1899. The contractor delivered 426.5 cubic yards trap-rock screenings, at a cost of \$699.46.

17. Constructing bicycle and bridle roadways and appurtenances adjacent to the existing roadway in the Bronx and Pelham parkway, between Bear Swamp road and Eastern Boulevard, in Pelham Bay Park, in The City of New York.

John B. McDonald, Contractor. The contract was executed February 14, 1898, and completed December 14, 1899, so far as not to interfere with other plans and contracts, at a cost of \$60,513.51.

18. Regulating, grading and paving walks and driveways in the Botanical Gardens in Bronx Park, in The City of New York.

John B. Devlin, Contractor. This contract was executed June 30, 1899, and completed December 15, 1899, at a cost of \$12,093.40.

The total amount of money expended for the year 1899 on completed contracts is \$236,588.81.

Work is not Completed on the Following Contracts, viz. :

19. Furnishing all the labor and furnishing and erecting all the materials necessary to erect and complete, so far as is herein specified, in the Botanical Gardens in Bronx Park, in The City of New York, the new Museum Building and Power House and Stable and Closet Group, etc.

John H. Parker Co., Contractors; Robert W. Gibson, Architect. This contract was executed December 28, 1897, and was modified September 21, 1899, in consequence of additional work on the steam subway, increasing the total amount of the contract by \$874. This work is nearing completion, and portions of the buildings are now occupied and in a few weeks will be entirely finished.

20. Regulating, grading and constructing a roadway and appurtenances and otherwise improving the Spuyten Duyvil parkway, from New York Central and Hudson River Railroad to Broadway, in the Twenty-fourth Ward of The City of New York.

James Oliver, Contractor. This contract was executed December 8, 1898, and contractor was ordered to commence work on March 27, 1899. The work has been in progress since that time, and about two-thirds of the work is completed.

21. Furnishing all the labor and erecting all the material necessary to erect and complete in Botanical Gardens in Bronx Park, in The City of New York, the range of horticultural buildings and appurtenances, etc.

John R. Sheehan, Contractor; Lord & Burnham Co., Architects. This contract was executed December 6, 1898; was modified February 6, 1899, in regard to payments, and again modified July 10, 1899, in consequence of additional work on Building No. 1 and in other minor details, increasing the total amount of the contract by \$2,000. This work is progressing and about four-fifths completed.

22. Furnishing all the materials and labor for erecting complete the approach to the Public Building, also grading and improving the grounds surrounding in Crotona Park, at Third and Tremont avenues, in The City of New York.

Thomas Kelly, Contractor. This contract was executed August 28, 1899, and the contractor notified to commence work on September 18, 1899. This work is progressing and about three-fifths is completed.

23. Regulating and grading a portion of the Bronx and Pelham parkway, in The City of New York.

John B. McDonald, Contractor. This contract was executed August 22, 1899, and the contractor notified to commence work on October 16, 1899. The work is now in progress and considerable has been done.

24. Regulating, grading and constructing retaining-walls and pools for use of New York Zoological Society in Bronx Park, in The City of New York.

John C. Rodgers, Jr., Contractor. This contract was executed September 25, 1899, and the contractor notified to commence work October 12, 1899. The work is in progress, with two-thirds of it completed.

25. Furnishing all labor and all materials for constructing four entrances to the New York Zoological Park in Bronx Park, in The City of New York.

John R. Sheehan, Contractor. This contract was executed October 5, 1899, and contractor notified to commence work October 23, 1899. The work is now in progress, with two-thirds of it completed.

26. Improving small park on the west side of Fulton avenue, between One Hundred and Sixty-ninth and One Hundred and Seventieth streets, in the Borough of The Bronx of The City of New York.

William J. Moore, Contractor. This contract was executed October 5, 1899, and the contractor notified to commence work on October 30, 1899. The work was suspended on account of the weather January 1, 1900; about two-thirds of the work is completed.

27. Furnishing all labor and all materials for constructing complete a Public Comfort Building in the New York Zoological Park in Bronx Park, in The City of New York.

T. W. Timpson & Co. (Incorporated), Contractors. This contract was executed November 15, 1899, and the contractor notified to commence work December 4, 1899. The work is practically suspended on account of the weather.

28. Furnishing and delivering two hundred (200) park settees for use in New York Zoological Park.

V. L. Dunne, Contractor. This contract was executed October 10, 1899, and is now in progress.

29. On November 17, 1899, an agreement was entered into between the New York, New Haven and Hartford Railroad Company and The City of New York through this Department, whereby a bridge shall be built carrying the Bronx and Pelham parkway over and above the grade of the Harlem river branch of the said railroad.

The bridge and abutments shall be built according to certain plans and specifications prepared in this office and attached to the agreement, at an estimated cost between \$60,000 and \$70,000, and said company agrees to make payments of one-half of said cost upon the Engineer's certificates to be made under the contract to be entered into between this Department and a contractor for the construction of the said bridge, as the said certificates are made and payments thereon become due.

30. Work done by park laborers as follows, viz.:

In Van Cortlandt Park the filling in of the Colonial Garden site has been in progress, and 15,069 cubic yards of filling have been put in place; the fund for this purpose is about exhausted.

All the roads in Van Cortlandt Park have been resurfaced with trap-rock screenings; also a portion of the roadway in Bronx and Pelham parkway.

The roadway of Old Boston road in Bronx Park was resurfaced with broken stone of trap-rock and trap-rock screenings; the roadway was 20 feet wide and 4,400 feet in length.

The sidewalk of this road for a distance of 3,500 feet has been rebuilt and improved.

Grand avenue, between Mosholu and Jerome avenues, in Van Cortlandt Park, has been regraded and telford pavement has been laid and macadam of domestic stone placed on top with trap-rock screenings; this work is not entirely finished.

The topographical survey of Pelham Bay Park has been in progress.

All the lines and corners have been designated on the ground by the placing of fifty granite monuments; levels and bench-marks established, and a portion of the park, with all details of topography, has been plotted on sheets, and it is expected to continue this work so as to make it fully complete, and may be used in the future for any permanent improvements contemplated.

A survey of the east line of Bronx Park has been made and settled in conjunction with the Engineers of the Department of Public Improvements.

Numerous surveys, estimates, specifications, plans, etc., have been made for improving and maintaining the parks and parkways.

Respectfully,

(Signed) DANIEL ULRICH, Engineer-in-Chief.

(Copy.)

JULY 1, 1899.

Hon. AUGUST MOEBUS, Commissioner of Parks, Borough of The Bronx :

DEAR SIR—I herewith respectfully submit to you my semi-annual report regarding the administration and development of the newly established garden and propagating department in Bronx Park.

1. Late last fall (middle of November, 1898), in the newly erected propagating house, the propagation of many kinds of bedding plants, needed for planting in the flower beds in Bronx, St. Mary's, Van Cortlandt and Claremont parks was started, and up to the time of January 1, 1899, a number of about 8,000 young plants had been rooted and potted for this purpose.

Besides this propagation, young seedlings, as 3,000 pansies, 2,000 daisies, 3,000 carnations and pinks, 500 myosotis, 500 phlox and 500 other kinds of plants, were kept on stock in frames.

From January 1 to April 1 the propagation of all such plants was continued and the older plants of the first propagation shifted and cultivated to be in suitable condition and size for the coming setting out in spring.

The extreme cold and snowy weather during the months of January and February caused much trouble and anxiety to keep such large number of plants in the small house and the cold frames, but thanks to our good care, no losses were to be remarked, and in consequence, the early spring decorations of the flower beds with hardy plants could be done in due time and was completed after first week of April. The second planting of the flower beds took place at the end of May, when another class of plants was selected for the flower show during the summer season.

About 10,000 plants in all had been used for the two flower decorations in the parks.

2. By your order in February last a planting map for planting St. Mary's Park in a landscape style was elaborated by me and adopted by your honorable body. During the time of preparations to carry out this extended planting work, a thorough pruning of all trees in Claremont Park was successfully carried out.

At the end of March the planting work in St. Mary's Park, with a force of twelve men and four gardeners, was commenced and was finished in about four weeks, at the end of April.

Although the weather at the time of planting was favorable, the following extreme drought for nearly three months kept the growth of trees and shrubs very much backward.

In spite of this, as the planting work was done with great care and much thought, only a very small percentage of shrubs and trees had been lost.

The entire planting in St. Mary's Park in accordance to the adopted plan required about—

- 250 evergreens of various kinds.
- 80 extra large elm trees (lime trees).
- 250 large shade trees, various kinds.
- 500 small trees for inside planting.
- 4,300 shrubs and climbing plants.

About one-third of the total number of trees and shrubs had been obtained by purchases of different nurseries in the vicinity of New York, chiefly from the Bloodgood Nursery in Flushing,

N. Y. The remaining two-thirds of the planting material came from our own nursery in Bronx Park.

3. After the planting work in St. Mary's Park was finished, it became necessary to transplant the remaining stock from the first nursery to the prepared ground of the new site. This planting work in the new nursery, about 3,500 trees and shrubs, etc., was carried out between May 1 and May 15; besides about 4,000 cuttings of many kinds of trees and shrubs were made and set out.

Our seed-beds contain now about 2,000 young seedlings of pines, firs, spruces, junipers, cypresses, etc., and other rare shrubs and trees; together with the stock in nursery, the entire stock in the nursery is about 8,000 plants, which will serve for future planting purposes and propagation.

4. The new flower garden in front of the propagating house and hot-beds was laid out and finished by June 15, and was planted at once to obtain good result and show for its first season. In the well-prepared ground, divided and geometrically arranged, about 50,000 bedding plants of many kinds have been set out and the entire planting being finished until July 10th, from which date till now the flower beds are under continued cultivation.

The rocky grounds in the rear of the propagating house have been laid out as a reserve and collective garden for hardy perennial plants, fine evergreens, shrubberies, rare and conspicuous trees, vines, etc., and contain now about 2,000 plants.

Finally, I have to state that with the next propagation, which is commencing in August and September, the propagating department and nursery will have on stock:

(a) *In the New Nursery.*

Evergreens and seedlings.....	1,000
Ornamental trees (650 of them, extra large size).....	1,500
Shrubs, cuttings and seedlings.....	5,500
Total.....	<u>8,000</u>

(b) *In the Flower Garden and Reserve.*

Hardy perennial plants, of the best varieties and species.....	10,000
Bulbous and tuberous plants, as iris, lilioms, funkias, hemerocallis, amaryllis.....	5,000
Roses, various kinds.....	500
Climbing and creeping plants.....	500
Total.....	<u>16,000</u>

(c) *In Frames, Flower Garden for Stock.*

Hardy perennials and bedding plants.....	<u>30,000</u>
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(d) *In Frames, Greenhouses, etc.*

Bedding plants of tender nature—cannas, calaliums, colius, geraniums—succulent plants.....	30,000
Ferns, best sorts for green and hot houses.....	500

Selected hothouse plants, collection.	500
Selected greenhouse plants, collection.	1,000
Total.	32,000

Considering this favorable result, obtained in such a short space of time, I therefore hope that this statement will have your full satisfaction.

Very respectfully,

(Signed) ROBERT DEMCKER.

Semi-annual report of the Garden, Department of Parks, Borough of The Bronx, in The City of New York, from July 1, 1899, to January 1, 1900, enumerating all the garden work carried out, improvements made and maintained in Bronx and other parks, the condition of nursery and flower garden, flower decorations; also the increase of the stock of plants in the Propagating Department.

1st. Nursery—The condition and the development of all the newly planted trees and shrubs in the new nursery became promising after a continuous cultivating and cleaning of the ground during the months of July and August, thereby preventing losses.

2d. The new flower garden having been laid out quite late in spring, had to be planted only with such plants for immediate effect. But a careful cultivation and thorough watering during the hot season produced an abundance of fine flowers. The splendor of flowers has been admired by thousands of visitors and acknowledged even by the Press. During August and September a large number of showy perennial plants, besides other kinds of a more imposing character, had been propagated, were substituted in the flower garden for the next great show this spring. A number of about 25,000 plants of this kind is now on hand for later supply or for planting in the other parks.

3d. The Rock Garden—While all this work was going on in nursery and flower garden, the grounds in the rear of the propagating house were laid out in a rock garden in order to make provisions for cultivating a fine large collection of hardy perennial and alpine plants, mixed with rare and fine evergreen shrubs and vines for the rocky borders of the walks. About 10,000 plants have been propagated and placed there in the mixed borders. Further arrangements have also been made to place frames for 48 sashes for the cultivation of tender plants. Besides, a rustic arbor was constructed to give shelter for the cultivation of palms during the hot summer season. The arbor, which is west of the greenhouse and served for the cultivation of tropical ferns, has proved a very convenient place for the mentioned purpose. The surroundings of this structure are intended for a fernery of all hardy kinds. The walks in the flower garden and rock garden, etc., were filled in with gravel; a large quantity of soil for potting purposes has been prepared, etc., and sufficient white sand, for propagating purpose obtained, been stored.

4. The Importance of the Propagating House for the Public Parks—The small propagating house has proved its practical service during the severe winter from 1898 to 1899. Its condition was kept in an excellent state; we had no losses or repairs, and we propagated in this house about 40,000 plants during last year, most of which have been used for the floral decorations in the parks. The hot-beds in front of the propagating house are now well stocked with plants for

the early spring planting in the parks. The long frame in the rear of the house contains a fine collection of rare pines, spruces and other evergreens and about 1,000 young roses, which will be planted out next spring in the nursery in order to make room for new seedlings. Flower bulbs had been planted late in fall in the flower beds of St. Mary's, Van Cortlandt and Bronx parks.

5. The Prospect of a New Propagating House—In order to meet the wishes of the public in general for greater and finer flower shows in the public parks, it has been proposed to erect a larger propagating house, for which a plan has already been elaborated and adopted by the Park Department. According to this fact the building plot had been prepared during August and September. All sods and useful soil have been taken from this ground and stored up and the stones used for the rock garden. Unfortunately, owing to lack of funds, the building of the house was postponed. It was now a necessity to construct a number of frames for about 150 sashes to store and keep 50,000 plants during the winter. Into these frames were filled in 400 loads of manure and leaves, with the necessary fine soil, to store the large number of plants which had already been cultivated and potted during the past summer. They will serve for the future decoration of the new house and for an enlarged floral decoration in the parks. All these plants are at present in an excellent condition, kept carefully under glass, protected by board covers and salt hay. The maintenance of such extended lines of hot-beds requires a continual and careful attention daily of several gardeners.

6. The Care of Tree and Shrub Plantation in St. Mary's Park—All shrubs and trees in this park have been properly pruned, cultivated and watered and the flower beds kept in best condition during the summer season. A few of the line trees on the avenue had been killed by the extreme heat of the asphalt pavement. They have been replaced by others this fall and the ground around all the line trees had been dug and fertilized with old manure.

7. The new planting in St. Mary's Park took place late in fall after the ground on the south side had been completely filled and graded. For this plantation 750 trees, shrubs and evergreens were used. In October and November all flower beds in the flower garden, in the rock garden and the shrubs in nursery were thoroughly manured and covered with salt hay for protection during severe dry and cold weather. The entirely neglected place near the stone steps and mansion in Bronx Park has been newly shaped, graded and sodded on the lines of walks, and planted densely with shrubs to prevent damaging the place by bicyclists. All planting and improving of this park will be completed as soon as the weather will permit the filling and planting work.

8. The Pruning and Thinning out Work in the Parks—After the finish of the planting work in St. Mary's Park all the necessary pruning work was done until the end of December. After this the pruning work began in Claremont Park; then came a thorough pruning and thinning out of dead trees, shrubs and branches in Cedar Park, also in Bronx Park; the pruning work is now continued in Washington Bridge Park, Claremont and Van Cortlandt Parks. All the useful firewood from these cleanings has been reserved, split and piled up for heating the propagating house. Some logs have been kept for protecting the slope near the propagating house and the river walk, and all useless brush has been burned and ashes saved for the soil.

9. Digging Out Trees in the Woods of Bronx Park—In order to economize the expenses for the planting of line and avenue trees, a small force of competent gardeners were ordered under my supervision and advice to dig out such trees which will be needed for planting in the next

season. Such line trees are planted in St. Mary's Park as 40 extra large American elm trees, 60 fine large American white ash trees, 100 sugar and silver maples, 50 trees of various kinds, and about 100 trees are on hand to be used in Cedar Park. The work of digging out trees will be continued whenever the weather is favorable.

10. The Condition and Extension of the Plant Collection in the Propagating Department—Soon after the small propagating house had been built and the necessary hot-beds for cultivating and propagating of plants established, with my collection of fine plants which I donated to the Park the first start was made, and to the end of June, 1899, the total amount of plants in the propagating department and nursery were about 50,000 on hand. Since that time the number of species has been greatly increased : 1st, by seeds received from my own stock, about 1,000 packages, a fine collection from the Botanical Garden in Giessen, Germany, and a small collection from the Botanical Garden in Bronx Park ; 2d, by donations from several private persons, about 200 species ; 3d, by exchange from Prospect Park, 150 species ; 4th, by collecting cuttings in other gardens, about 450 species, and finally by my donation of bulbs, tubers, etc., with 600 species and varieties. The collection shows a total increase of more than 2,000 species, many of which are now in good propagation. During the next summer season a complete systematic catalogue of all species here in cultivation will be elaborated, and seeds, etc., for exchange, collected.

Finally, I take the liberty to make some suggestions in relation to the maintaining of trees, shrubs, and the landscape effects of the parks in general. It is a matter of fact and experience that all trees in parks can be kept in good condition for many years if they are carefully and judiciously pruned and thinned out from time to time. Bare roots around old trees should be covered with a slight top dressing of rich soil and any damage to the bark be prevented.

A great damage is done to trees by placing benches under or near them, as thereby the soil under the trees become tough and prevents the free circulation of air, resulting in decay of the fibrous roots. All lowering branches of trees near walks, drives and open places should be removed to allow the necessary vistas and prevent the decay of the lawns. Fruit trees should not be permitted in public parks, as they accumulate too many noxious insects, which spread over to the most valuable park trees, and children attracted by the fruits will throw stones, etc., to trees and lawns.

Having given herewith a full account of the work carried out in the last six months, I feel obliged to mention and acknowledge the great diligence, ability and excellent discipline of all the gardeners and laborers under my control, who faithfully did their duties. And so I submit my report to your kind consideration.

(Signed) ROBERT DEMCKER.

To Hon. A. MOEBUS, Commissioner of Parks, Borough of The Bronx.

(Copy.)

REPORT OF THE SECRETARY AND DIRECTOR-IN-CHIEF.

(Transmitted and accepted January 8, 1900.)

To the Board of Managers of the New York Botanical Garden :

GENTLEMEN—I have the honor to submit herewith my report as Secretary and Director-in-Chief for the year ending January 8, 1900 :

Plants and Planting.

1. *Herbaceous Grounds*—The work of maintaining and increasing the herbaceous collection has been continued through the year with very gratifying results. As shown by the list in the accompanying report of Mr. Nash, General Assistant, there have been 2,151 species and varieties, contained in one hundred and five families, under cultivation during the season; this is a slight gain of species over the record for 1899. Most of the accessions have been raised from seed in the nurseries, but a considerable number have been secured by exchange or purchase of roots. The general plan of the ground has not been changed, space for the additional plants brought in during the year having been provided by simply enlarging the existing plots. An additional pool for aquatic plants was excavated during the autumn. This collection has been used by many students during the year, and has now become complete enough to afford a good general view of all the natural plant families containing herbaceous species, hardy in our climate. The large number of different kinds of plants brought together on an area of about eight acres has naturally afforded a constant change in color effects from week to week as the plants successively come into bloom, and thus, together with the large amount of greensward between the plots and the forest surroundings of the glade, have made this plantation exceedingly attractive.

2. *Fruiticetum*—During the planting season of both spring and fall, species of shrubs additional to those set out in the autumn of 1898 were installed on the plain northeast of the Museum Building. The collection of shrubs thus grouped in natural families now contains three hundred and thirty-eight species, which is a gain of one hundred and forty-three species over the record of 1898. The collection now contains enough kinds of shrubs to fairly represent all natural families in which shrubs are included, hardy in this climate, and it has come to be of value to students who have used it in considerable numbers. The *Salicetum* or willow collection has been installed on a part of the marshy ground northeast of the *Fruiticetum*.

3. *Arboretum*—Tree-planting in accordance with the scheme contemplated by the general plan has been carried on during both spring and fall. The number of species of trees now in place, including those native to the grounds, or long ago established, aggregates one hundred and sixty.

4. *Viticetum*—The collection of vines which had been brought together in the nurseries was transferred during the spring and fall to the rustic arbor built last winter; the number of species now included in this collection is forty-five.

5. *Nurseries*—No additional space has been taken into the nurseries during the year, the amount of land already under cultivation having proved sufficient. Among the most important collections of seeds sown in the nurseries during the spring are those received from the Royal Botanical Garden at Berlin, Germany, and from the Botanical Garden of Cambridge University, England; through the interest of Mr. Rives, we were able to purchase a large and interesting collection of Japanese shrubs from nurseries at Yokohama, Japan; these are still in the nurseries, but may be transplanted to the *Fruiticetum* next year; a considerable number of them do not appear to have been grown in this vicinity hitherto, and their behavior in our climate is being noted with much interest.

6. *Boundary Borders*—The border screens have been considerably modified by addition and substitution, most attention having been paid to the strip along the railroad from the Southern

Boulevard Bridge to the Bog Garden, and to the strip near the stable and the Bleecker street entrance on the south side of the park.

7. Temporary Greenhouse—The use of the Columbia University greenhouse on Morningside Heights has been continued and it is now crowded with plants to its utmost capacity, there being probably enough specimens in this collection to occupy one-fifth or one-fourth the space which will be provided by the great range of horticultural houses now under construction.

Further details concerning the planting are contained in the report of Mr. Henshaw, Head Gardener, hereto appended.

Buildings.

Work on the contract of the Department of Parks with the John H. Parker Company, for the construction of the Museum Building, the power house, stable and closet group, has been prosecuted throughout the year under the constant supervision of Commissioner Moebus of the Borough of The Bronx, his Chief Engineer, Mr. Daniel Ulrich, and his Inspector, Mr. William Brooks, and under the direction of Mr. R. W. Gibson, Architect, and his assistants.

Museum—The Museum Building is now essentially completed, in accordance with the terms of the contract, it only remaining to effect the final cleaning-up and adjustment of some details relative to the furniture and the heating and ventilating apparatus to make the acceptance of the work desirable. We have used several rooms of the Museum in a temporary way, the first specimens and books having been placed in one of the dark rooms upon the third floor on August 15, and portions of the Garden Herbarium were shelved in the herbarium room, at the east end of the third floor, early in September. The transportation of the Herbarium of Columbia University to the new herbarium room was begun on September 15, and has been carried on at intervals since that time by means of our own teams and laborers, as opportunity afforded. It is now nearly completely installed, there remaining only a few boxes of specimens at the University. The Library room was first occupied on December 6, and the moving of the Botanical Library of Columbia University into it was begun December 20, and is now practically completed. The setting of the furniture in the laboratories was accomplished early in December, and the work of placing their instrumental equipment is now in progress. We have also occupied four of the basement rooms for storage. The cases in the Public Museum Halls are ready to receive specimens, and this work of installation may be begun within a few days. The lecture hall in the basement is quite ready for use whenever needed. A supplementary contract for the construction of the front central portico, amounting to \$12,875, was awarded by the Commissioners of Parks to the John H. Parker Company in July; work was begun under this contract immediately thereafter. This portico was completed in October and accepted by the architect; it adds greatly to the appearance of the building. Plans prepared by Mr. Gibson for some further ornamentation of the end pavilions of the Museum have been accepted by the Board of Managers, and Mr. Gibson has obtained some estimates of the expense which would be incurred in carrying them out, but he has concluded that it will be advantageous to defer this work for the present. The Board of Managers have also authorized a sculptors' competition for designs for the fountain planned for construction in front of the Museum Building, and arrangements for such competition have been made by a committee of the managers and the architect.

Power House—Awaiting the completion of the Museum Building, little work was done on the power house early in the year, it having been essentially completed, with the exception of steam-pipe and water-pipe connections, last December ; several tests of the boilers were made during the autumn, the official Police Department test having been made on November 3. Steam was first turned on the Museum on December 15, and tests of the heating and ventilating apparatus have since been proceeding continuously ; they are not yet fully completed.

Subway from Power House to Museum—In consultation with Commissioner Moebus, Mr. Ulrich and Mr. Gibson, it was deemed desirable early in the year to increase the height of the subway from 2 feet, as originally planned, to 4½ feet along about one-third of its length, and a modification of the Parker Contract to arrange for this was effected at an additional cost of \$874. The subway was completed, its steam pipes laid, and the trenches closed early in the autumn.

Stable—As recorded in my last annual report, this building was completed and was occupied by us in November, 1898 ; it has been in constant use ever since ; a force-pump connecting with the well near by was placed in it early in December, affording an abundant supply of water.

Public Comfort Station—This structure is now complete for operation, needing only water and sewer connections, which it is planned to supply early in the year.

Tool House—No changes have been made in this building.

The Range of Horticultural Houses—As recorded in my last annual report, ground was broken for these buildings on January 3 under the contract awarded by the Commissioners of Parks to Mr. John R. Sheehan. Mr. Sheehan began excavations for the foundations early in the spring and has since prosecuted work continuously. In consultation with Commissioner Moebus, Mr. Ulrich, Mr. Lincoln Pierson, of the Lord & Burnham Company, architects of these buildings, and with experts summoned by the Commissioner and by the architects, it was deemed desirable to modify the contract so as to permit a strengthening of the girders of the large central palm house beyond that originally planned, and also to add some columns in the two end houses of the range to give their roofs more certain support. It was also decided to be advantageous to substitute rubble masonry in the walls of the subway connecting the power house with these buildings, and also in the walls of the trenches extending under the buildings, for the brick walls originally specified. After much consultation it was decided to allow Mr. Sheehan the sum of \$2,000 extra on account of this modification, fixing the amount to his contract at \$112,000 instead of \$110,000, the considerable additional cost of ironwork being partially offset by the reduction effected in the change from brick to stone in the subway and trench walls. The modification in the ironwork caused a delay of three months in the framing of the central palm dome, and this has only recently been completed ; the other seven houses covered by the Sheehan contract are completed, including their glazing, with the exception of their interior fittings ; work on these is being prosecuted.

The Propagating Houses—Detailed plans for the small green-houses for propagating and experimental purposes, together with specifications, have been completed by the Lord & Burnham Company, and the buildings may be erected as soon as funds for the purpose become available.

Drainage and Sewerage—Early in the year it was deemed necessary to effect the connection of the Museum Building with the Williamsbridge and Bronx Park sewer, and, beginning in March, a 12-inch vitrified pipe was laid from a point 25 feet in front of the west wing of the Museum down the steam subway trench for 140 feet, thus taking advantage of excavations already made, thence turning at right angles to the north and continuing to meet the position planned for the sewer from the horticultural houses, a manhole being established at this intersection; thence to the Williamsbridge and Bronx Park sewer at the curve of the latter just before it passes under the railroad, as provided in the general plan. The divergence from the general plan by taking advantage of the subway excavations along this line enabled us to escape all rock excavations. From the starting point of the 12-inch sewer in front of the west wing of the Museum a 10-inch line was laid parallel with the front wall of the Museum nearly to the east wing, and all the outlet pipes from the Museum were connected with this 10-inch line under the Parker contract. To obtain the necessary grades and allow for future connections, it was necessary to lay these sewers very deep, and the work was not finished until July. In order to take care of the roof water of the Museum and the drainage from the Museum areas, a 10-inch vitrified pipe was laid in the bottom of the subway excavations from the west wing of the Museum to the main 18-inch land drain in the valley facing the railroad station, and also an 8-inch vitrified pipe from the eastern corner of the Museum to the ditch along the driveway leading to the lakes; this 8-inch line will ultimately be connected with the land drains of the driveway system which are planned to outflow into the lakes. In order to take care of the roof water of the range of horticultural houses a 15-inch vitrified pipe was laid from the manhole built under the Sheehan contract just north of house No. 5 for 220 feet to the northwest, temporarily outflowing on the surface; this may also be connected with the land-drain system in the future. The roof water of the power house was made to flow into an 8-inch vitrified tile connecting with a dry well 15 feet in diameter about 100 feet southwest of that building, and the blow-off water from the boilers as well as that which accumulates in the catch-pit of the power house is discharged into this same dry well through a 3-inch vitrified pipe. The drainage from the runways at the power house is discharged through a porous tile system into the underlying gravel at a point three feet south of the northern retaining-wall of the building. During the autumn the porous tile drainage system, begun last year north of the Bleecker street entrance on the eastern side of the park, was continued for several hundred feet, temporarily outflowing on the surface. A system of 6-inch porous drain-pipe was laid from a piece of swampy woods south of the nurseries to the east line of the park, satisfactorily draining that part of the ground.

Water Supply—The herbaceous grounds were supplied with water in the spring by laying about 900 feet of 2-inch and 1-inch galvanized-iron pipe from the branch provided last year in the pipe which supplies the Lorillard Mansion. As these grounds only need water about four months in the year, this pipe was laid only about a foot beneath the surface, and valves were supplied for shutting it off and draining it at will; hose taps were provided every 50 feet along its entire length. This water supply proved very useful during the extremely dry summer. In August, during the building of the plaza facing the railroad station, all water-pipes needed there were laid so as to avoid the tearing up of the road in the future; this policy having been adopted so far as it has been possible throughout the prosecution of the work of construction. In September, excavations were begun for the laying of about 4,000 feet of iron water-pipe to connect the power

house and the range of horticultural houses with the system begun last year by connecting the Museum Building with the 36-inch aqueduct which passes through the park. This work was prosecuted continuously and was finally completed toward the end of December ; careful attention was paid to the grades, and fire-hydrants were placed on the two high points, one along the driveway just east of the Museum Building and the other nearly in front of the eastern greenhouse ; these pipes were tested under high pressure before being covered. The positions of all sewers, drain-pipes and water-pipes laid have been carefully plotted on a map, as determined by actual surveys as the work progressed, so that there shall be no uncertainty about this important matter in the future.

Grading.

Grading operations have been for the most part confined to work in the immediate vicinity of the buildings, the surplus material being utilized for filling in the preparation of the sub-grades for roads and paths. All buildings have been made secure against winter storms by establishing slopes away from them sufficient to shed water.

The slopes about the power house have been finished and planted, and a temporary service road for coal delivery has been built from the rear of that building to the Southern Boulevard. The steep stone retaining-wall at the south side of the Boulevard, opposite the power house, has been masked by dumping earth against it so as to form a slope ; this is not yet quite completed, but a few days' work in the spring will finish it and thus remove a very unsightly and dangerous feature.

The terrace around the Museum Building is nearly completed, requiring only some shaping, top-soiling and sodding to finish it. The grading between the Museum Building and the railroad station is well advanced and may be completed early in the spring in time for planting ; the space planned for the fountain in front of the museum has also been brought to approximately finished grade. Part of the filling required in building the two driveway approaches to the front of the Museum Building has been made, as well as a part of the excavation.

All this work of pipe-laying and grading has been under the supervision of Col. F. A. Schilling, General Foreman, since his appointment in July.

Considerable work remains to be done around the Museum Building before the final surfaces are secured, but as much of it is rock excavation, considerable progress can be made during the present winter.

The heaviest piece of grading in our plan is around the eastern end of the range of horticultural houses in order to establish the desired surfaces. Work on this may proceed as opportunity offers.

Roads and Paths.

Under a contract of the Department of Parks with Mr. J. B. Devlin, awarded in June, by means of an appropriation voted by the Board of Estimate and Apportionment in 1897, work in road and path building was commenced early in July. This contract included the building of the plaza facing the railroad station, the building of the path between this plaza and the west wing of the Museum, the building of the path extending south from the east wing of the Museum

to the driveway, and the filling necessary for the building of the driveway from the plaza southeast to where it crosses the Aqueduct ; the contract also included the construction of the necessary drain pipes and catch-basins provided by the General Plan. The work was continuously prosecuted and was completed early in December ; it was very carefully inspected by Chief Ulrich and his assistants, and is pronounced by experts to be one of the best pieces of telford-macadam construction built in the City. The approximate cost was \$14,000.

Two paths connecting those to the Museum wings built under the Devlin contract with the Museum basement doors are being built by us in the same general style, and we have made the subgrades and laid some of the foundation for part of the path planned to connect the station plaza with the Southern Boulevard.

By means of an unexpended balance on appropriations for the improvement of parks and parkways, Mr. Devlin was awarded another contract by the Commissioners of Parks in November. This contract provides for the building of driveways from the station plaza to the Southern Boulevard, and around the Museum Building as far as the lakes, together with the necessary accompanying drainage system, all as contemplated by our General Plan, at a cost of about \$20,000.

It is expected that work under this contract will be commenced early in the spring. A further unappropriated balance to the credit of this appropriation remains, which may be utilized in additional road building.

Care of the Grounds.

Although the grounds have been visited by many thousand people, no depredations worthy of serious attention have been committed. The plantations have been watched by the gardeners on Sundays and holidays, in addition to the police patrol. The hemlock forest has been guarded by a keeper nearly throughout the season, who has also gathered up the papers and other refuse which still continues to be scattered by picnic parties, in spite of posted notices and verbal remonstrance, and this is the only nuisance that we have had to contend with. We do not know how to curb or control this vicious habit of people who are otherwise neat and orderly ; the placing of receptacles for them to place refuse in has been seriously considered, but the experience elsewhere where this has been tried is not encouraging, inasmuch as it could not be enforced without filling the woods with guards.

Inasmuch as the picnicking of many more persons than those who have hitherto used the grove for this purpose will be a menace to the natural undergrowth, and, from the proximity of the tree-roots to the surface, a danger to the trees themselves, it appears to me desirable to forbid picnicking in this forest. This will be no great deprivation to visitors, because there lies just to the south, and on both sides of the river, over one hundred acres of forest land of the park, which might well be regarded as a pleasure grounds.

The grass of the tract was cut by our gardeners and laborers and stacked for fodder for our horses.

Lawn-mowers have been used immediately around most of the plantations.

The Surroundings of the Range of Horticultural Houses.

Plans for the detailed development of the grounds in the vicinity of the range of horticultural houses have been approved by the Board of Managers and by the Commissioner of Parks of the Borough of The Bronx, during the year, after a prolonged study. They contemplate the building of a traffic road from the Southern Boulevard, near the Power-house, west and south of these buildings, near the line of St. John's College property, to meet the Southern Boulevard again opposite the southern end of the herbaceous grounds, and also a park driveway, parallel with the traffic road and between it and the buildings, these two roads to take the place of the Southern Boulevard along its straight stretch between the horticultural houses and the Museum Building ; also a carefully prepared system of path approaches to these houses and the necessary accompanying grading.

The Board of Managers has requested the Commissioner of Parks to apply to the Board of Estimate and the Municipal Assembly for an appropriation of \$200,000 for the making of these improvements and for the completion of the range of horticultural houses. The Commissioner has asked an opinion from the Corporation Counsel relative to the powers of the Board of Estimate in this connection, but this opinion has not yet been rendered.

There is no doubt that this is the most important new construction work in the development of the garden, and the construction of at least one of these roads and of parts of the path system is almost imperatively necessary during the year.

Library.

Books for the Library, which had been accumulating in the temporary office since 1896, were moved into the Museum Building in August.

At the last annual meeting the Board of Managers authorized a subscription of \$5,000 for the purchase of books, with special reference to works not in the Botanical Library of Columbia University. The sum was subscribed as follows :

Mr. William E. Dodge.....	\$1,000 00
Mr. D. O. Mills.....	1,000 00
Mr. Andrew Carnegie.....	1,000 00
Mr. J. Pierpont Morgan.....	1,000 00
Mr. William C. Schermerhorn.....	500 00
Hon. Charles P. Daly.....	100 00
Mr. Samuel Sloan.....	100 00
Hon. Addison Brown.....	100 00
Mr. C. F. Cox.....	100 00
Dr. N. L. Britton.....	100 00
	<hr/>
	\$5,000 00

Volumes, aggregating 490, have been bought by means of this fund through an expenditure of \$1,916.65. Under the appropriation for Library, 54 volumes have been bought, and 657

volumes have been received through gifts and exchanges, the total number of volumes added to the Library during the year being 1,201, together with over 1,250 pamphlets and parts.

Considerable binding has been done.

The gift by the New York Academy of Medicine of 203 volumes of books from the library of the late Dr. David Hosack is especially noteworthy. This collection includes many very rare works of the last century, now seldom to be obtained.

Special attention has been paid to obtaining agricultural and horticultural works, and many volumes have been secured through exchanges.

Mr. Nash, General Assistant, acted as Librarian during the first part of the year, and Professor MacDougal, First Assistant, has taken charge of the books since his appointment in July. The Scientific Directors have authorized the appointment of a regular Librarian for 1900.

Museums and Herbarium.

The accumulation, preparation and mounting of specimens has proceeded continuously throughout the year. Over 70,000 specimens have been secured, mainly by gifts. Specimens mounted for the herbarium aggregate the enormous number of 115,600, an increase certainly unprecedented in any American herbarium. A detailed account of the progress of this part of our work will be found in the reports of the Curator of the Museums and of the Honorary Curator of the Economic Collections, herewith submitted.

Laboratories.

A large portion of the furniture necessary for the laboratory rooms is provided under the contract for construction and equipment of the Museum Building. Special cases may be added as required. Under an appropriation made by the Board of Managers, the obtaining of the instrumental equipment was begun in October, and sufficient has been secured to enable us to use some of the rooms for research purposes during the past two weeks. As stated in the report of the Director of the Laboratories, herewith submitted, twenty advanced students have already been given the advantages of the laboratories, library and collections of the garden.

Lectures.

In co-operation with the American Museum of Natural History two lectures were delivered in the lecture-hall of that institution as follows :

April 13, Professor L. M. Underwood, "The Royal Botanical Gardens at Kew, England."

April 6, Professor H. H. Rusby, "The Production of Quinine."

Publications.

Bulletin No. 4 was issued April 15, 1899. Four technical papers by members of the staff, published in the bulletin of the Torrey Botanical Club, have been reprinted for exchange purposes, under the title "Contributions from the New York Botanical Garden." The printing of Volume I. of the Memoirs, containing Dr. P. A. Rydberg's "Annotated Catalogue of the Flora of Montana and the Yellowstone National Park," based on the collections made by Dr. Rydberg in 1897, by means of funds provided by Mr. William E. Dodge, and authorized in 1899, is nearly com-

pleted, and this fine volume will be issued within a few weeks. The Board of Managers and the Scientific Directors have also authorized the publication of a monthly journal, beginning January, 1900, and the first number of this journal is in press.

Temporary Office.

The house on Suburban street, Bedford Park, rented as a temporary office in November, 1898, has been since used continuously, and I deem it desirable to retain it until spring.

Botanical Exploration of Puerto Rico.

As recorded in my last annual report, Mr. and Mrs. A. A. Heller were sent to Puerto Rico by means of funds provided by Mr. Cornelius Vanderbilt, to collect specimens illustrating the flora of that island. They returned in June with nearly 8,000 specimens and copious notes referring to them. A set of the herbarium specimens have been mounted for the purpose of determining the species, and some study has been given to them. The museum material secured is being arranged for exhibition; many duplicates were obtained which will be valuable for exchange purposes.

Supplementing this collection I have been able to examine the collections made about the same time in Puerto Rico by Dr. C. F. Millspaugh of the Field Columbian Museum of Chicago, who has also provided us with such of his specimens as were in duplicate, and I have recently secured, through Professor Urban, of the Berlin Botanical Garden, a considerable collection made some years ago on the island by Herr Sintenis. These collections, together with a set collected there in 1852 by Blauner, and contained in the Columbian Herbarium, together with a few specimens obtained by Wydler early in the century and our practically complete literature relating to the botany of the West Indies, will enable me, as opportunity offers, to prepare a moderately complete account of the flora. Mr. Heller purposes returning to Puerto Rico this winter to explore parts of the island unvisited by him on his former trip.

Mr. Henshaw spent about a month in Puerto Rico late in the winter by the aid of the same fund, and secured a desirable collection of orchids, ferns and other tropical plants, but he found the island far less desirable for horticultural exploration than either Trinidad or Jamaica, owing to its being so largely under cultivation.

Meteorological Observations.

Under authorization by the Scientific Directors, instruments and apparatus have been ordered preparatory to recording the temperatures of the herbaceous grounds, the fruiticetum and the hemlock grove, and the rainfall.

Reports Appended.

I submit also reports by the Curator of the Museums and Herbarium, the Honorary Curator of the Economic Collections, the Director of the Laboratories, the Acting Librarian, the Curator of the Plantations, the Head Gardener, and a schedule of expenditures under appropriations made by the Board of Managers.

Respectfully,

(Signed) N. L. BRITTON, Director-in-Chief.

REPORT OF THE DIRECTOR OF THE NEW YORK ZOOLOGICAL PARK.

To the Board of Managers.

The spell has been broken.

After fifty years of unnecessary waiting, New York at last possesses an institution for the exhibition of live animals, founded on a scale commensurate with the dignity of a city of the first rank. During the entire history of this city down to 1895, not one serious effort, not one move worthy of mention, was made in behalf of the establishment of a zoological garden or park worthy of this great and wealthy city.

Sixty years ago, when Central Park was laid out, the landscape architects made the mistake of providing five paltry acres in the southeastern corner of that great pleasure ground for a menagerie. That would have answered very well for Poughkeepsie or Auburn, but never for one moment was it adequate or suitable for the metropolis of the western hemisphere. The menagerie thus thoughtlessly established has, beyond doubt, been the chief factor—though quite innocently so far as its sponsors and supporters were concerned—in postponing the creation in New York of a proper zoological garden or park, while scores of smaller cities broke ground and built up institutions of great beauty and usefulness. While New York has slept on her rights, Philadelphia, Cincinnati, Antwerp, Rotterdam, Hanover, Hamburg, Frankfort, Cologne, Manchester, Copenhagen, Calcutta, and even Saigon—hidden in the jungles of Cochin China—have all made for themselves zoological gardens worthy of the name.

We speak lightly of “the effete monarchies of Europe,” but America has deliberately permitted even the very smallest of them to lead her in zoological garden development.

And this, too, despite the fact that the vertebrate fauna of North America is so rich and varied. In zoological garden work America has too long occupied a rear rank. The richest and most populous city, the literary and scientific centre of North America, is expected to step forth and set the pace for other cities.

At last the spell has been broken, and to-day, though painfully incomplete, the Zoological Park of Greater New York is an accomplished fact. The foundation has been laid and a goodly portion of the superstructure has been reared, completed and occupied. The people as a whole have done a portion of the goodly work, but private generosity and private enterprise have done more.

Our task is only one-third of the way toward completion. The private citizens represented in the Zoological Society stand pledged to provide \$90,000 more within eighteen months. The people should now provide \$300,000 for the continuation of the improvements which are needed to render the Zoological Park more completely available for the use to which it has been devoted. In view of the fifty years of delay that have elapsed in the founding of this institution, both the sums named above should be furnished promptly and cheerfully, in order that we may, to some extent, make up for lost time. It is beneath the dignity of Greater New York to allow this enterprise, involving but a comparatively small expenditure, to languish and halt through lack of additional funds.

Assuming that all those who have contributed toward the work of the Society will be interested in the business methods and work of their representatives, this is the story in brief of the past year's efforts in the creation of New York's Zoological Park.

January 1, 1899, revealed less progress in improvements generally than had been hoped for. Instead of being walled and roofed, the Reptile House had not risen above its foundations. The Bird House was roofed with boards, but it was a mere empty shell, standing over an ice-bound reservoir of water, for which escape was impossible. The Birds' Valley sewer, for which the Director had labored so persistently in order that it might relieve the Bird House, and make possible the erection of the Flying Cage, was begun so late in 1898 that the severe winter weather delayed its completion until spring.

The winter of 1898-9 began on November 24, 1898, and held the Zoological Park with a grip which never relaxed until March 1, 1899. The snow storm of Thanksgiving week stopped all work by the Park Department on the aquatic mammals' pond, and for nearly five months left the excavation an expanse of black muck. The contract for the construction of roads, walks, sewers and water-lines was approved so late in the year that no work under it was possible until the spring of 1899. This left the park for the entire winter without the service road which it was hoped could be built in 1898. The delay in the building of the service road resulted in such distress to all parties who were obliged to haul building materials into the park that the numerous disasters to teams compelled the Society to expend nearly \$2,000 in building temporary roads of plank and stone.

During the winter, in all mild weather the park roads were extremely muddy. The Society maintained its bureau of administration in the park, and improved each day of working weather. Contractors were urged forward, and co-operated with in many ways. At the earliest opening of spring, work began all along the line, and by May 1 the park presented a scene of general activity. Walks were excavated and filled with stone, trenches were dug for sewers and water-pipes, and the park became a chaos of upheaved earth, yawning pits, piles of stone, sand and iron, tool-houses, trucks, carts, horses and men. For a long period, the number of teams engaged in hauling heavy materials into the park, and working on the grounds, was seldom less than forty, and some weeks numbered over sixty. At one time, work proceeded simultaneously at twenty-six different points. The working hours of the officers in charge extended from early morning until nearly sunset, and holidays and vacations were luxuries in which they could not indulge.

Opening of the Park.

Twice was the formal opening of the Zoological Park postponed in order to give contractors time to finish their work. Finally, however, on November 8, with simple but appropriate ceremonies, consisting of an address of welcome by Professor Henry F. Osborne, Vice-President of the Society and responses by Comptroller Bird S. Coler and Hon. August Moebus, Park Commissioner, the New York Zoological Park was declared by Hon. Levi P. Morton, President of the Zoological Society, to be open to the public. At that time, twenty-two installations for animals were ready, and they contained a total of 843 living specimens.

Contract Work.

As far as possible, the work of the Society given out by contract to the lowest bidder. The following is a list of the principal firms and individuals who executed contract work for the Society on its buildings, dens, aviaries and other installations for animals. For a list of the contracts made by the Park Department in the improvement of the grounds, see page .

J. W. Cody & Co.—Excavating.

W. S. Tyler Wire Works Company (Cleveland, Ohio)—Bear dens, wolf dens, fox dens, flying cage.

Page Woven Wire Fence Company (Adrian, Mich.)—Iron fences for beaver pond, prairie dogs' village, otter pool, crocodile pool.

A. Allgoever—Iron fence for ducks' aviary, side cages in bird house, burrowing rodents.

William Wilson—Elk house, Buffalo house, seven shelter-houses for deer, ducks, etc.

Atlantic Terra Cotta Company—Terra-cotta for reptile house and bird house.

M. F. Westergren—Roof of reptile house, bird house, metal cases, reptile house, etc., etc., etc.

Dowd & Maslen—Brick work of reptile house, bird house, bear pools, etc.

B. A. & G. N. Williams—Cut limestone for reptile house and bird house.

The Armstrong-Bolton Company—Hot water heating in reptile house and bird house.

Thomas W. Weathered's Sons—Small mammals' house.

Batavia & New York Woodworking Company—Trim and wall cases of reptile house.

Estey Wire Works Company—Outside cages of bird house and central cage.

J. B. & J. M. Cornell—Steel beams and girders, reptile house and bird house.

Tostevin Hayes Fireproof Construction Company—Floor, reptile house and bird house.

E. P. Roberts—Granite work on buildings, and bear, wolf and fox dens.

Barr, Thaw & Fraser—Limestone for bird house.

P. Mancinelli—Rubble masonry.

William Dudley—Metal railings.

Thomas McKay—Wrought-iron work at bear dens.

Miscellaneous Work.

Notwithstanding the fact that as much work as possible was given out on contracts, there remained innumerable items of construction and general labor which it seemed advisable should be performed by the Society's own workmen. At the outset it was decided that for the concrete work to be done in connection with the numerous dens, cages and wrought-iron fences, the most satisfactory results could be obtained with the least expenditure by purchasing all materials and having the work performed by day labor, under competent superintendence. This plan has been followed throughout the year, and all concrete work in the Park, save the floors of the reptile house and bird house, is the work of our own force of concrete workers, which was kept busily employed from the opening of spring until very nearly the end of the year.

Our own force of masons constructed the five series of sleeping-dens for the bears, and for the sea lions in the crocodile pool, the foundation walls of the buffalo house, and seven shelter-houses for deer, antelopes, etc. The Society's Carpenters erected the temporary storehouse, tool-house, stable, cook-house, storage sheds, yards for animals, floors and cages in the small mammals' house, and performed a great number of additional tasks. All the painting of wrought-iron work, wirework, shelter-houses and cages, and the plumbing of the reptile house and bird house, was done by our own force. With the completion of the past year's work, the pay-roll of the construction force was reduced from a maximum of eighty-three men earning \$3,600.94 per month, as in the month of August, to twelve men earning \$ per month, as at present.

Purchase of Materials.

Those who purchased materials and general supplies for the Society did so as carefully as if they had been purchasing for themselves. All important purchases were made of the lowest bidder, and by making prompt payment the Society was always able to purchase at the lowest prices, and secure the largest discounts. All purchases were made by formal requisitions, duly inspected and approved. Through this system strict economy was secured, and all misunderstandings and disputes were avoided.

The entire history of a purchase and payment therefor, is as follows :

1. Requisitions from staff officer to Director.
2. Inspection and approval of requisition, and designation of proper fund to bear the expense.
3. Issue by Chief Clerk of official "order for supplies."
4. Delivery of goods at storehouse, with list, checked by Storekeeper.
5. Delivery of list by Storekeeper, signed by him.
6. Inspection and approval of goods by the requisitioner.
7. Delivery of goods to person for whom ordered.
8. Delivery of bill to Chief Clerk, duly checked and approved as to "goods" and "prices," by requisitioner.
9. Examination, amendment or approval of bill by Director.
10. Examination, amendment or approval of bill by Chairman of Executive Committee.
11. Issue of order on Treasurer by Chairman of Executive Committee.
12. Payment of bill by Treasurer.
13. Filing of receipted bill in its proper file, in Chief Clerk's office.

The Executive Committee has enabled the Director to establish a business system which, while affording the utmost celerity in making necessary purchases, and also providing a reasonable number of safeguards, yet is in no way cumbersome nor overburdened with "red tape." Ordinarily bills are paid by the Treasurer within ten days from their receipt in satisfactory form.

Administration.

The complex and diversified character of the Society's work in the Zoological Park, both in construction and in the care of collections of living animals, rendered the formation of its work-

ing force a task of unusual difficulty and perplexity. The first portion of this task consisted in assembling a force of nearly one hundred men for duty as mechanics of various kinds, and laborers. All these men, being engaged upon construction work, were necessarily considered temporary employees, and as work was finished in their various lines, they were dispensed with. For the maintenance of the park, however, it was necessary to select most carefully a certain number of experienced and competent men to be placed in charge of the various departments into which the work would necessarily be divided, and to provide each of them with a force of competent assistants. The fact that every person placed on the maintenance force was expected to become a permanent employee, rendered it necessary to exercise unusual care in their selection.

At the outset of its work in the Zoological Park, the Society adopted the policy of employing none but competent and reliable men, who were not addicted to the drinking habit. That portion of the Society's agreement with the City which required that all persons employed in the Zoological Park should be selected solely by reason of their special fitness and ability was, in every case, most strictly observed. So thoroughly has this principle been carried out, that not a single person now employed on the park force owes his position to the personal influence or friendship of any member of the Executive Committee, or Board of Managers, or any other person prominently connected with the Zoological Society. The force contains not one "favorite" but every person occupying a place in it owes his position solely to his own merits and his ability to satisfactorily perform the service for which he was engaged.

To cover the service required the Zoological Park force has been divided into various departments, and the following diagram shows the subdivisions, with the name of the officer in charge of each :

ADMINISTRATION OF THE ZOOLOGICAL PARK.

DEPARTMENTS.

Accounts, Receipts and Disbursements, H. R. Mitchell, Chief Clerk—Three gatekeepers, three watchmen, four check-boys and one storekeeper.

Mammals, J. Alden Loring, Assistant Curator—Two keepers, one helper and one cook.

Birds, C. W. Beebe, Assistant Curator—One keeper and one helper.

Reptiles, R. L. Ditmars, Assistant Curator—One keeper, one assistant keeper and one janitor.

Forestry, Gardening and Park Service, H. W. Merkel, Chief Forester—Two assistant foresters, one hot-house man, one helper, two teamsters, one cleaner and seven laborers.

Construction and Repair, W. H. Puffer, Chief Constructor—One foreman, two painters, one plumber, two carpenters and five laborers.

Engineering, George M. Beerbower—One assistant, two chainmen and one laborer.

Director—One stenographer and one messenger.

The following is a brief resume of the most important features of the work of each department :

Accounts, Receipts and Disbursements.

Early in 1899 it became apparent that the labor and responsibility involved in keeping the books of account of the Society's construction operations, and of the maintenance of the park,

together with the management of the gates, the daily receipt of moneys from privileges and a proper accounting for the same, involved serious responsibilities. After long and careful deliberation, Mr. H. Raymond Mitchell was selected to fill the position of Chief Clerk and Disbursing Officer, and he assumed the duties of the position on May 23, 1899.

Having had several years' experience in railroad work as chief clerk, cashier and agent, Mr. Mitchell is particularly well fitted to perform the very exacting duties of his position. He has assumed full responsibility for the handling of all cash coming into his hands, and has furnished a satisfactory bond. His first work consisted in opening two sets of books of account, one for the Park Improvement Fund, and one for the Maintenance Fund, which show in detail every receipt and disbursement. He renders a monthly financial statement to the Executive Committee, and at the end of each year an annual statement. He prepares all pay-rolls, receives from the Treasurer the funds for their payment, and pays our employees in currency instead of checks, which is much more satisfactory to them.

The force of men employed on the gates in selling and receiving tickets, checking bicycles, selling guide books, etc., are entirely under Mr. Mitchell's direction, and the receipts from all privileges are paid to him and duly accounted for. For the safe keeping of the numerous files of vouchers for payments made from the Park Improvement and Maintenance Funds, and of the cash receipts, a fireproof safe has been provided.

Notwithstanding the complicated nature of the work involved in keeping the various funds of the park in separate accounts, and maintaining sharply the line of division between the expenditures of the Society and those made by the City on account of maintenance, the status of every item of expenditure, even down to the smallest, is sharply defined and charged in its proper place in the account to which it belongs. The Chief Clerk's books of account, vouchers, requisitions and orders for supplies are all in admirable condition. An account is kept with each feature of the Society's installations for animals, so that at any time the cost of each can be accurately ascertained.

Collection and Care of Animals.

I. MAMMALS.

The Society's promise to devote early attention to the formation of collections of our most interesting American mammals has thus far been faithfully carried out. In spite of all temptations to accept animals before we were ready for them the Society adhered to its original policy—to form no collections until actually in possession of the grounds, and within measurable distance of the opening day. Last May, however, the opening of the park in 1899 seemed reasonably certain, and accordingly the business of gathering collections began.

After a prolonged search for a satisfactory head keeper for quadrupeds the choice of a man for that position fell upon Mr. J. Alden Loring, who received the title of Assistant Curator, in charge of mammals. Mr. Loring came to the Zoological Park well recommended by Dr. C. Hart Merriam, Chief of the Biological Survey, of Washington, in whose service he had spent eight years as a field naturalist working on mammals. During this period Mr. Loring's observations upon the home-life and food habits of our North American mammals yielded to him a fund of information of great value in connection with the care of animals in captivity. In addition to

this experience, Mr. Loring came to the Zoological Park fresh from several months' practical training in the gardens of the Zoological Society of London, where, by the courtesy of Dr. P. L. Selater, he was permitted to work with the keepers in the various departments of the gardens while he studied their methods in the care of the 2,500 animals forming that splendid series of collections. In addition to this, Mr. Loring visited several of the finest zoological gardens of the Continent.

Live animals began to arrive at the Zoological Park on May 11, and Curator Loring reported for duty on the following day. Inasmuch as at that time none of the permanent installations for animals were ready for occupancy, it became necessary to provide temporary quarters for both mammals, birds and reptiles. At the north end of the storehouse building a yard for animals was made by inclosing a dry, open space on the hilltop by a tight board fence, and providing suitable interior sheds. Temporary cages and inclosures of wire netting were provided, and almost as rapidly as completed they were filled with birds and quadrupeds. The arrival of a large shipment from Florida necessitated the extension of the yard, and the hurried preparation of two small cemented pools for the brown pelicans and other water birds, and for the alligators. A small temporary cook-house was erected, a man was engaged to serve both as cook and butcher, and the work of caring for a large mixed collection of living creatures was seriously entered upon. Within a short time the two animal yards were filled to overflowing with large water birds, alligators, snakes in glass-fronted boxes, lynxes, foxes, raccoons, bears, monkeys, squirrels, young antelopes, etc.

During the entire summer, all the birds, as well as the mammals, were in Mr. Loring's charge, and in spite of numerous perplexing difficulties they were very successfully cared for.

The first large ruminant to arrive at the park was a yearling caribou, which came from Champlain County, Canada. Pending the completion of the caribou shelter house, this animal was temporarily installed in the moose range. This specimen was quickly followed by three elk, male, female and young, presented to the Zoological Park by the Brooklyn Park Department, through Commissioner George M. Brower and Landscape Architect De Wolf. These fine animals were immediately placed in the elk range, where they were soon joined by seven more elk presented by Mr. George J. Gould, making a very fine herd, consisting of two large males, two young males and females of various ages.

Following closely upon the completion of the buffalo house and the corrals, was the arrival from Texas and Oklahoma of seven buffaloes, selected and purchased for the Society by Mr. C. J. Jones and by him delivered at the Zoological Park. These animals represent two strains of blood, and form a very satisfactory nucleus for what is intended shall be a herd of about twenty individuals.

After much correspondence, and the placing of several orders, six young prong-horned antelopes were procured and safely transported to the park. They were all quite small and generally delicate. Being fully aware of the difficulty of acclimating these animals on the Atlantic seaboard, they received from the first the most unremitting care. In spite of all efforts, however, illnesses in the little herd were frequent, and one by one four out of six animals have died, usually without any premonitory symptoms. The difficulty of rearing antelopes in captivity, even in the portions of the West where the animals run wild, is so well known that, while these deaths have

occasioned much regret, they have caused no surprise. At present the two remaining specimens are in excellent condition, and it is hoped they will survive and become physically adjusted to this climate. The Society intends to persist in its efforts to establish in the park a representative herd of prong-horned antelopes, and if possible induce the species to breed.

The accumulation of small mammals from the tropics rendered it immediately necessary to provide for them a shelter building which could be heated in winter. To this end the construction of a glass house was determined upon, and during the months of September and October a building 25 by 75 feet was erected near the burrowing rodent's quarters. The construction of the cage work occupied two months longer, and this building was finally opened to the public on January 24 with all of its cages filled. It contains cages for small mammals of various sizes, and the abundance of light and ventilation leads to the belief that the building will be found admirably adapted for the display of small mammals, both summer and winter. In this building are housed the three orang-utans, all the monkeys, all the lynxes, the great ant-eater, the young tiger and various smaller species.

On January 1, the mammal collections of the Zoological Park were as follows :

Primates	6 species.....	10 specimens.
Carnivora	21 "	43 "
Ungulata.....	9 "	28 "
Rodentia	6 "	65 "
Edentata	1 "	1 "
Marsupialia	1 "	4 "
Total	<u>44</u> "	<u>151</u> "

The Society has received, by purchase, three caribou from northern Newfoundland ; by gift, from Mr. William Rockefeller, four fallow deer and two red deer, and from the Duke of Bedford, two sambar deer and one equine deer. It is our intention to fill up the ranges as rapidly as possible with the large ungulates for which they were designed, until each range contains as large a herd as it will properly accommodate.

The four bear dens, completed in October, were filled immediately thereafter. The special installation for the polar bears has not yet been constructed, and these fine animals are now kept in one of the ordinary bear inclosures, which is very inadequate for their needs. The small bathing tank, which is sufficient for other bears, is entirely too small for polar bears, and it is imperative that another inclosure, with a spacious swimming pool, be constructed without delay. The polar bears are fine and showy animals, and should have a swimming pool suitable to their very interesting aquatic habits.

2. BIRDS.

After much deliberation, the choice of an ornithologist to take charge of the bird collections of the Zoological Park fell upon Mr. C. William Beebe, who entered the service of the Society on October 16, 1899. For several years Mr. Beebe has been a close student of the classification, structure and food habits of birds, and by reason of his combined knowledge of systematic orni-

thology, and of bird life in the field, he is specially qualified for the duties of the position to which he was appointed.

Through arrangements perfected by the Director during a vacation trip to Florida in February, 1899, Mr. C. F. Latham collected for the Society in the heronries on the headwaters of the St. John's river a considerable number of young specimens of herons, egrets, ibises, etc. He also purchased for the Society the entire collection of birds, quadrupeds and reptiles owned by the estate of the late Dr. John Vedder, of St. Augustine, and in July arrived at the Zoological Park with about two hundred living specimens. He also brought an important collection of subtropical plants for display in the conservatory attached to the reptile house. Through this means and through purchases the Society acquired a collection of water birds and birds of prey sufficient to completely fill all the cages in and around the aquatic birds' house and to make a very respectable showing in the ducks' aviary.

The large central cage in the bird house has proven a success beyond all expectations. A few days before the formal opening of the park it was occupied by a mixed collection of flamingoes, pelicans, white swans, wild geese, ducks of various species, scarlet ibis, glossy ibis, wood ibis, egrets, etc., to a total number of about fifty birds. The floor of the cage is raised eighteen inches above the floor of the building, and in its centre is a large pool of running water, provided with a central fountain.

The success of this exhibit in a great measure depends upon the harmony of its members, and a bird which proves to be of a quarrelsome nature is not permitted in the group. The result of the association of a number of species in this spacious inclosure is quickly noticeable in the condition of the birds. They are remarkably healthy and active, and the mortality in this group has been very low. Indeed, so beneficial are the conditions of this miniature flying cage that when water birds quartered elsewhere begin to show signs of illness or lack of appetite they are immediately transferred to the flying cage, where in nearly every instance they have been benefited by the changed conditions.

The difficulties encountered in the construction of the large aquarium tank for diving birds have delayed its completion, and it was not until January 20 that it was filled with water for the first time. Even then the filter which had been provided for its water supply proved inadequate, and necessitated further experiment.

The birds of prey quartered temporarily in the cages along the outer walls of the bird house have been maintained in good condition, but the eagles and condors are perceptibly crowded. It is to be hoped that the eagles' and vultures' aviary, or at least an important section of it, may be constructed soon, and thereby furnish the birds of prey with as good accommodations as have been provided for the water birds.

The full stocking of the ducks' aviary was purposely delayed until 1900. Nevertheless, it has contained all winter flocks of swans, geese and ducks, representing eight species.

It has been impossible for the Society to accept gifts of perching birds, pheasants and cranes which have been offered, because there are no suitable accommodations for them. The absence of a pheasants' aviary is particularly regrettable because of the general interest in birds of this order, and the ease with which aviaries can be stocked.

On January 1, the bird collections of the Zoological Park consisted of the following :

Longipennes.....	1 species.....	4 specimens.
Steganopodes	2 "	21 "
Anseres	10 "	62 "
Odontoglossæ.....	1 "	4 "
Herodiones.....	12 "	38 "
Paludicolæ.....	1 "	2 "
Gallinæ.....	2 "	13 "
Raptores.....	11 "	29 "
Psittaci	1 "	2 "
Passeres.....	2 "	10 "
Total.....	43 species.....	185 specimens.

3. REPTILES AND AMPHIBIANS.

No event in connection with the opening of the Zoological Park was watched by the public with keener interest than the completion and opening of the reptile house. The public had become acquainted with the fact that because of the general lack of facilities for studying reptiles, the Zoological Society proposed to devote early attention to animals of this class. The Society was fortunate in securing for Assistant Curator, in charge of reptiles, Mr. Raymond L. Ditmars, a thoroughly qualified expert in the care of reptiles in captivity, and also a man well versed in reptilian classification and life history. Mr. Ditmars assumed the duties of his position on July 17, 1899, and, in addition to caring for the reptiles then in the park, he at once began to take measure for the increase of the collections. He immediately presented to the Society his entire collection of living serpents, consisting of 45 specimens, representing 15 species.

Pending the completion of the reptile house, all the reptilian collections were temporarily provided for in the animal yard, which has been previously mentioned. One very difficult feature in connection with the collections of this department is the food supply, and the ingenuity of the Curator and his assistants has been taxed to the utmost to supply the great variety of kinds of food which the capricious appetites of captive reptiles demand.

From the outset, a fair share of attention had been bestowed upon the formation of collections for this building, and the degree of progress that had been made by the opening day seemed acceptable to the public. The venomous serpents of North America were particularly represented. A special effort was made to show as many as possible of the batrachians, which resulted in the exhibition of thirteen species. A very fair collection of turtles and terrapins filled the central pools and sand banks which had been provided for them, and the alligator pool contained seven alligators, varying in length from 6 to 12 feet. The largest individual was obtained for the Society in Cocoa, Florida, and brought up with the two carloads of specimens received from that State. A Florida crocodile, which had been held for some weeks at Palm Beach for the Society, unfortunately died before it was delivered.

Two very fine reticulated pythons were secured by purchase in New York City, but owing to the unexpected cold wave which visited the Atlantic coast in October, before the reptile

house was heated, one of these specimens died of congestion of the lungs. The other survived and is still in good condition. Purchases of reptiles have been made from time to time as opportunity offered.

On January 1 the reptilian collections of the Zoological Park consisted of the following :

Crocodylia	1 species.....	18 specimens
Chelonia	22 "	85 "
Lacertilia	12 "	65 "
Ophidia—Venomous	11	51.....
Non-venomous.....	33	186.....
—	44 " —	237 "
Amphibia.....	13 "	40 "
—	—	—
Total	92 species	445 specimens

Summary of Live Animals on hand January 1, 1900.

Mammals	44 species.....	151 specimens
Birds	43 "	185 "
Reptiles	92 "	445 "
Total	179 species.....	781 specimens

Forestry, Gardening and Park Service.

The amount and variety of work performed during the year by Chief Forester Hermann W. Merkel and his force was very great. Under the spur of imperative necessity, and to meet the demands of each month, a large force of laborers, skilled and unskilled, was placed at Mr. Merkel's disposal, and by him kept very busily engaged until the exhaustion of the maintenance fund rendered it necessary to dispense with twenty-three men out of thirty,

To many of those who visited the park during the working season of 1890, and observed the chaos which then prevailed, it seemed impossible that it could be reduced to order before the opening day. The amount of work required to smooth up the grounds after the various kinds of contract work had been completed, was really enormous, and unfortunately this work was of such a peculiar nature, and the requirement so constant for the exercise of artistic taste and expert judgment, it was impossible for it to be specified and performed by contract. In the matter of road and walk making, the contractor's duties extended only two feet beyond his macadam work, and the regulating, grading and seeding necessary to join the park surface to the walks, was work which could be performed satisfactorily only by the chief forester and his men.

For similar reasons, the work of finishing the borders of all ponds devolved upon this department, and in connection with the aquatic mammals' pond and ducks' aviary, required a great amount of labor. For example, it was found necessary to cover practically the entire bottom and borders of the former with broken rock and gravel six inches in depth. Several hundred loads of rock were donated for this purpose by the Zoological Society, from the

excavation made for the antelope house; and by permission of Park Commissioner Moebus, about one hundred loads of gravel were hauled from a bank in Mosholu parkway and spread upon the banks.

The following is a brief resumé of the principal work performed by Mr. Merkel's department during the year :

About nine hundred forest trees were pruned, and cavities filled in about eighty.

About two hundred dead, dangerous and unsightly trees were removed, sawn into cord wood and piled up.

A nursery was established in the northeastern corner of the park.

A road was opened from Boston road to the nursery.

About twenty thousand trees, shrubs, vines and perennials were collected and propagated.

The whole of the ducks' aviary was surfaced and seeded.

The whole of the aquatic mammals' pond was dressed down to a finish, and surfaced with 6 inches of broken stone and gravel.

About 160,000 square feet of walk borders were regulated, graded and seeded.

About 700 feet of old roads through animal ranges were obliterated and seeded.

About 2,900 feet of posts and guard wire erected along walk borders.

The crocodile pool and fifty-one reptile cases in reptile house decorated with plants, and constantly maintained.

About one thousand cabbages, two thousand ears of corn, one thousand five hundred pounds mangel wurtzels, one thousand heads of lettuce and twenty barrels of turnips raised in nursery for animal food.

Maintained all walks and roads, and daily service of carts and cleaners for the entire park.

The Director desires to call special attention to the practical difficulties involved in selecting and maintaining living plants in glass cases containing reptiles, and also in the main halls of such buildings as the Reptile House, Bird House and Small Mammals' House, when the great accumulations of sand and dust from the feet of the visitors render the care of living plants a continuous struggle. The fifty-one cases in the Reptile House abundantly attest both the botanical knowledge and the artistic taste of Mr. Merkel, who, in spite of many difficulties, has so successfully collected and arranged the plant life they contain.

In view of the very important and even imperative duties now devolving upon the Society in the preservation of the forests of the Zoological Park, in doing the planting that is absolutely necessary, and in maintaining these two hundred and sixty-one acres of park lands in a condition which will be satisfactory to the people of Greater New York, the special appropriation of \$10,000 which was asked for last year is very seriously needed, considering the work to be done. The amount is not one dollar more than is necessary, and it is earnestly hoped that for 1901 it will be granted.

Construction.

During the year 1899, the position of Chief Constructor was filled most acceptably by Mr. W. H. Puffer. We cannot speak too highly in praise of the ability displayed by Mr. Puffer in the discharge of the very complex and exacting duties which devolved upon him, and the diligence with which he pushed forward the Society's work. It was his duty to see that all contracts in connection with the Society's buildings were carried out faithfully and promptly, and also that the force of day laborers and mechanics at work under his direction met all expectations regarding them. A very important part of his duties consisted in securing bids on such materials as were used in the construction work carried on by our own force. In many instances, special features of construction were carried out by Mr. Puffer's force at considerably less cost than the lowest bid of contractors.

Several special features in masonry were constructed by our own masons, for the reason that satisfactory results could not be secured by contract work. Of this class the leading example is the series of sleeping dens for the bears. They were built against a ledge of bare granite rock, and faced with weathered blocks of granite so carefully selected, and so skillfully joined together, that at a trifling distance the sleeping dens appears to be a part of the natural ledge. The sleeping den of the Russian wolf is generally considered by visitors to have been dug out of a huge boulder of solid granite.

Owing to the complicated nature of the plumbing required for the Reptile House and Bird House, the whole of it was put in by our own force.

In this connection it is worthy of note that while nearly thirty-one contractors were engaged during the past year in the execution of orders for the Zoological Society, often upon work which required additions and alterations in course of construction, the Society's relations with all have been entirely harmonious. Not a single serious difference of opinion has arisen, nor one requiring the services of a referee. In view of the complex nature of many portions of our work, this result is well worthy of mention.

Engineering.

Throughout the year, Mr. George M. Beerbower has continued to serve the Society most acceptably as its civil engineer, and has been obliged to work with great diligence to meet the multitude of demands made upon him. He has staked out the lines of every building, aviary, den, range, corral, park boundary, walk and road, and he has also erected the batter boards for each of seventeen buildings that have up to this date been erected in the park. All the maps produced during the year were drawn by him, as also were numerous working drawings for wrought-iron work.

Ground Improvements by the Park Department.

In 1898 and 1899, the Board of Estimate placed at the disposal of the Park Department for the Borough of The Bronx, the sum of \$125,000 to be expended in preparing the grounds of South Bronx Park for use as a zoological park. Aside from the making of Park roads, this appears to have been the first appropriation ever made for the improvement of one of the great northern parks of this City, in a manner calculated to promote its utilization by pedestrians.

The amount of work accomplished during 1899 at the expense of this fund was very considerable, and the opinion has been freely expressed by citizens in no way connected with the work, save as taxpayers, that it is to be doubted whether the City has ever secured more results for the money expended than it obtained in this park during the year 1899.

As has previously been stated, all the improvements made were in harmony with the general scheme of development as proposed in 1897 by the Zoological Society. The general plans and specifications furnished by the Society were elaborated by Chief Engineer Daniel Ulrich into detailed plans and specifications, and various contracts were let by the Park Department to the lowest bidders. Assistant Engineer John P. Schermerhorn and a field party were especially detailed to take charge of the work in progress, and it required very nearly his undivided attention. It was the duty of the Director of the Park to explain and interpret to the engineers the general scheme of the Society, in order that the work performed by the City might exactly fit together with that of the Society, and that both together might harmonize with the natural surface and other natural features of the park.

From the very beginning, all parties concerned have labored most earnestly to fit the general plan to the grounds, and not to make the grounds conform to the plan. The exact grades of every walk and road, and the lines of every inclosure for animals were determined upon the ground, not in an office. The 12,000 lineal feet of walks and roads have been carefully fitted to the natural contours of the park, and the construction of the entire system completed thus far has not cost the life or even one valuable tree!

The task of providing this very uneven tract of forest and meadow land with walks, water, sewerage, buildings, dens, aviaries and ponds, all of which shall serve their functions, maintain the harmony of Nature, and yet do all work with both rapidity and economy, is to-day and from the beginning has been a difficult one. It is both a duty and a pleasure to record the fact that Park Commissioner Moebus and his engineers have, in every possible manner and on all occasions, labored most earnestly in co-operation with the Society to secure for the public the best possible results with a minimum of expenditure.

Up to the close of 1899, the work of the Park Department in the preparation of the grounds of the zoological park consisted of the following items:

Aquatic Mammals' Pond.

The first work of the City in the Zoological Park was the excavation of the aquatic mammals' pond, which was performed in the year 1898. The rough excavation had been almost completed by the time the winter put an end to all further operations. Owing to the soft, spongy nature of the material to be removed, the difficulties encountered in making the excavation were very great. The cost of the original excavation was over four thousand dollars, but, aside from the value of the Pond, the supply of rich, black soil obtained has been estimated by experts to be worth the entire sum expended in removing it. As stated above, the sides and bottom of this pond were finished by a force from the forestry and gardening department, working under the personal direction of Chief Forester Merkel. This pond, as completed, is highly satisfactory, and serves a number of important practical purposes, not the least of which is the continuous supply of pure ice it will yield for the park.

Service Road and Motor-carriage Road.

No other feature of the ground improvements has afforded such general relief to the park administration as the Service road. Prior to its completion there was a constant struggle with teamsters to keep them from ruining the southern portion of the park. This road enters the grounds from the Southern Boulevard, between the elk and moose ranges, touches the wolf dens and storehouse, passes close behind the reptile house, taps the bear dens by a short spur and sweeps around Rocking Stone Hill to the buffalo house and Public Comfort Building. It is built of telford macadam covered with trap-rock screenings, and is 3,000 feet in length. As a matter of course, it has been constructed to fit the contours of the ground over which it passes. Beside providing for the service of nearly the entire southern portion of the park, this road will presently form the middle half of the Motor-carriage road which has been designed for vehicles to carry visitors to various points in the area devoted to collections. An extension eastward of about 900 feet will carry the line to the Boston road, and an extension 1,400 feet northward will reach the proposed terminus of the line at the carriage entrance on Pelham avenue.

Gravel Walks.

On account of the numerous fillings required in constructing the walks made last year, it was inadvisable to surface them with asphalt until their foundations has settled as much as they ever will. It was therefore decided that for the first year, at least, the walks should all be finished as gravel walks, which was done. Between March 1 and November 1, Mr. William Masterson constructed, under the terms of his contract, 9,750 linear feet of gravel walks, varying in width from 10 to 20 feet, with a total surface of about 140,000 square feet. From each of three entrances a main walk 20 feet wide leads into the grounds, until it divides; and nearly all other walks are 12 feet in width. The system completed last year carries the visitor through the park diagonally from southeast to northwest, branching off midway to the southwest entrance, and reaches all of the twenty-six buildings and other inclosures which contain animals. During future years this system will be extended to the northeast entrance, Baird Court, the carriage entrance, and, in fact, all other portions of the grounds, on the lines laid down in the final plan.

Water Lines.

By dint of great effort, both on the part of the Park Department and the Zoological Park force, water pipes were laid, not only to the large buildings, dens and aviaries, but also to every range for animals. The two mains which have been laid into the grounds from the Southern Boulevard are large enough to provide adequate protection from fire; but a very moderate fraction of their capacity is sufficient for the ordinary needs of the park. Strict injunctions against unnecessary use of water have been laid upon the park officers.

The total length of water pipe of all sizes laid in the grounds last year was 6,110 feet, the greatest amount being of 1½-inch and 2-inch galvanized pipe, leading to the ranges for large game and the bear dens. Thus far no water pipes have been laid in Baird Court, for obvious reasons; but the present 6-inch main terminates within a few feet of the lion house and bird house.

Sewers.

The first sewer constructed in the zoological park was that in birds' valley, 1,200 feet in length, to receive the sewer stream coming into the park from Belmont. This was constructed by the Sewer Department, at a cost of \$2,250, which sum was specially appropriated in 1898. All the sewerage connected with the bear dens was constructed by the Zoological Society. Mr. Masterson constructed, under his general contract, a main sewer from the crocodile pool and reptile house on the east, and the otters' pool on the south, to a point in the northeast of the wolf dens. In birds' valley a lateral was built to the bird house, and many shorter lines were laid. Including the birds' valley sewer, the total length of sewers and drains constructed in the park up to date is 4,775 feet.

New Dam at Waterfall.

During the summer of 1899 the water in Lake Agassiz began to break through the old stone wall which abuts against the northern end of the rock ledge which forms the waterfall in the Bronx river. By degrees this wall was washed away, until Lake Agassiz was quite emptied of water. The malarious exhalations from the mud flats that were exposed became a public menace to health, and created a condition which demanded prompt abatement. Park Commissioner Moebus immediately ordered construction work which resulted in the rebuilding of the broken wall, and in replacing the decayed wooden timbers on top of the rock ledge with a coping of solid concrete, laid in curves conforming to the natural lines of the ledge. By this means the water in Lake Agassiz was again raised to its original level, and the nuisance was abated. While this work was in progress, a special force of men was employed in cleaning out the channel around the island near the southern shore, in order that a current might flow around it and abate the condition of unwholesome stagnation that had previously existed at that point. This end was successfully accomplished, and one more malarious influence has thereby been eliminated from that region.

Fences for Park Boundary and Ranges for Animals.

In April, 1899, a contract for wire fencing on steel posts was let to the Page Woven Wire Fence Company, and on July 1 that company completed the erection of 27,855 feet of elastic steel-wire fence, on heavy steel posts, a large number of which were set in concrete.

This contract inclosed all of the Zoological Park which lies west of the Boston road and south of Lake Agassiz, with a fence 7 feet 4 inches high, made of 25 wires of hardened steel, each having a tensile strength of between 4,000 and 4,500 pounds. The end and corner posts are of plate steel, the heaviest ever made for this fence, and are set four feet deep in a mass of solid concrete two feet in diameter. The same kind of fence incloses each of the ranges for buffalo, antelope, deer of various kinds, moose and caribou. At a little distance, say 200 feet, the wire of these fences very often is absolutely invisible. The entire work of erecting these fences and gates, and connecting them with buildings, has been done in a most painstaking and skillful manner, and they constitute a valuable object lesson for other cities wherein zoological gardens are to be established.

Toilet Cottages.

For temporary use, until a regular outlet for sewage has been secured via West Farms, four small toilet cottages of wood were erected last October by T. W. Timpson & Co., and completed before the park was formally opened to the public.

Entrance Pavilions.

A contract for the construction of four entrance pavilions, with rooms for gate-keepers, self-registering turnstiles, etc., was let to John R. Sheehan ; but while work upon them had been well advanced by the end of 1899, they are not yet ready for use. These pavilions are situated at the extreme corners of the inclosed area of the park, with the exception that the one nearest to West Farms is situated at the northeastern corner of the buffalo range. Pending the completion and acceptance of these pavilions, the Zoological Society has provided temporary sentry boxes for the gate-keepers.

Public Comfort Building No. 1.

On November 2, 1899, a contract was let to T. W. Timpson & Co. for the erection of a public comfort building, quite near the rocking stone. In addition to spacious toilet rooms, it will contain an interior dining room for the serving of cooked meals and extensive lunch counters in the two pavilion wings. This structure will be greatly needed as soon as spring opens, and it should be completed by June 1, 1900.

Grading of Baird Court.

A very important contract was let on September 7, 1899, to John C. Rogers, Jr., for \$20,756, for the grading of Baird Court, the erection of stone retaining-walls along both sides and certain other work. This work is a necessary preliminary to the erection of the large animal buildings that are to be located in that open space. Immediately upon the approval of his contract, Mr. Rogers began work with a large force of men and machinery, and by the end of the year had very nearly completed the task. One feature of this work is the excavation and concreting of a pool for sea-lions, situated in the centre of the court, which will be ready for use early in the coming spring.

Excavation of Cope Lake and Elk Pond.

Both these features are included in the contract with J. C. Rogers, Jr., mentioned above. The Elk pond excavation was completed in October. Work on Cope lake has been in almost constant progress for several months, and will be completed early in the spring. The Society will then take up promptly the work of finishing and seeding the banks of both these lakes, and confidently expects to have them in satisfactory condition by the time the mild weather of May brings the usual throng of visitors.

Benches.

Two hundred park benches have been contracted for by the Park Department, and are almost ready for delivery. These will be distributed generally throughout the Zoological Park grounds, in shady situations, where they will be most useful to visitors. Quite a number will be placed in the pleasure grounds bordering the river.

STATEMENT OF GROUND IMPROVEMENT CONTRACTS AND GENERAL WORK.

Expended for Ground Improvements to January 1, 1900.

Fences for ranges, corrals and boundary, $5\frac{1}{4}$ miles.....	\$10,571 84	
9,750 linear feet of gravel walks	}	30,970 48
6,110 linear feet of water-pipe (Masterson's).....		
4,775 linear feet of sewers.....		
3,000 linear feet of service road (contract).....		
22 flights of stone steps		
Manholes, street washers, etc.		
Excavating aquatic mammals' pond up to November 24, 1898.....		
New dam at waterfall, and other labor.....	8,061 17	
Four toilet cottages	1,400 00	
Engineering expenses.....	4,872 23	
Miscellaneous bills and supplies.....	1,233 54	
		<u>\$57,109 26</u>

Under Contract with Ground Improvement Fund.

Four entrance pavilions.....	\$8,600 00	
Grading of Baird Court....	} John C. Rogers, contractor.....	20,756 00
Erection of retaining-walls.....		
Excavation of Cope Lake....		
Excavation of elk pond....		
Public Comfort Building No. 1.....	16,550 00	
200 park benches	1,200 00	
		<u>47,106 00</u>
Total.....		\$104,215 26
Leaving an unexpended balance of.....		20,784 74
Total fund appropriated		<u>\$125,000 00</u>

Gratuitous Work.

At the north end of Baird Court, and extending along the entire line of the carriage concourse to the proposed carriage entrance at the Pelham Avenue Bridge, there existed a depression from five to seven feet in depth, which required to be filled before the concourse could be constructed. At the northwest entrance, also, a smaller depression existed. By a piece of very timely good fortune, the space which required filling was needed by Mr. J. C. Rogers as a dumping place for stone which he was removing from a street near the park. As a result, the delivery of several thousand cubic yards of earth was secured, free of charge, where the Society most desired to have it.

Several thousand dollars were saved to the City, and the final completion of the carriage and motor concourses was advanced by nearly a year.

Privileges.

During the year 1899 the Zoological Society claimed none of the privileges existing in the park, save that from November 9th onward an admission fee has been charged every Monday and Thursday at the gates to the fenced grounds. This fee is 25 cents for adults and 15 cents for children under twelve years of age. During the year 1900, however, and for the future, the Society will assume the management of all the privileges available in the Park, and devote the revenue from them solely to the purchase of animals for the collections.

The first edition of the Official Guide-book to the Park is being sold at cost ; but after the cost of the plates has been made up, its sale may possibly yield a small profit.

Attendance and Gate Receipts.

November 8—Formal opening of the Zoological Park.

November 9—First pay-day.

Attendance for remainder of November, 21 days.....	57,910
Attendance for December	31,932
Received at gates during November.....	\$230 75
Received at gates during December.....	\$162 65
Greatest number of visitors in one day, November 26th....	18,300

Maintenance Fund.

The following is a statement of the expenditures incurred for the maintenance of the Zoological Park during 1899. During the year reported upon the drain upon this fund for labor, which was imperatively necessary in connection with the proper care and treatment of the park grounds, roads, walks, etc., was much greater than was expected.

To offset this, the arrival of live animals and the engagement of curators and keepers was delayed as long as possible. During the year 1900 the increased expenditure necessary for services, food for animals, etc., will require at least \$5,000 per month, without providing for the planting operations that are so imperatively necessary. Aside from the care of the collections, the the proper grounds of the Zoological Park, and the wants of the public, require at all times, save in midwinter, a force of twenty men constantly employed. At present this force consists of seven men only.

Maintenance Expenditures in the Zoological Park.

January 1, 1899—Received "for six months' maintenance".....	\$30,000
Expended from City Maintenance Fund—January.....	\$162 30
" " February.....	215 75
" " March.....	705 87
" " April.....	1,453 18
" " May.....	3,185 58
" " June.....	5,582 77
" " July.....	3,516 42

Expended from City Maintenance Fund—August.....	\$4,910 58
“ “ September.....	4,988 00
“ “ October.....	4,456 17
“ “ November.....	823 38
Total.....	<u>\$30,000 00</u>
Paid by the Zoological Society for maintenance, November and December.....	7,038 61
Total.....	<u>\$37,038 61</u>

Detailed Statement of Maintenance Expenditures.

Salaries.....	\$26,645 35
Tools and hardware.....	1,474 95
Paints.....	41 33
Sundries.....	265 22
Nursery fixtures.....	557 62
Nursery stock and seeds.....	712 22
Fertilizers.....	323 00
Office furniture and fixtures.....	552 54
Office supplies and printing.....	306 88
Uniforms and badges.....	228 50
Sanitation.....	39 79
Insurance.....	46 38
Horses and vehicles.....	237 24
Repairs.....	81 03
Drainage and water supply.....	202 21
Roads and walks.....	202 09
Kitchen utensils.....	69 16
Stable and animal inclosure.....	739 91
Telephone.....	84 65
Landscape architecture.....	767 56
Postage, telegraph and express.....	362 06
Food for animals.....	1,840 95
Fences.....	635 26
Ice.....	63 13
Fuel.....	419 38
Labels and signs.....	120 20
Medical attendance.....	20 00
Total.....	<u>\$37,038 61</u>

Acknowledgments.

I cannot close this report without recording an expression of acknowledgment of the helpful sympathy which has been bestowed upon the work of the zoological park force, and for the universal and hearty co-operation which has made it possible to open the park in the year 1899.

It is well that members of the Zoological Society, and the public generally, should know that the attention of the Executive Committee to the work in hand has been constant and tireless. Not only has it been given to matters of prime importance, but it has also been lavishly bestowed upon matters of detail, and there are few features of work in the Park which do not bear the visible impress of the careful suggestion, criticism or direction of Professor Henry F. Osborn and Mr. Madison Grant. But for their devotion to the work the Zoological Park would be much less perfect than it now is. The speed which has been made in the Society's special work in the Park has been due to the diligence, attention and good business methods of the Executive Committee.

To the Park Department of this borough belongs great credit for the energy and success with which its work has been pushed forward. Park Commissioner Moebus has at all times hastened his share of the improvement work in the Park, and done everything in his power to promote the great end in view. The money expended under his direction has been expended wisely and economically and in entire accord with the plans and desires of the Zoological Society. The Park Department engineers in charge of the work have spared no pains nor labor in their endeavors to secure the best results obtainable, and the Society owes much to the sincere good-will of the various officials of the Park Department for the Borough of The Bronx.

The Society's relations with nearly all the contractors engaged in the Zoological Park have been most cordial, and nearly all have manifested a public spirited and helpful interest in carrying out the details of the general scheme of development.

For the numberless kind acts of sympathy and helpfulness which have been bestowed upon the Director individually he records his grateful thanks.

Respectfully submitted,

W. T. HORNADAY, Director of the New York Zoological Park.

BOROUGHES OF BROOKLYN AND QUEENS.

OFFICE OF THE DEPARTMENT OF PARKS—BOROUGHES OF BROOKLYN AND QUEENS, }
ROOM 14, BOROUGH HALL, BROOKLYN, }
January 1, 1900. }

Hon. ROBERT A. VAN WYCK, Mayor of The City of New York:

SIR—I have the honor to submit herewith the report of the Department of Parks of the boroughs of Brooklyn and Queens for the year 1899.

For the years 1898 and 1899 there was no money appropriated for new work. There were only the general appropriations for maintenance of the parks and boulevards under the jurisdiction of this department. By economy in the administration, and careful management of the labor, we were enabled to maintain and improve most of the parks, and at the same time do something toward the development of the unimproved portions of the system.

The Red Hook Park, situated in the Twelfth Ward, and in a locality where little or no effort has heretofore been made to beautify the city, and where parks are needed most, has been prepared and made ready for planting and seeding down in the spring. The shelter house and

toilet is also partially completed, and will be ready for use during the coming summer. The work will also include a fountain and walks laid with octagonal asphalt blocks.

In order to construct this park, aside from the planting, it was necessary to excavate and cart away over 13,000 cubic yards of ashes and other foreign materials, and to place therein about 20,000 cubic yards of top-soil and dressing.

The plaza at Fort Greene has also been put in condition for planting in the coming spring. The improvement consists of the removal of over 15,000 square yards of old tar pavement, and putting on the plaza over three thousand cubic yards of top-soil. This plaza has long been a menace to the health and comfort of the surrounding neighborhood and an eyesore to those using the public streets surrounding it, and it was also a reproach to the City that it should be permitted to surround the tomb of the martyrs of the revolutionary war. By a contract or agreement with the Brooklyn Rapid Transit Company, we placed on their cars about 11,000 cubic yards of this old tar pavement, which they carted away without any expense to the City, except the cost of making a temporary switch in the Myrtle Avenue car line to lay down rails for the freight cars. The transporting and carrying away of this tar pavement was done without any cost to the City, and at a saving of about \$15,000.

The circle at the Ninth avenue and Fifteenth street entrance to Prospect Park has all been laid out, curbed, flagged and guttered and the centres prepared for seeding down. Trees have been planted around the entire circle.

The work at the Fifteenth street entrance required the removal of 3,700 cubic yards of dirt and cobble-stones, and there were placed thereon 22,000 paving bricks, 630 cubic yards of trap-rock, 512 lineal feet of curved-stone coping, 130 feet of straight coping, 772 lineal feet of bluestone curbing, 6,352 square feet of sandstone flagging and 75 barrels of cement. In addition to this, 5 new catch-basins were built and 108 feet of drain-pipe laid, and 350 lineal feet of 2-inch water pipe introduced for irrigating purposes. The stone used cost \$3,925.67. All this stone had to be cut at its several joints, in order to form a circle.

Improvements have also been made at Sunset Park. A retaining-wall has been built of the natural rough boulders, which is unique in its character, and which has proved, so far as we have gone, to be substantial.

Fort Hamilton avenue, from Seventy-ninth street to the shore of New York Bay, has been graded and macadamized, at the contract price of \$25,304.90, which has been paid out of the Maintenance Fund. This completes the roadway of Fort Hamilton avenue, from Ocean park-way to the Shore drive.

The new palm house in Prospect Park, which was necessary for the protection of many of the choice palms of the City, has been completed. It has also been paid for out of the Maintenance Fund. The grading and excavation was done by the department, and also the foundation for the superstructure. The palm house is 50 feet wide, 100 feet in depth and 58 feet high. The cost of the building, exclusive of the above work, was \$17,830.

Plans are being perfected for a driveway, from Fort Hamilton avenue to the Shore drive, the intention being to open, grade and macadamize Sixty-seventh street to Fourth avenue; thence through city property to Second avenue, the roadway going under Second and Third avenues,

which avenues will be spanned over the roadway with suitable bridges. It is expected to have this roadway well under way during the coming year.

The general details of the work of the department for the past year, and a brief mention of the same, will be found in the report of the superintendent and landscape architect, which forms a part of this report. It also includes a financial statement for the year 1899, and such other matters as are pertinent to the administration of this Department.

Respectfully submitted,

GEO. V. BROWER, Commissioner, Department of Parks,
Boroughs of Brooklyn and Queens, City of New York.

SYNOPSIS OF THE WORK OF THE DEPARTMENT OF PARKS OF THE BOROUGHS OF BROOKLYN AND QUEENS FOR THE YEAR 1899.

Prospect Park.

The work in this Park is now mainly that of restoration and maintenance, requiring more skill, supervision and patience, however, than the rougher work of construction. The attrition of ever-increasing crowds of people, with the liberty they are allowed in Prospect Park, requires constant attention and continual freshening up in all places. This work, when well done, is not apparent to the casual visitor, and is only appreciated by those who frequent the park. The shores of the lake require continual filling-in and renewing where washed by the waves or worn by the feet of the unwary. The water weeds must be raked out and removed, while ornamental aquatic plants are renewed and cultivated. Poor soil on the hilltops and worn places has been renewed by good soil and the grass and shrubbery replanted. The borders of the drives and walks have been renewed and sodded.

A material aid to the preservation of the Park has been the completion of the new wrought-iron fence on the Coney Island avenue and Fifteenth street boundaries. Its good effects in restraining depredators and unruly persons were apparent at once.

Drives and Bridle-paths.

All the drives and bridle-paths in the park (covering a distance of thirteen miles) have been kept clean and in good order, and have been regularly sprinkled.

The driveway at the main entrance was resurfaced with 2,700 square yards of Hudson river gravel, and the driveway leading to Lookout Hill was resurfaced with 1,330 square yards of gravel. Part of the East Drive was also resurfaced, for which 1,300 square yards of Hudson river gravel were used. The holes and ruts in the roads, caused by washouts, were repaired and rolled. Several thousand feet of border along the drives were lowered and regraded and the grass restored.

All the catch-basins (about nine hundred) and the drains and gutters have been cleaned and opened and the shores of the brook restored. Two new waterfalls were built and the others repaired. The cesspool at the shelter house was cleaned out and filled in with earth from the East Side Lands, a new connection being made with the public sewer outside of the park.

About 1,000 feet of old drain-pipe was taken up and replaced by new pipe, at a level which will do away with several low places where pools of water formed after each storm.

The lake was cleaned of over 200 truck-loads of mud, which was carted to the East Side Lands.

Flower Gardens.

In the flower garden 480 square yards of old tar walks were taken up and carted to the East Side Lands, and 67,200 asphalt tiles were laid in their place, for which 225 cubic yards of sand was hauled.

New designs in flower-beds were executed, including the United States Steamship "Olympia" and America's Challenge Cup, as well as a reproduction of ancient patterns. A collection of dwarf Japanese trees excited much interest.

A rare and interesting collection of cacti was formed and placed on exhibition in the flower garden as long as the weather permitted, the night-blooming varieties being a special feature.

Late in the fall, after the beds had been dug over, about 110,000 hyacinth, tulip and narcissus bulbs were planted for spring display in new designs.

A new fountain basin was constructed at the "Point of Sight" on "Scarlet Island."

The rose garden suffered greatly from the drought of the early season, which shortened the period of bloom. However, the autumn flowers were unusually fine and lasting.

The water-lily ponds were as much enjoyed as ever, both the day-blooming collection and the nocturnal displays.

The old-fashioned perennial garden on Breeze Hill has been restored, and presented continual masses of bloom. The collection of hardy perennials in this garden was greater and more interesting than ever before.

The Green-houses.

The green-houses have been a continuous source of enjoyment to countless visitors throughout the year, the attractions being varied weekly. A particularly fine display, consisting of azaleas, hyacinths, tulips, etc., was prepared for Easter week. The chrysanthemum exhibition, started about November first, proved very attractive, thousands visiting it daily, especially on Sundays and holidays. Since the chrysanthemum show other flowering plants and shrubs have been placed in the green-houses, the display still being enjoyed by the public.

The new palm house, adjoining the present green-houses, is rapidly nearing completion, it having been delayed in its construction by a difficulty in the iron and steel markets.

In the propagating houses the force has been kept busy in potting and growing the numerous plants that will be used in the spring in the various parks throughout the boroughs of Brooklyn Queens.

Lawns, Meadows, etc.

All the lawns, meadows, etc., have been kept mown and their borders trimmed, holes filled with top-soil, and all bare places sown with grass seed, over 6,500 pounds being used in the various parks. Bare places along the borders of the lawns were dug up and sodded.

During the first three months of the year over 2,600 cubic yards of manure was received and spread for top dressing. Owing to the long-continued drought in the early summer, it was found necessary to water the lawns with fire-hose, after sundown, to preserve them from destruction.

The Trees.

During the year the work of pruning and caring for the trees was carefully carried on. Old, crowding and diseased trees were taken out, to the advantage of the more healthy ones remaining.

About six hundred and fifty evergreens and shrubs were planted on the mounds at the Plaza and at the various entrances to the park. Seventy-five sugar maples were planted around the outside of the park, along Ninth avenue and Coney Island avenue.

During the summer the spraying of trees for the destruction of insects in the various parks and on the boulevards, was successfully carried on.

Music in the Parks.

Band concerts were given in Prospect Park every Saturday and Sunday afternoon, from June 3 to September 16, inclusive, and special arrangements were made for a concert by the United German Singers of Brooklyn on Sunday, October 1.

Concerts were also given at various times during the summer at Tompkins, City, Fort Greene, Bushwick and Winthrop Parks, and at Kings Park, Jamaica, and the park at Flushing, Borough of Queens, on July 4.

The Electric Fountain.

The electric fountain was opened for the season on Tuesday evening, June 6, and displays were given every Tuesday and Friday evening until July 7, when, in consequence of the drought, the Department of Water Supply was obliged to discontinue the use of water.

Lawn Tennis and Croquet Grounds.

These grounds have been kept in excellent condition, and have been enjoyed by large numbers of people. The popularity of croquet still continues in Brooklyn.

Fifteenth Street Circle.

The roadways at the circle at Fifteenth street and Ninth avenue have been completed, being built of trap rock and screenings, 1,225 cubic feet of this material having been used. Five hundred and eighty linear feet of brick gutters have been built, the stone copings and pavement finished, and grass plots graded and filled in with top-soil, preparatory to seeding down in the spring.

Eighteen European linden trees were planted on the inner circle.

Parade Grounds.

All the buildings have been repaired, the grounds kept clean and in good order, and the grass regularly mown and rolled and kept in good condition for the thousands of games of baseball, cricket, foot-ball, polo, etc., played there.

Part of the old fence on the west side of the Parade Ground was removed to give a better view of the field, an effort that has resulted in general approbation. The fence on the other sides has been repaired, preparatory to painting.

Mechanical Work.

In addition to keeping all the tools, implements, wagons, trucks, carts, ploughs, steam and horse rollers, settees, buildings, shelters, fences, fountains, etc., in repair, and making seed and plant boxes, animal cages, tables and trusses for picnic grounds, and stakes and barricades for the Engineers' use, the following new work has been done :

Seats were made and decorated in Prospect Park for the Anniversary Day Parade, to accommodate 15,000 children, and three reviewing stands were also erected and decorated on the Long Meadow for the same purpose, as well as stands at Meserole and Leonard streets and Pennsylvania and Liberty avenues. Reviewing stands were also erected and decorated at various times at Fort Greene, Prospect Park plaza, Kings Park, Jamaica, Ocean parkway (for bicycle races) and Shore road and Eightieth street—the latter for ceremonies attending the presentation of a flag-pole to the City by the people of Bay Ridge.

A new storehouse was built near the workshops. A new and improved wire fence was partly built around the elk and deer paddocks, and the foundations for the new club-house for the American Model Yacht Club have been laid on the peninsula. The rustic work for both the above building and the new shelter at Red Hook Park was made at the workshops.

An addition to the new cold green-house of 60 feet (making this house now 120 feet in length), has been built, glazed and painted by park employees.

A new shelter and storage shed have been erected at Highland Park.

Gifts to the Park.

The following is a list of the donations to the Department during the year 1899 :

Plants, from Mrs. E. M. Champney, No. 716 Union street, Brooklyn ; seeds, from Mrs. J. U. Foster, Meriden, Conn. ; porcupine, from Mr. R. S. Miller, No. 573 Fulton street, Brooklyn ; plants, from Mr. A. Schwartzman, St. Mark's and Nostrand avenues, Brooklyn ; giant Abyssinian banana tree, from Dr. Warner, Arlington, N. Y. ; cedar trees, from C. H. Higbee, Fishkill, N. Y. ; plants and roots, from Mrs. E. S. Babbitt, Bristol, R. I. ; three bamboos, from Fairmount Park, Philadelphia, through Mr. C. H. Miller, Landscape Gardener ; collection of plants and cuttings, from Miss Helen Gould, Irvington, N. Y. ; small deer (from Cuba), from Mr. A. L. Ruland, Brooklyn ; pair of peacocks, from Mrs. G. H. Peabody, Abenia, Lake George, N. Y. ; one pheasant, from Mr. L. J. Cunningham, No. 291 State street, Brooklyn ; three bantam chickens, from Master N. G. Herreshoff, Jr., Bristol, R. I. ; one large owl, from Mrs. Lucinda Grace, No. 220 Hewes street, Brooklyn ; one monkey, from Mr. James M. Blackford, No. 340 Thirteenth street, Brooklyn ; one opossum, from Mr. Ernest Buhot, No. 319 Seventeenth street, Brooklyn ; one peacock, from Mr. G. H. Lovett, No. 480 Clinton avenue, Brooklyn ; two West Indian turtles, from Captain H. Low, No. 474 Thirteenth street, Brooklyn ; two foxes, from Mr. Warren Cruikshank, No. 141 Broadway, Borough of Manhattan ; one raccoon, from Dr. C. F. Fissler, No. 23 Kossuth place, Brooklyn ; one cactus, from Mr. Joseph Brugger, Brooklyn.

East Side Lands (Institute Gardens).

The work of forming the terrace on the East Side Lands was continued throughout the year, 81,523 cubic yards of earth having been received and distributed, and large quantities of top-soil received and stored, ready for distribution when the ground is ready. The formation of the outer mounds has also made considerable progress.

A large cold frame bedding plant was erected on these grounds for propagating purposes.

Seventy-five sugar maples were planted on the outside of the grounds, to take the place of dead and diseased ones that had been taken up.

Tompkins Park.

In addition to the regular work of keeping the shelters, walks, gutters, etc., clean and in order, the lawns mown and their borders trimmed, over fifty new trees have been planted inside and around the park. The trees and shrubs were trimmed during the winter and spring and sprayed twice with insecticide during the summer.

The shelter in the centre of the park was prepared by park employees for use as a public library, and was placed under the direction of the Brooklyn Public Library Association. New walks were laid around the library shelter, and the mounds around the same were filled in with top-soil and sodded.

The flower-beds were prepared and taken care of, and were replanted in the fall with hyacinth, tulip and other early blooming bulbs for spring exhibition.

Redford Park.

A new concrete sidewalk was laid around Bedford Park, on Park place and Kingston avenue, and the sides filled in with top-soil, preparatory to seeding down in the spring. A new flagpole was erected on July 3, in addition to which the regular work of maintenance has been carried on.

Red Hook Park.

In accordance with the accepted design, the work of improving this park is being pushed forward as rapidly as possible. Over 13,000 cubic yards of ashes and other refuse have been removed under contract, and about 20,000 cubic yards of top-soil received. There has also been received 1,300 cubic yards of manure, which was worked over with 2,850 cubic yards of poor soil.

The iron fence around the outside of the park has been rebuilt and painted, 1,257 feet of irrigation pipe and 640 feet of drain pipe laid, the new shelter partially built, fountain basins dug out and the formation of the ground well advanced.

Fort Greene.

The regular work of maintenance has been carried on, and the walks, gutters, basins and shelters kept clean and in order. New trees, shrubbery and flower-beds have been planted and cared for. The trees were sprayed during the summer and new designs in flower-beds executed, which in the fall were planted with early blooming bulbs for spring exhibition.

A design prepared by the Landscape Architect has been accepted for the improvement of the "Gant," and all the old asphalt pavement has been taken up and carted away, the surface covered

with top-soil, fertilized with over 900 truck loads of manure and graded, preparatory to sowing down in the spring. Walks have been laid out, ready for asphaltting the coming season.

The old pavement on the DeKalb avenue side of this park was taken up and relaid, and the borders partly regraded.

The customary celebration was held on July 4, at the Martyrs' Tomb, under the auspices of the Daughters of the American Revolution.

Sunset Park.

Sunset Park is now open to the public. A six-hole golf course was laid out on the grounds, and is used by several golf clubs.

The rustic stonework on the Fifth avenue side of the park has been carried on throughout the year, as the weather permitted. The amount of work accomplished during the year was as follows : 300 cubic yards of stone masonry excavated and set ; 290 boulders set, and 1,200 cubic yards of earth and top-soil carted, to fill in between boulders and tree holes. The unfavorable criticism of this work has entirely subsided, as the construction advances, and the people realize the object of the contract and appreciate the fact that this improvement will greatly beautify that section of the city.

Fort Hamilton Park.

At Fort Hamilton Park, 11,000 cubic yards of top-soil has been received, preparatory to commencing the construction of the park. The weeds were mown down and the park cleaned up, and curbs and gutters laid around the outside.

Forest Park.

Owing to the small force of men available for work at Forest Park, it has been maintained in its natural state, the men having been employed in trimming the trees and guarding the park from fires and reckless shooting. A number of arrests have been made by the park guards for shooting, and as in each case the offender has been fined or imprisoned, it is hoped that there will be much less shooting in the future.

As the men could be spared, they have been kept busy in repairing the roads and cleaning out surplus trees and underbrush. A small pond was filled in, by order of the Department of Health.

Small Parks.

Brooklyn Heights, Carroll, City, Winthrop, Bushwick, Bensonhurst, Municipal, Long Island City, Flushing, Kings (Jamaica), Cooper, Zindel, Underhill, Cooper, Gore, Cuyler, City Hall and Woodpoint Parks, and Saratoga and Irving squares and Lincoln terrace, have all received the necessary attention. The walks, gutters, basins, fountains and shelters were kept clean and in good order. The lawns were regularly mown and their borders trimmed, the trees, shrubbery and hedges trimmed and kept free from insects, and the flower-beds planted and kept in order. All the old flower-beds were dug up and planted with bulbs for spring exhibition.

Old and diseased trees on the outside of parks were dug up and replaced by new ones as follows : Winthrop Park, 92 sugar maples ; Bushwick Park, 27 Oriental planes ; Saratoga

square, 35 Oriental planes ; Irving square, 10 European lindens ; City Park, 7 poplars, and City Hall Park, 1 sugar maple.

New flag-poles were erected at Saratoga square, Irving square, Bushwick Park and Cooper Park.

Dyker Beach, Canarsie Beach and New Lots Playground.

These parks have all received the necessary attention. A new plank drain was built at Dyker Beach to drain the meadow.

College Point Park.

A design for this park was prepared, and the work of grading and covering the park with top-soil, according to contract, has been carried on.

Walks were made and covered with crushed bluestone, and an excavation dug for a fountain basin. It is hoped to continue this improvement during the coming season.

Linden Park, Corona.

This park has been entirely cleaned of garbage and other refuse and put in a sanitary condition. The lake was cleaned and weeds carted away.

Coney Island Concourse.

The Concourse at Coney Island has been kept clean and in good order. A new horse-bowl was put in and stone pavement laid around it.

A very severe storm on Sunday, December 24, carried away a large part of the asphalt pavement and otherwise severely damaged the beach. This, however, has been repaired as far as possible during the winter weather.

The Boulevard.

Over 1,400 sugar maples, Norway maples, American elms and Oriental plane trees have been planted along Ocean parkway, Eastern parkway, Eastern parkway extension and Highland Boulevard, to take the place of old and diseased trees that had been taken up. The trees on the entire length of the boulevards have been trimmed and sprayed, to destroy insects.

All the boulevards and roads have been regularly sprinkled, which, owing to the dryness of the season, was continued until December 10.

Ocean Parkway.

All of the drives, bicycle paths, side roads, gutters and bridle roads have been properly maintained. The main drive of the parkway was covered with trap-rock screenings and rolled, from Fort Hamilton avenue to Twenty-second avenue. The west drive was rebuilt from Twenty-second avenue to Avenue M with trap-rock and screenings, 17,300 cubic yards being used.

Three new catch-basins were built and 321 linear feet of nine-inch pipe laid at the Plaza Circle and Fort Hamilton avenue.

Bay Parkway (Twenty-second Avenue).

In addition to the regular maintenance, part of the main drive of Bay parkway was resurfaced with trap-rock and gravel, over 6,000 cubic yards having been used.

The roadway at the foot of Bay parkway, and also the drive through Bensonhurst Park, were resurfaced with 3,250 cubic yards of Hudson river gravel.

The main drive through Dyker Beach was repaired with gravel and screenings wherever required.

Fort Hamilton Avenue.

The contract of the Manhattan Construction Company, for improving Fort Hamilton avenue, from Seventy-ninth street to the shore of New York Bay, has been completed. The total amount of work performed was as follows : curbing, 12,411 linear feet ; macadam, 29,703 square yards ; belgian-block gutters, 2,752 square yards ; excavation, 14,000 cubic yards ; brick pavement, 99 square yards.

The remainder of the roadway of Fort Hamilton avenue was kept clean and in good condition.

Part of the roadway between Ocean parkway and Gravesend avenue was rebuilt with a layer of 5 inches in thickness of crushed trap-rock, bound with Hudson river gravel and topped with trap-rock screenings.

Eastern Parkway and Eastern Parkway Extension.

All of the drives, gutters and side roads of Eastern parkway and its extension have been kept clean and in good order.

Two blocks of Eastern parkway, extending to Ralph avenue, have been covered with Hudson river gravel and rolled. Part of the main drive, from the entrance to the Museum of Arts and Sciences to the Plaza at the main entrance to Prospect Park, an area of about 4,000 square yards, was resurfaced with Marcellus Shale sandstone screenings.

The Eastern parkway extension was rebuilt from Atlantic avenue to Fulton avenue, a total of 2,000 square yards having been resurfaced with trap-rock and screenings.

Twenty-sixth Ward Streets.

The streets under the jurisdiction of the Park Department in the Twenty-sixth Ward have all received regular attention, the roads, gutters, etc., having been kept clean and in good condition.

Stone avenue was improved with gravel and trap-rock screenings, 4,530 square yards having been resurfaced. The avenue was curbed and guttered throughout its entire length.

The widening and resurfacing of New Lots road has been completed as far as Miller avenue.

Bay Ridge Parkway (Shore Drive).

The contract of Kelly & Byrnes for the improvement of the Shore road terminus, on which work was commenced June 14, has been completed. The total amount of work performed was as follows :

Curbing, 4,123 lineal feet ; brick pavement, 1,354 square yards ; telford pavement, 7,477 square yards ; drain pipes, 18-inch, 2,139 linear feet ; drain-pipes, 12-inch, 597 linear feet ; catch-basins and manholes, 29 ; excavation and refilling, 5,272 cubic yards.

The balance of the roadway of the Shore drive was regularly maintained in good condition. A flag-pole, 140 feet high, was erected on the Shore road at "Owl's Head," and was presented to the City by the citizens of Bay Ridge, with appropriate ceremonies, on September 28, 1899.

Respectfully submitted,

ALVIN BOODY, Superintendent,
JOHN DE WOLF, L. A.

REPORT OF THE CAPTAIN OF POLICE.

OFFICE OF THE DEPARTMENT OF PARKS—BOROUGH OF BROOKLYN AND QUEENS, }
LITCHFIELD MANSION, PROSPECT PARK, BROOKLYN, }
January 1, 1900. }

Hon. GEORGE V. BROWER, Commissioner, Department of Parks, Boroughs of Brooklyn and Queens :

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

Prospect Park Police Force.

The Police permanently assigned to duty in this precinct, sixty-seven in number, are composed of the following officers :

One captain, five sergeants, one detective sergeant, two roundsmen and fifty-eight patrolmen.

One sergeant, permanently assigned to duty in this precinct, is in charge of the horses and equipments of the Police Department of the Borough of Brooklyn, and is therefore not on our active list.

Six of the fifty-eight Patrolmen permanently assigned to duty in this precinct are, at the present time, temporarily attached to the Twenty-seventh Precinct, in the former town of Flatbush.

One Patrolman died, one was retired and three were transferred to other precincts without being replaced by substitutes since my last annual report, thus leaving our total force five Patrolmen short of what it was a year ago.

Arrests in the Park.

There were fifty-four arrests made by the members of this precinct during the year ending December 31, 1899, for the following causes :

Homicide, 1 ; grand larceny, 2 ; burglary, 3 ; indecent exposure, 3 ; disorderly conduct, 4 ; attempted felonious assault, 1 ; reckless driving, 2 ; assault in the third degree, 6 ; carrying con

cealed weapons, 1 ; lounging, 5 ; vagrancy, 2 ; violation of park ordinances, 6 ; intoxication, 9 ; suspicious persons, 1, and petit larceny, 8.

Music in the Parks.

The following concerts were given in Prospect Park and some of the larger outside parks during the summer months :

Saturday concerts in Prospect Park, 16 ; first concert June 3, last concert September 2.

Sunday concerts in Prospect Park, 12 ; first concert June 4, last concert September 3.

There were also special concerts given in Prospect Park on July 4 and September 16, the latter being a military concert under the auspices of the Grand Army of the Republic.

In Fort Greene Park there were nine regular Saturday concerts given, the first being on July 2 and the last on August 26, with an additional special concert on July 4, which made ten concerts in all.

In City Park there were four Sunday concerts, the first being on July 30 and the last on August 20.

In Winthrop Park there were six Saturday concerts, the first on July 22 and the last on August 26.

In Bushwick Park there were five Saturday concerts, the first on July 22 and the last on August 19.

In Tompkins Park there were four Saturday concerts, the first on July 29 and the last on August 19.

Summer Picnics.

During the year there were 412 picnics in Prospect Park, representing an attendance of 43,365 persons. Of these there were 172 Sunday school picnics, with an attendance of 33,990 persons; 19 private school picnics, attendance, 357; and 215 social and family parties, with an attendance of 7,473 persons.

During the month of May there were 102 picnics, with an attendance of 4,891 persons; in June, 102 picnics, with an attendance of 11,300 persons; in July, 127 picnics, with an attendance of 16,921 persons; in August, 54 picnics, with an attendance of 6,690 persons; and in September 27 picnics, with an attendance of 3,763 persons.

Field Sports.

There were 1,957 games of baseball played on the Parade Ground during the season, in the following order :

In April, 62 ; in May, 234 ; in June, 315 ; in July, 343 ; in August, 384 ; in September, 326, and in October, 93.

There were 83 games of cricket played during the following months : May, 12 ; June, 18 ; July, 14 ; August, 24, and September, 15.

There were 108 games of football played during the months of October and November.

There were 43 games of basket-ball played by young ladies connected with different clubs during the months of May and September.

There were four days of skating during the months of January and February.

There were (estimated) about 1,200 games of croquet and from 3,800 to 4,000 games of lawn tennis played during the summer season.

List of Accidents.

The total number of accidents of all kinds during the year was 102, and the number requiring medical attendance was 58. Of these 58 cases 30 were removed to the hospital and 28 were sent or removed to their homes.

The accidents above-mentioned were as follows: Miscellaneous accidents to carriages and sleighs, 28; accidents to bicyclists, 11; accidents to saddle horses, 7; collisions between carriages and other vehicles, 13; collisions between carriages and bicycles, 3; collisions between bicycles, 8; collisions between trolley cars, trucks, carriages and bicycles, 8; run down and injured by carriages, 2; run down and injured by bicycles, 5; run down and injured by trolley cars, 3; run down and injured by saddle horses, 2; fell from trolley cars and injured, 8; injured while playing ball on the Parade Ground, 3; injured while skating on Prospect Park lake, 1; fell in Prospect Park and injured, 5; injured by premature discharge of cannon at military concert, 1; injured by attempting to stop runaway horse, 1; number of persons who fell in the lake and were rescued, 3.

There were ten persons taken sick in Prospect Park, all of whom were removed to their homes or to the hospital; five lost children found wandering in the park were restored to their homes; and one lost child, for whom there was no claimant, was turned over to the Society for the Prevention of Cruelty to Children.

There was one suicide by poison in the rose garden in Prospect Park, and the body of one dead infant, which was removed to the morgue, was found in the park.

The number of ambulance calls during the year was 58.

Respectfully submitted,

MICHAEL A. McNAMARA, Captain of Police.

REPORT OF THE SECRETARY.

Detailed Statement of Expenditures of the Department of Parks of the Boroughs of Brooklyn and Queens during the year 1899.

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899 Jan. 10	Brooklyn Institute of Art and Sciences.	Wages and supplies, December, 1898.....	\$5,564 85
" 11	J. M. Thorburn & Co.	Seeds.....	153 80
" 11	Parsons & Sons Company.....	Oriental Plane Trees.....	56 25
" 11	Frederick W. Kelsey.....	1000 California Privet.....	22 50
" 11	Jamaica Water Supply Company.....	Water, Forest Park, May 1, 1898, to November 1, 1898.....	11 25

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899			
Jan. 11	Jamaica Water Supply Company.....	Water, Forest Park, November 1, 1898, to December 31, 1898.....	\$3 75
" 11	Edison Electric Illuminating Company.....	Electric light at Lake-house, January 1, 1898, to November 30, 1898.....	161 17
" 11	N. Y. & N. J. Telephone Company.....	Telephone service.....	196 56
" 11	"	"	84 59
" 13	Brooklyn Metal Ceiling Company.....	Ceiling at Litchfield Mansion.....	25 00
" 19	Elliott, Jones, Breckinridge & Dater. }	Attorney's fees in connection with purchase of Weck property, for Bay Ridge parkway. }	585 75
" 20	F. X. Kerrigan, Chief Clerk.....	Office disbursements.....	94 65
" 24	Watson & Pittinger.....	Lumber.....	44 48
" 24	Samuel W. Cornell.....	Hardware, etc.....	97 80
" 24	N. Langler & Sons.....	Carriage hardware.....	94 62
" 24	James T. Shillinglaw.....	Horse liniment.....	5 40
" 24	D. W. Binns.....	Basin heads and grates.....	96 00
" 24	C. Offerman.....	Two tons Cumberland coal.....	7 70
" 24	John A. Scollay.....	Repairs to boiler at Green-house.....	17 50
" 24	Henry McShane Manufacturing Company.....	Plumbing materials.....	56 93
" 24	F. Donovan & Son.....	Cracked corn, screenings, etc.....	6 00
" 24	J. K. Brown.....	Erection of derrick, etc.....	55 50
" 24	S. B. Kraus.....	Painting materials.....	31 28
" 24	P. Kane Harness Manufacturing Company.....	Repairing harness, etc.....	3 45
" 24	C. W. Keenan.....	Rock potash.....	5 00
" 24	The Bolton Drug Co., Limited.....	London purple, sulphur, etc.....	36 56
" 25	Edward T. Buckingham.....	Plants and bulbs.....	35 29
" 25	Williamsburgh City Fire Insurance Company.....	Insurance, Forest Park property.....	25 50
" 25	F. Donovan & Son.....	Oats, corn, hay, etc.....	314 25
" 25	Charles Zeller's Sons.....	Plants.....	29 50
" 26	C. Offerman.....	Coal.....	983 55
" 26	Williamsburgh City Fire Insurance Company.....	Insurance, Shore road property.....	181 75
" 30	Brooklyn Union Gas Company.....	Gas at Litchfield mansion.....	21 35
" 30	Flatbush Water Works Company.....	Water at Ocean and Flatbush avenues.....	11 85
" 30	Michael Kennedy.....	Carrots.....	12 50
" 30	Department of Correction.....	Brooms.....	25 00
" 30	Manhattan Supply Company.....	Screws.....	90
" 30	James Campbell.....	Charcoal.....	6 00
" 31	Joseph A. Manda.....	Moss and peat fibre.....	33 75
" 31	Charles J. Dunne.....	Meat and fish, November, for feeding animals...	14 40
" 31	"	Meat and fish, December, for feeding animals...	14 88
" 31	Ed. T. Buckingham.....	Plants.....	6 60

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899. Jan. 31	Edison Electric Illuminating Company.	Electric light, Farmhouse and Shelter-house . . .	\$23 67
" 31	C. H. Joosten	Rhododendrons	111 50
" 31	"	Plants	150 00
" 31	Nassau Fire Insurance Company.	Premium on insurance, Bedford Park building . .	25 00
Feb. 6	Robert T. Brown, secretary	Office disbursements	13 66
" 6	F. Donovan & Son	Oats, hay, straw, etc.	359 52
" 9	New York and New Jersey Telephone Company	Telephone service	8 70
" 15	Henry McShane Manufacturing Com- pany.	Plumbing materials	380 17
" 15	Jamaica Water Supply Company.	Water, Forest Park.	7 50
" 23	Francis X. Kerrigan, Chief Clerk.	Office disbursements	83 23
" 27	Brooklyn Lumber Company	Lumber.	383 30
" 28	Leggat Bros.	Books on gardening	21 30
" 28	C. W. Keenan	Fresco leaf bronze.	5 50
" 28	Edison Electric Illuminating Company.	Electric light, Farm-house and Shelter-house . .	98 18
" 28	"	Electric light at Lake-house.	25 00
" 28	W. A. Manda	Fancy-leaved caladiums.	20 00
" 28	Brooklyn Borough Gas Company.	Gas, Coney Island Concourse.	126 00
" 28	C. Offerman.	1 ton Cumberland coal.	3 85
" 28	James Smith.	25 loads of manure.	31 25
" 28	The P. Kane Harness Manufacturing Company.	Stable supplies, repairs, etc.	48 15
" 28	C. W. Keenan	Painting materials.	106 78
" 28	Photogravure and Color Company.	Designs for music programs	100 00
" 28	David G. Yates & Co	Plants	437 75
" 28	A. M. Stein & Co.	Five horses.	865 00
" 28	Diebold Safe and Lock Company.	Moving safe from Prospect Park to Borough Hall.	30 00
" 28	Patrick Keegan.	25 loads of manure.	31 25
" 28	William H. Jackson & Co.	Bottom and dump for grate.	3 50
" 28	Patrick McDermott.	50 loads of manure.	62 50
" 28	James Hines.	25 loads of manure.	31 25
" 28	James J. Farrell	25 loads of manure.	31 25
" 28	James Campbell.	Charcoal.	6 00
" 28	Flatbush Water Works Company	Water, Ocean avenue and Flatbush avenue. . . .	5 17
" 28	Ball & Corbett	Inspection and report on steam rollers.	50 00
" 28	Samuel W. Cornell	Hardware, etc.	66 26
" 28	Pierce, Butler & Pierce Manufacturing Company	Grate, gaskets, etc.	60 20
" 28	Henry McShane Manufacturing Com- pany.	Plumbing materials.	16 50
" 28	John F. Maillie	4,250 cubic yards top soil.	2,890 00
" 28	"	9,500 grass sods.	114 00

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899			
Feb. 28	John F. Maille.....	Trap-rock screenings.....	\$207 80
Mar. 8	Frederick MacMonnies.....	Third payment on contract for side groups, } Memorial Arch.....}	10,000 00
" 9	Robert T. Brown, Secretary.....	Office disbursements.....	14 39
" 9	S. B. Kraus.....	Painting materials.....	38 04
" 11	Philip S. Langler.....	Wagon and carriage hardware.....	223 86
" 11	Watson & Pittinger.....	Lumber.....	109 74
" 11	W. Dolan.....	50 loads of manure.....	62 50
" 11	Brooklyn Union Gas Company.....	Gas at Litchfield Mansion.....	16 91
" 11	The J. L. Mott Iron Works.....	Grate, door, etc., for range.....	4 97
" 11	A. V. Benoit.....	Engineer's supplies.....	22 07
" 11	N. Langler & Sons.....	Star pads and buggy shafts.....	17 25
" 11	F. Donovan & Son.....	Cracked corn, screenings, meal, etc.....	28 30
" 11	W. L. Gildden.....	Two extension ladders.....	36 00
" 11	James T. Shillinglaw.....	Horse medicines.....	2 65
" 14	Francis X. Kerrigan, Chief Clerk.....	Office disbursements.....	73 87
" 17	John Morrissey.....	Repairs at Ocean parkway and Avenue U.....	100 00
" 17	William N. Kenyon.....	Brick, cement and lime.....	88 00
" 17	Bauch & Harris Machine Tool Com- } pany.....}	2 ice planers.....	300 00
" 22	Brooklyn Institute of Arts and Science ^s	Wages and Supplies, January.....	1,075 23
" 22	" "	Wages and supplies, February.....	1,535 69
" 22	Thomas Kelly.....	25 loads of manure.....	31 25
" 22	Michael McGarry.....	225 ".....	281 25
" 22	W. Dolan.....	25 ".....	31 25
" 22	F. Donovan & Son.....	Hay, straw, oats, etc.....	287 41
" 22	The Neostyle Company.....	1 rotary neostyle and paper.....	53 60
" 24	M. O'Hara.....	25 loads of manure.....	31 25
" 24	B. E. Gray.....	25 ".....	31 25
" 24	T. Kennington.....	25 ".....	31 25
" 24	P. H. Nannery.....	50 ".....	62 50
" 24	Peter Fruh.....	Boulders for Sunset Park.....	677 92
" 24	Peter Gill.....	50 loads of manure.....	62 50
" 24	Edward Reilly.....	50 ".....	62 50
" 24	Patrick McCormick.....	50 ".....	62 50
" 24	Peter Keegan.....	50 ".....	62 50
" 27	Timothy Conklin.....	75 ".....	93 75
" 27	Peter B. Bracken.....	25 ".....	31 25
" 27	William O'Keefe.....	25 ".....	31 25
" 27	J. P. Smith.....	25 ".....	31 25

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899.			
Mar. 27	John Golden.....	74 loads of manure	\$92 50
" 27	Edward Stenson.....	100 "	125 00
" 29	P. J. Langler	Blacksmithing materials.....	145 01
" 29	Michael Lynan.....	50 loads of manure	62 50
Apr. 5	James Malone.....	25 "	31 25
" 8	Robert T. Brown, Secretary.....	Office disbursements	18 66
" 8	Andrew Riley.....	100 loads of manure.....	125 00
" 8	John Laracy	25 "	31 25
" 8	John M. Fox	75 "	93 75
" 8	T. Kane	25 "	31 25
" 10	James Murray	25 "	31 25
" 10	Edward Stenson	25 "	31 25
" 10	John Clancy	50 "	62 50
" 10	P. Kane Harness Manufacturing } Company	Harness repairs, supplies, etc	37 50
" 10	Samuel W. Cornell.....	Hardware supplies.....	44 32
" 10	Charles J. Dunne.....	Meat and fish for animals	31 86
" 10	Ed. T. Buckingham	Plants	12 50
" 10	The Brooklyn Union Gas Company.....	Gas, Litchfield Mansion.....	22 33
" 10	Flatbush Water Works Company.....	Water, Ocean avenue, corner Flatbush avenue..	4 23
" 10	The Eureka Fire Hose Company.....	Rubber boots.....	77 00
" 10	Christian & Clarke.....	Portland cement	14 40
" 10	M. M. Corwin.....	Grate, etc., for range	4 60
" 10	F. W. Creighton	Flower-pots.....	25 35
" 10	Henry McShane Mfg. Company.....	Plumbing materials	2 35
" 10	Department of Correction.....	Brushes and Brooms	40 00
" 10	F. Donovan & Son.....	Corn, etc., for animals.....	28 10
" 10	John N. May.....	Chrysanthemums	12 53
" 10	Joseph A. Manda.....	10 barrels of peat.....	22 50
" 10	S. B. Kraus.....	2 barrels kerosene oil.....	12 28
" 15	Thomas Hare	25 loads of manure.....	31 25
" 15	Richard McCarthy	12 loads of cow manure.....	15 00
" 17	Charles B. Attlesley.....	25 loads of manure.....	31 25
" 17	Michael Padden.....	25 "	31 25
" 17	Frank J. Phelan.....	75 "	93 75
" 17	P. McLaughlin.....	50 "	62 50
" 17	Daniel Gill.....	25 "	31 25
" 17	M. Kelly.....	25 "	31 25
" 17	Edward Ennis.....	25 "	31 25

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899			
Apr. 17	John Terrell.....	25 loads of manure.....	\$31 25
" 21	Brooklyn Lumber Company.....	Lumber.....	33 75
" 21	C. H. Tiebout & Sons.....	Wagon supplies.....	53 69
" 21	Tefft, Weller & Co.....	Swiss, for Curtains at Shelter House.....	3 78
" 21	Francis X. Kerrigan.....	Chief Clerk, Office Disbursements.....	91 91
" 21	John F. Maille.....	Top-soil.....	1,013 12
" 21	C. Offerman.....	Coal.....	687 30
" 24	Manhattan Supply Company.....	Hardware.....	188 95
" 24	Watson & Pittinger.....	Lumber.....	4 60
" 24	Brooklyn Lumber Company.....	".....	10 00
" 24	Charles J. Dunne.....	Meat and fish for animals.....	18 60
" 24	Martin Kelly.....	50 loads of manure.....	62 50
" 24	Frank J. Gallagher.....	25 ".....	31 25
" 24	John F. Maille.....	48 ".....	60 00
" 24	John J. Crowley.....	23 ".....	31 25
" 25	Brooklyn Institute of Arts and Sciences	Pay-roll and disbursements, month of March...	2,630 91
" 27	" The Brooklyn Citizen ".....	Printing.....	7 50
" 27	W. W. Livingston.....	Coal.....	231 12
" 27	New York and New Jersey Telephone Company.....	Telephone service.....	47 60
" 27	New York and New Jersey Telephone Company.....	".....	267 00
" 27	New York and New Jersey Telephone Company.....	".....	25 70
" 27	Samuel W. Cornell.....	Hardware.....	7 84
" 27	Edwin C. Swezey, C. E.....	Disbursements, Bay Ridge Parkway.....	509 87
" 27	F. Donovan & Son.....	Hay, oats, straw, etc.....	396 04
May 1	Frederick MacMonnies.....	Seventh payment on contract for bronze groups } for Ocean Parkway entrance.....	10,000 00
" 8	Henry McShane Manufacturing Company.....	Plumbing materials.....	2 68
" 8	Peter Henderson & Co.....	Seeds and plant labels.....	57 81
" 8	Flatbush Water Works Company.....	Water, Ocean avenue, corner Flatbush avenue...	3 40
" 8	C. Offerman.....	Coal.....	11 88
" 8	Ruwe Bros.....	Horseshoes, etc.....	96 53
" 11	William P. Perkins.....	Grass seed.....	179 72
" 11	Robert T. Brown, Secretary.....	Office disbursements.....	14 03
" 11	Frank Hanley.....	62 truck loads of manure.....	77 50
" 11	R. P. Jerrery & Sons.....	200 hemlock trees.....	80 00
" 17	F. W. Howell.....	47 American elms.....	42 30
" 17	Ed. T. Buckingham.....	Plants.....	15 40
" 17	".....	Grass seed.....	234 76
" 17	W. W. Livingston.....	Coal.....	359 52

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899			
May 19	Michael Padden	15 loads cow manure.....	\$18 75
" 19	F. Donovan & Son	1 tub of grease	95
" 19	"	Corn, meal, etc.....	20 25
" 19	"	Oats, hay, straw, etc.....	272 68
" 19	Francis X. Kerrigan, Chief Clerk.....	Office disbursements.....	109 01
" 20	The Brooklyn Union Gas Company....	Gas, Litchfield Mansion.....	18 62
" 20	The P. Kane Harness Manufacturing } Company.....	Repairing harness, etc.....	70 54
" 20	A. & C. Ferguson.....	Corn, meal, etc.....	24 73
" 20	Henry McShane Manufacturing Com- } pany.....	Plumbing materials.....	13 20
" 20	J. L. Mott Iron Works.....	Castings for drinking-fountain.....	2 25
" 23	Duparquet, Huot & Moneuse Company.	Repairs to range.....	13 45
" 23	Thomas W. Wood's Sons.....	One ton Cumberland coal.....	4 00
" 23	James T. Shillinglaw.....	Horse medicines.....	19 05
" 23	F. W. Creighton.....	Plants.....	61 25
" 23	Henry A. Dreer.....	Flower seeds.....	4 42
" 24	Brooklyn Institute of Arts and Sciences.	Pay-roll and disbursements, April, 1899.....	3,118 14
" 26	Joseph A. Manda.....	10 barrels live moss.....	22 50
" 26	Ruwe Bros.....	Boiler packing.....	28 75
" 26	John Lewis Childs.....	Plants and seeds.....	130 25
" 26	Parsons & Sons Company.....	Trees.....	33 25
" 26	Henry A. Dreer.....	50 pounds sweet vernal grass seed.....	15 00
" 31	Henry McShane Manufacturing Com- } pany.....	Plumbing materials.....	1,090 48
" 31	Elliott Stock.....	One book on gardening.....	4 21
June 12	The P. Kane Harness Manufacturing } Company.....	Repairing Harness, etc.....	158 00
" 12	H. Aschenbach.....	4 sets of cart harness.....	95 00
" 12	A. V. Benoit.....	Blue-print paper.....	1 00
" 12	D. W. Binns.....	Caps for railing.....	5 00
" 12	Martin B. Brown Company.....	1 time ledger.....	17 95
" 12	William N. Kenyon.....	Plaster and cement.....	51 10
" 12	The Anchor Post Company.....	75 anchor posts.....	56 25
" 12	The P. Kane Harness Manufacturing } Company.....	Repairing harness.....	7 85
" 12	Brooklyn Hardware and Sporting } Goods Company.....	300 tennis checks.....	35 00
" 12	Keuffel & Esser Co.....	1 leveling rod.....	16 00
" 12	Peter Henderson & Co.....	Gardening implements.....	39 33
" 12	John Hennessy.....	Axle grease and oil.....	17 20
" 12	Ruwe Bros.....	Blacksmithing materials.....	79 66
" 15	James T. Shillinglaw.....	Horse medicines.....	11 40
" 15	Robert T. Brown, Secretary.....	Office disbursements.....	14 52

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899 June 15	Samuel W. Cornell.....	Hardware.....	\$40 40
" 15	Harris & Maguire.....	Hay.....	58 05
" 15	Thomas Ineson.....	1 barrel Algae Jell.....	37 50
" 15	Thomas G. Knight.....	Plumbing materials.....	70 06
" 15	Mann & Co.....	Chloro-naphtholeum.....	45 00
" 15	H. Aschanbach.....	Harness supplies.....	143 00
" 15	The Brooklyn Citizen.....	2,000 tickets, bound in book form.....	7 00
" 15	William N. Kenyon.....	Portland cement.....	46 00
" 15	Brooklyn Lumber Company.....	Lumber.....	46 50
" 15	Abraham & Straus.....	Desk and chair.....	29 00
" 15	The J. L. Mott Iron Works.....	Jets for drinking fountain.....	10 50
" 15	The P. Kane Harness Manufacturing } Company..... }	Reins and feed bags.....	17 00
" 15	Francis X. Kerrigan, Chief Clerk.....	Office disbursements.....	92 25
" 15	Dennis Norton.....	Blue limestone screenings.....	715 00
" 15	Brooklyn Institute of Arts and Sciences.....	Pay-roll and disbursements, May.....	3,485 70
" 17	F. W. Howell.....	68 American elms.....	102 00
" 17	Louis Conterno.....	Concert at Prospect Park, June 10.....	215 00
" 17	W. S. Mygrant.....	" " 3.....	215 00
" 17	".....	" " 4.....	215 00
" 17	".....	" " 11.....	210 00
" 22	Harris & Maguire.....	Corn for animals.....	23 95
" 22	Isaac Hicks & Son.....	Trees.....	112 75
" 22	Hiram T. Jones.....	".....	72 00
" 22	David G. Yates & Co.....	Trees and plants.....	505 25
" 22	F. Donovan & Son.....	Corn for animals.....	22 10
" 22	M. Kelly.....	Grass sods.....	86 00
" 22	Ed. T. Buckingham.....	Plants.....	3 30
" 22	Brooklyn Union Gas Company.....	Gas, Litchfield Mansion.....	15 77
" 22	Charles J. Dunne.....	Meat and fish for animals.....	18 60
" 22	Charles Zeller's Sons.....	Plants.....	23 50
" 22	W. A. Manda.....	Roses.....	4 20
" 22	Fleetwood Stables.....	Hire of landau.....	5 00
" 27	F. N. DuBois.....	Plumbing materials.....	1,349 27
" 27	John Condon.....	Plants.....	519 80
" 27	William Young.....	Top soil.....	5,390 00
" 27	Caldwell Lawn Mower Company.....	Retained percentage on contract for lawn mowers.....	208 77
" 29	Frederick W. Kelsey.....	Grass seed.....	18 35
" 29	Brooklyn Lumber Company.....	Lumber.....	89 12

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899			
June 29	S. B. Kraus.....	Kerosene oil.....	\$24 96
" 29	Brooklyn Union Gas Company.....	Gas, Litchfield Mansion.....	16 15
" 29	Jamaica Water Supply Company.....	Water, Forest Park.....	3 75
" 29	Charles J. Dunne.....	Meat and fish, for animals.....	18 60
" 29	Wood Bros.....	300 verbenas.....	75 00
" 29	Harris & Maguire.....	Hay, etc.....	91 83
" 29	The P. Kane Harness Manufacturing } Company..... }	Repairing harness, etc.....	39 35
" 29	Patrick Keegan.....	25 loads of manure.....	31 25
" 29	MacBeth & Bohlen.....	Repairs to wagon.....	17 15
" 29	Louis Borjes.....	Concert at Prospect Park, June 17.....	215 00
" 29	Thomas F. Shannon.....	" " 18.....	215 00
July 7	Brooklyn Lumber Company.....	Lumber.....	1,790 52
" 7	James T. Shillinglaw.....	Horse medicines.....	11 60
" 7	Brooklyn Lumber Company.....	Lumber.....	122 33
" 7	Samuel W. Cornell.....	Hardware, etc.....	101 69
" 7	Ruwe Bros.....	Blacksmithing materials.....	272 86
" 7	Abraham & Straus.....	Shades.....	27 06
" 7	C. W. Keenan.....	2 pounds leaf bronze.....	5 50
" 7	Morris Jackson Flag Company.....	Flags, bunting, etc.....	102 11
" 7	C. H. Joosten.....	Roses.....	35 40
" 7	James Weir, Jr., & Son.....	Geraniums.....	36 00
" 7	J. L. Mott Iron Works Company.....	Drinking fountains, etc.....	76 88
" 7	George W. Millar & Co.....	Toilet paper.....	60 00
" 7	John Condon.....	Plants.....	286 25
" 8	F. W. Creighton.....	100 myrtle clumps.....	8 00
" 8	Thomas W. Wood's Sons.....	1 ton Cumberland coal.....	4 00
" 8	Brooklyn Citizen.....	Fishing permit book.....	6 00
" 8	W. W. Livingston.....	Coal.....	282 48
" 8	Ruwe Bros.....	Water gauges and axle grease.....	18 90
" 8	D. W. Binns.....	Castings for drinking fountains.....	9 00
" 8	George M. Eddy & Co.....	1 steel tape measure.....	11 25
" 8	Nathan Lane's Sons.....	2 books.....	3 75
" 8	Page, Dennis & Co.....	Repairing platform scale.....	80 00
" 13	Miss E. B. Close..... }	Typewriting report of Commissioners, East- } ern Parkway Extension..... }	40 00
" 13	Louis Conterno.....	Concert at Prospect Park, June 24.....	210 00
" 13	W. S. Mygrant.....	" July 1.....	215 00
" 13	".....	" " 2.....	215 00
" 13	".....	" " 4.....	215 00

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899 July 13	Brooklyn Institute of Arts and Sciences.	Pay-roll and disbursements, June.....	\$4,499 39
" 14	Robert T. Brown, Secretary.....	Office disbursements.....	19 74
" 14	American District Telegraph Company.	Messenger service.....	2 20
" 14	Harris & Maguire.....	Retained percentage of contract, Bay Ridge } Parkway.....	5,890 00
" 14	Frederick MacMonnies.....	Fourth payment on contract for side groups for } Memorial Arch.....	10,000 00
" 14	The Brooklyn Citizen.....	500 fountain tickets.....	2 75
" 15	Louis Borjes.....	Concert at Kings Park, Jamaica, July 4.....	110 00
" 15	Louis Conterno.....	Concert at Prospect Park, July 8.....	215 00
" 18	W. W. Livingston.....	Coal.....	278 20
" 18	New York and New Jersey Telephone } Company.....	Telephone service.....	343 13
" 19	George V. Brower.....	Disbursements.....	57 05
" 19	F. X. Kerrigan, Chief Clerk.....	Office disbursements.....	96 02
" 21	Louis Borjes.....	Concert at Prospect Park, July 16.....	215 00
" 21	".....	" " 15.....	115 00
" 21	Thomas F. Shannon.....	" " 9.....	210 00
" 21	".....	Concert at Flushing Park, July 4.....	110 00
" 21	E. J. McCormick.....	Concert at Fort Greene, July 4.....	110 00
" 21	".....	" " 5.....	105 00
" 22	The Hastings Pavement Company.....	Asphalt paving tiles.....	3,897 60
" 22	Robert C. Fisher & Co.....	Replacing letters on Maryland Monument.....	50 00
" 27	John F. Maillie.....	Hudson River gravel.....	660 00
" 27	Flatbush Water Works Company.....	Water for sprinkling.....	134 89
" 27	Richard McCarty.....	12 loads of manure.....	15 00
" 27	James Smith.....	Sods for Bushwick Park.....	15 00
" 27	Charles J. Dunne.....	Meat and fish for animals.....	18 48
" 27	Brooklyn Union Gas Company.....	Gas, Litchfield Mansion.....	12 54
" 27	Henry A. Dreer.....	Flower seeds and plants.....	19 74
" 27	Charles Zeller's Sons.....	Plants.....	13 50
" 27	Peter Henderson & Co.....	Flower seeds.....	1 47
" 27	Ed. T. Buckingham.....	Plants and grass seed.....	214 29
" 27	G. E. Conterno.....	Concert at Fort Greene, July 15.....	110 00
" 27	".....	Concert at City Park, July 16.....	110 00
" 31	Louis Conterno.....	Concert at Prospect Park, July 22.....	215 00
" 31	The Hastings Pavement Company.....	Laying asphalt tiles in flower garden.....	918 00
" 31	Henry R. Worthington.....	Repairs to engine at well.....	154 05
" 31	William N. Kenyon.....	Cement and brick.....	76 25
" 31	The Fairbanks Company.....	Repair cock for boiler at well.....	2 18
" 3	The P. Kane Harness Manufacturing } Company.....	Stable supplies.....	11 25

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899			
July 31	Studebaker Bros. Manufacturing Com- pany.....	Washers for sprinklers.	\$15 60
" 31	Pioneer Iron Works.....	Repairs to boiler at well.....	41 53
" 31	F. V. Lindon	Repairing clock at Mansion.	2 00
" 31	Brooklyn Lumber Company.....	Lumber.	21 30
" 31	The Martin B. Brown Company.....	500 lithographed letter-heads.	7 38
" 31	The P. Kane Harness Manufacturing Company.....	Harness repairs and stable supplies.....	37 50
" 31	Ronalds & Johnson Company.....	Street washers.	15 00
" 31	C. W. Keenan.....	Two pounds gold bronze.....	5 50
" 31	B. Barnie.....	300 sheets of paper.	1 25
" 31	George M. Eddy & Co.....	One steel tape.....	6 00
" 31	Peter Henderson & Co.....	Bone meal and ground bone.....	7 50
" 31	Brooklyn Lumber Company.....	900 feet yellow pine.....	29 25
" 31	The Bolton Drug Company (Limited)...	Chemicals, for spraying trees.....	41 30
" 31	M. S. Keffe.....	Ice, for June.....	5 00
" 31	Goodyear's India Rubber Glove Manu- facturing Company	2,000 feet rubber hose.....	130 00
" 31	Pioneer Iron Works.....	Copper pipe, for steam boiler.....	5 05
" 31	Davies, Turner & Co.....	Schneider's " Book of Choice Ferns "	18 00
" 31	Abraham & Straus.....	Two books on Gardening	3 97
" 31	James T. Shillinglaw.....	Horse medicines.....	4 30
" 31	Samuel W. Cornell.....	Hardware, etc.....	275 72
" 31	M. S. & P. C. Brown.....	Opening safe and fitting two keys.....	18 00
Aug. 8	Charles Hart.....	Part of retained percentage, Bay Ridge parkway	7,380 00
" 8	George V. Brower.....	Disbursements.....	31 50
" 8	Thomas F. Shannon.....	Concert at Prospect Park, July 29.....	215 00
" 8	"	" " 30.....	215 00
" 8	R. L. Halle.....	Concert at Fort Greene, July 22.....	110 00
" 8	Edwin W. Stowe.....	Concert at Winthrop Park, July 22.....	110 00
" 11	Manhattan Construction Company....	Macadamizing Fort Hamilton avenue.....	5,084 23
" 11	Samuel W. Cornell.....	Hardware.....	608 44
" 11	Photogravure and Color Company.....	Music programs.....	521 75
" 14	G. E. Conterno.....	Concert at Tompkins Park, August 5.....	110 00
" 14	"	Concert at City Park, August 6.....	110 90
" 14	Otto M. Bergner.....	Concert at Fort Greene, July 8.....	110 00
" 17	F. X. Kerrigan, Chief Clerk.....	Office disbursements.....	80 39
" 17	Peter Fruh.....	Boulders for Sunset Park.....	1,009 51
" 17	Otto M. Bergner.....	Concert at Tompkins Park, July 29.....	110 00
" 17	"	Concert at Bushwick Park, July 22.....	110 00
" 17	Edwin W. Stowe.....	" " 29.....	110 00

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899			
Aug. 17	Edwin W. Stowe.....	Concert at Winthrop Park, August 5.....	\$110 00
" 17	Thomas F. Flaherty.....	Concert at City Park, July 30.....	105 00
" 17	Edward S. Duffy.....	Concert at Bushwick Park, August 5....	110 00
" 17	R. L. Halle.....	Concert at Winthrop Park, July 29.....	110 00
" 23	Buffalo Pitts Company.....	Steam roller, sprinkling carts, etc.....	6,170 00
" 23	Estate of Henry Newman.....	One bay horse.....	150 00
" 25	Robert T. Brown, Secretary.....	Office disbursements.....	15 03
" 25	Edwin W. Stowe.....	Concert at Bushwick Park, August 12.....	110 00
" 25	R. L. Halle.....	Concert at Winthrop Park, August 12.....	110 00
" 25	E. J. McCormick.....	Concert at Fort Greene, July 29.....	110 00
" 25	Louis Conterno.....	Concert at Prospect Park, August 5.....	215 00
" 25	W. S. Mygrant.....	" " 6.....	215 00
" 25	Otto M. Bergner.....	Concert at Fort Greene, August 5.....	110 00
" 25	Edward S. Duffy.....	Concert at City Park, August 13.....	110 00
" 25	Otto M. Bergner.....	Concert at Tompkins Park, August 12.....	110 00
" 25	Thomas F. Shannon.....	Concert at Prespect Park, August 12.....	215 00
" 25	".....	" " 13.....	215 00
" 26	F. Donovan & Son.....	Hay, oats, straw, etc.....	206 06
" 26	C. A. Bloomingdale.....	Hay, corn and oats.....	423 56
" 29	William N. Kenyon.....	Portland cement and slate.....	75 15
" 29	".....	Cement and whitening.....	34 75
" 29	American District Telegraph Company.	Messenger service.....	1 35
" 29	W. W. Livingston.....	Coal.....	308 16
" 29	Harris & Maguire.....	Corn, meal, oats, etc.....	21 85
" 29	Manhattan Oil Company.....	1 barrel machine oil.....	18 38
" 29	Thomas G. Knight.....	Gas brackets.....	3 00
" 29	".....	150 feet vitrified brick.....	41 25
" 29	D. W. Binns.....	2 sewer manholes and covers.....	20 00
" 29	Harris & Maguire.....	Laying 440 feet pipe.....	170 00
" 30	J. Warren Mead, agent.....	3 dozen chairs.....	20 44
" 30	Addison Johnson, agent.....	Brushes.....	42 44
" 30	David F. Dobie, agent.....	Pails, dippers and oil cans.....	76 86
" 30	J. Warren Mead, Agent.....	Whisk brooms.....	2 25
Sept. 1	E. J. McCormick.....	Concert at Fort Greene, August 12.....	110 00
" 1	Louis Borjes.....	Concert at Prospect Park, August 19.....	215 00
" 1	".....	" " 20.....	215 00
" 1	G. E. Conterno.....	Concert at Tompkins Park, August 19.....	110 00
" 6	E. C. Stevenson.....	Concert at Bushwick Park, August 19.....	110 00

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899 Sept. 11	Mann & Co.....	Chloro-naphtholeum.....	\$46 80
" 11	R. L. Halle.....	Concert at City Park, August 20.....	110 00
" 13	Manhattan Construction Company..	Macadamizing Fort Hamilton avenue.....	3,927 81
" 13	Edward S. Duffy.....	Concert at Winthrop Park, August 19.....	110 00
" 13	".....	Concert at City Park, August 27.....	110 00
" 13	Thomas F. Shannon.....	Concert at Prospect Park, August 27.....	215 00
" 13	R. L. Halle.....	Concert at Fort Greene, August 19.....	110 00
" 13	".....	Concert at Winthrop Park, August 26.....	110 00
" 13	E. J. McCormick.....	Concert at Fort Greene, August 26.....	110 00
" 13	Louis Borjes.....	Concert at Prospect Park, September 2.....	215 00
" 13	C. A. Bloomingdale.....	Forage.....	311 75
" 13	Kings County Gas and Illuminating Company.....	Removing gas-mains on the Shore road.....	450 00
" 14	S. B. Kraus.....	Paints and painting materials.....	165 08
" 14	William N. Kenyon.....	Brick and lime.....	34 20
" 14	P. J. May.....	Horseshoes.....	30 00
" 14	M. S. Keefe.....	Ice, month of July.....	5 00
" 14	William N. Kenyon.....	Sixteen barrels of cement.....	30 50
" 14	Samuel W. Cornell.....	Hardware.....	64 65
" 14	Stevenson & Marsters.....	Altering twelve badges.....	3 00
" 14	H. Aschenbach.....	Two sets of harness.....	95 00
" 14	Robert T. Brown, Secretary.....	Office disbursements.....	17 03
" 14	C. & N. Poillon.....	Six flagpoles.....	300 00
" 14	J. Norwood.....	Three iron grilles.....	13 50
" 14	R. J. Macaulay.....	Glass.....	4 00
" 14	The P. Kane Harness Manufacturing Company.....	Repairing harness, etc.....	21 35
" 15	Thomas G. Knight.....	Plumbing materials.....	3 65
" 15	F. Donovan & Son.....	Clover hay, salt, etc.....	13 34
" 15	Flatbush Water Works Company.....	Water, Ocean avenue.....	12 53
" 15	Ed. T. Buckingham.....	Sunflowers.....	1 50
" 15	Brooklyn Lumber Company.....	Lumber.....	119 93
" 15	American District Telegraph Company.	Messenger service.....	2 70
" 15	Alex. Schwalbach.....	One pair bicycle tires.....	8 00
" 15	H. Aschenbach.....	Two sets double truck reins.....	10 00
" 15	Ronalds & Johnson Company.....	Three single street washers.....	11 25
" 15	Thomas M. DeLaney & Co.....	Three Bartholomew hydrants.....	21 00
" 16	Charles J. Dunne.....	Meat and fish, for animals.....	20 46
" 15	Stanley & Unckles.....	Yellow pine frames and sashes.....	290 00
" 16	Francis X. Kerrigan, Chief Clerk.....	Office disbursements.....	74 53

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899 Sept. 16	John Hennessy.....	Axle grease.....	\$5 94
" 16	John W. Friend.....	1,000 myrtle vines.....	10 00
" 16	Brooklyn Institute of Arts and Sciences	Wages and supplies for August.....	4,842 35
" 16	" " "	Wages and supplies for July	4,246 80
" 18	J. Warren Mead, Agent.....	3 dozen chairs.....	31 83
" 18	Mack Manufacturing Company.....	Vitrified brick.....	473 00
" 18	P. W. Creighton.....	Japanese lily bulbs.....	7 50
" 18	J. Warren Mead, Agent.....	1,000 pairs settee legs	1,180 92
" 18	Department of Correction..	Brooms.....	126 00
" 18	J. M. Thorburn & Company.....	Flower seeds.....	8 95
" 18	Joseph A. Manda.....	Moss and peat	87 50
" 18	Henry A. Dreer.....	6 Asplenium ferns.....	2 50
" 18	Pioneer Iron Works	Repairs to steam roller.....	15 85
" 19	Abraham & Straus	Awnings for mansion.....	32 33
" 19	Addison Johnson, Agent.....	Mane brushes.....	17 65
" 19	Louis Conterno.....	Concert at Prospect Park, August 26.....	210 00
" 19	"	Concert at Prospect Park, September 13.....	215 00
" 19	Thomas F. Gilbride.....	Excavation at Red Hook Park.....	3,987 50
" 19	Photogravure and Color Company.....	Music programmes.....	356 55
" 19	Ruwe Bros.....	Blacksmithing materials.....	57 96
" 19	W. W. Livingston.....	Coal.....	188 32
" 23	Louis Borjes	Concert at Prospect Park, September 16.....	215 00
" 23	General Incandescent Arc Light Com- pany.....	4 arc lamps at Plaza entrance.....	400 00
" 27	Ronalds & Johnson Company.....	Plumbing materials	106 32
" 27	Samuel W. Cornell	Hardware.....	170 55
" 27	William N. Kenyon.....	Brick and cement	81 15
" 27	Ruwe Bros.....	Iron, truck poles, etc.....	94 67
" 27	The P. Kane Manufacturing Company.	Repairs to harness, etc.....	6 50
" 27	D. W. Binns.....	12 heavy grates, for drains.....	60 00
" 27	J. K. Brown.....	Repairing and fitting up derrick.....	21 96
" 28	Hecla Iron Works.....	Erecting 3,079 feet of iron railing	8,714 01
" 28	Brooklyn Alcatraz Asphalt Company. }	Retained percentage on contract, Coney Island }	292 31
" 28	C. A. Bloomingdale	Concourse	
" 28	C. A. Bloomingdale	Oats, hay, straw, etc.....	280 33
" 28	Kelly & Byrnes	First payment on contract, Bay Ridge parkway.	4,072 73
Oct. 4	S. B. Kraus.....	3 barrels kerosene oil.....	12 24
" 4	Kings County Gas and Illuminating Company.....	Lowering gas-mains, etc., Fort Hamilton avenue	539 50
" 4	J. K. Brown.....	Use of derrick	52 50
" 4	Charles J. Dunne.....	Meat and fish, for animals.....	22 98

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899			
Oct. 4	Brooklyn Union Gas Company.....	Gas, Litchfield mansion.....	\$31 26
" 7	Brooklyn Lumber Company.....	500 feet white pine	18 75
" 7	Flatbush Water Works Company	Water, Fort Hamilton avenue	100 00
" 7	Brooklyn Lumber Company.....	Lumber.....	68 00
" 7	Jacob May.....	8 cast-iron posts.....	26 00
" 7	Charles E. Ball.....	Grate and bricks, for range.....	5 40
" 9	Stevenson & Marsters.....	Stationery.....	7 00
" 9	Abraham & Straus.....	Rugs and carpets.....	187 00
" 9	F. Donovan & Son.....	Oil meal.....	4 00
" 9	William Churchill Oastler.....	Spikes, etc., for steam roller.....	30 00
" 9	N. C. Walter & Son.....	Copper burning brands.....	10 50
" 9	Ruwe Brothers.....	Iron, nuts and horse pads.....	29 23
" 9	Photogravure and Color Company.....	Music programmes.....	37 00
" 12	Thomas Rice.....	50 loads of manure.....	62 50
" 12	James Kelly.....	25 "	31 25
" 12	Joseph F. Daley.....	25 "	31 25
" 12	Martin Kelly.....	25 "	31 25
" 12	Thomas Kane.....	25 "	31 25
" 12	John M. Fox.....	25 "	31 25
" 12	John F. Maillie.....	50 "	62 50
" 12	P. Riley	50 "	31 25
" 12	M. McCormick	25 "	31 25
" 12	Owen Cullen.....	25 "	31 25
" 12	Patrick McDermott.....	50 "	62 50
" 12	James F. Farrell.....	25 "	31 25
" 12	Robert T. Brown, Secretary.....	Office disbursements.....	15 12
" 12	F. X. Kerrigan, Chief Clerk	"	78 36
" 12	Brooklyn Institute of Arts and Sciences	Pay-roll and disbursements, September.....	4,974 39
" 13	James T. Shillinglaw.....	Horse medicines.....	7 90
" 13	American District Telegraph Company	Messenger service.....	6 30
" 13	Thomas F. Shannon.....	Concert at Prospect Park, October	215 00
" 20	Harris & Maguire.....	Limestone screenings.....	2,179 33
" 20	I. S. Remson Manufacturing Company.	One wagon.....	325 00
" 20	The American Florist Company.....	One florist's directory.....	2 00
" 20	Harris & Maguire.....	Carting vitrified brick.....	42 50
" 20	The Bolton Drug Company (Limited)...	One barrel London purple.....	58 32
" 20	Snow Steam Pump Works.....	Repairing steam pump.....	7 50
" 20	" The Brooklyn Daily Eagle ".....	Printing 500 envelopes.....	1 75

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899. Oct. 20	Brooklyn Lumber Company	Sawing posts.....	\$5 50
" 20	Brooklyn Lumber Company	40 yellow pine ceiling boards.....	8 01
" 20	Brooklyn Lumber Company	12 hickory strips.....	4 30
" 20	Fleetwood Stables.....	Hire of one landau.....	8 00
" 20	Samuel W. Cornell.....	Hardware.....	139 31
" 20	William N. Kenyon.....	Cement.....	128 85
" 21	M. McCormick.....	50 truck loads top soil.....	62 50
" 23	Martin Kelly.....	Grass sods.....	40 00
" 21	John W. Friend.....	2,000 myrtle vines.....	20 00
" 21	David G. Yates & Co.....	Plants.....	10 00
" 21	Charles H. Ebert.....	Plants.....	50 00
" 23	Ed. T. Buckingham.....	Grass seed and plants.....	193 77
" 23	Flatbush Water Works Company.....	Water, for use on Fort Hamilton avenue.....	50 00
" 23	Stevenson & Marsters.....	Legal cap and foolscap paper.....	12 60
" 23	William N. Kenyon.....	Cement, brick, etc.....	96 38
" 23	New York and New Jersey Telephone Company.....	Telephone service.....	262 55
" 23	The Lord & Burnham Company.....	Furnishing plans, etc., for green-house	200 00
" 23	Charles J. Dunne.....	Meat and fish for animals.....	40 92
" 24	S. B. Kraus.....	3 barrels kerosene oil.....	12 24
" 24	Brooklyn Lumber Company.....	Lumber.....	374 21
" 24	Harris & Maguire.....	Trap-rock and trap-rock screenings.....	2,619 80
" 24	William N. Kenyon.....	Fire clay and brick.....	37 25
" 24	W. W. Livingston.....	Coal.....	269 64
" 25	S. B. Kraus.....	3 barrels kerosene oil.....	12 48
" 25	Brooklyn Lumber Company.....	Lumber.....	64 40
" 25	Ronalds & Johnson Co.....	Plumbing materials.....	76 35
" 25	Brooklyn Union Gas Company.....	Gas, Litchfield Mansion.....	15 68
" 25	Flatbush Water Works Company.....	Water, August.....	19 82
" 25	M. S. Keefe.....	Ice, Litchfield Mansion.....	10 00
" 25	F. Donovan & Son.....	5 bags of meal.....	4 75
" 25	Harris & Maguire.....	Cracked corn and meal.....	9 05
" 25	The P. Kane Harness Manufacturing Company.....	Reins and harness soap.....	16 00
" 25	"The Brooklyn Citizen".....	10,000 loam tickets.....	15 00
" 25	Manhattan Oil Company.....	1 barrel machine oil.....	18 06
" 25	Thomas W. Wood's Sons.....	1 ton Cumberland coal.....	4 00
" 28	James T. Shillinglaw.....	Horse medicines.....	1 70
" 28	C. W. Keenan.....	Paint and boiled oil.....	11 00
" 28	Duparquet, Huot & Moneuse Company	Grate bricks, etc.....	8 05

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1890			
Oct. 28	F. N. DuBois.....	Plumbing materials.....	\$169 53
" 28	Nathan Lane's Sons.....	2 letter books.....	2 00
" 28	Thomas Ineson.....	1 barrel Algae Jell	37 50
" 28	Shady Hill Nursery Company.....	Plants	36 00
" 28	United Typewriter and Supply Company	Repairing typewriter.....	20 00
" 30	Thomas Connor.....	25 loads of manure.....	31 25
" 30	William H. Greany.....	25 "	31 25
" 30	Thomas Cunningham	50 "	62 50
" 30	James Radigan.....	25 "	31 25
" 30	James Murray.....	25 "	31 25
" 30	John F. Maillie.....	Grass sods.....	88 00
" 30	Millard S. Smith	1 Ludlow valve screw, etc.....	4 50
" 30	C. W. Keenan.....	25 pounds Atlantic white lead.....	1 41
" 30	John F. Maillie.....	Top soil.....	197 88
" 31	The Greenwich Insurance Company....	Premium on insurance, Prospect Park property..	735 55
" 31	Christopher McCormick.....	25 loads of manure.....	31 25
" 31	Ruwe Brothers.....	Repairs to bellows, etc.....	34 55
" 31	The P. Kane Harness Manufacturing } Company.	Repairs to harness, etc.....	7 00
" 31	Peter Hans.....	Cleaning lake at Linden Park, Corona.....	109 50
Nov. 3	John F. Maillie.....	Trap-rock screenings.....	1,026 00
" 4	Delaware and Hudson Stone and Con- } struction Company.....	Marcellus shale sandstone screenings.....	1,191 96
" 4	Harris & McGuire.....	Corn, meal, etc.....	14 70
" 4	Richardson & Boynton Co.....	1 set of grate-bars	4 40
" 8	Timothy Conklin.....	Grass sods.....	20 00
" 8	M. J. Kelly.....	50 loads of manure.....	62 50
" 8	Peter McCormick.....	25 "	31 25
" 8	Robert T. Brown, Secretary.....	Office disbursements.....	28 19
" 8	Ed. T. Buckingham.....	Plants.....	45 85
" 9	Frederick MacMonnies.....	Second payment on contract Gen. H. W. } Stocum monument.....	3,000 00
" 10	Brooklyn Institute of Arts and Sciences.	Pay-roll and disbursements, October.....	4,311 75
" 13	John M. Fox.....	25 loads of manure.....	31 25
" 15	Charles J. Dunne.....	Meat and fish, for animals.....	34 50
" 15	John Condon.....	136,250 imported bulbs.....	2,480 00
" 15	Brooklyn Lumber Company.....	Lumber.....	403 40
" 15	F. E. Brandis, Sons & Co.....	Repairing transit.....	41 75
" 15	Dunne & Co.....	99 Oriental plane trees.....	201 00
" 15	F. Donovan & Son.....	Axle grease.....	3 35
" 15	Flatbush Water Works Company.....	Water	11 31

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899.			
Nov. 15	Samuel W. Cornell.....	Hardware.....	\$37 88
" 15	W. W. Livingston.....	Coal.....	428 00
" 15	Photogravure and Color Company.....	Music programmes.....	19 50
" 17	F. X. Kerrigan, Chief Clerk.....	Office disbursements.....	68 76
" 23	Simon Feigel.....	Paints, etc.....	694 50
" 23	Manhattan Construction Company.....	Improving Fort Hamilton avenue.....	4,121 60
" 23	The Brooklyn Citizen.....	Printing tickets.....	6 75
" 28	The Lord and Burnham Company.....	Erection of green-house.....	2,662 10
" 28	Baker, Voorhis & Co.....	Laws of 1899, two volumes.....	3 75
" 28	"The Brooklyn Citizen".....	Printing fountain tickets.....	7 50
Dec. 7	Thomas E. Wheeler.....	15 loads cow manure.....	15 00
" 7	Thomas Rice.....	50 ".....	62 50
" 7	Edward Stenson.....	25 loads of manure.....	31 25
" 7	Philip Grass.....	25 loads of loam.....	18 75
" 7	James E. McCanna.....	25 loads of manure.....	31 25
" 7	M. Kelly.....	3,000 grass sods.....	30 00
" 7	Charles McCarthy.....	2,000 ".....	20 00
" 7	J. C. O'Brien.....	25 loads of manure.....	31 25
" 7	Jeremiah O'Connell.....	25 loads of cow manure.....	31 25
" 7	Patrick McDermott.....	3,000 grass sods.....	30 00
" 7	John S. Loomis.....	Hire of horse.....	71 50
" 8	Henry A. Dreer.....	Plants.....	204 75
" 8	C. H. Joosten.....	".....	361 65
" 8	Brooklyn Union Gas Company.....	Gas, Litchfield Mansion.....	23 37
" 8	Flatbush Water Works Company.....	Water, Fort Hamilton avenue.....	50 00
" 8	Julius H. Zschorna.....	Plants.....	15 00
" 8	Isaac Hicks & Son.....	Trees.....	215 15
" 8	S. G. Harris.....	Plants.....	81 10
" 8	David G. Yates & Co.....	Trees.....	96 25
" 8	Charles Zeller & Son.....	Plants.....	26 00
" 8	Robert T. Brown, Secretary.....	Office disbursements.....	15 71
" 8	American District Telegraph Company.....	Messenger service.....	4 20
" 8	John Whalley.....	Expenses to Boston.....	21 25
" 9	Brooklyn Institute of Arts and Sciences.....	Pay-roll and disbursements, November.....	8,177 06
" 11	Samuel W. Cornell.....	Hardware.....	343 63
" 11	W. W. Livingston.....	Coal.....	564 96
" 16	F. X. Kerrigan, Chief Clerk.....	Office disbursements.....	75 35
" 16	M. F. Hickey.....	Concrete sidewalk around Bedford Park.....	1,521 60

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899. Dec. 16	C. A. Bloomingdale.....	Forage.....	\$381 37
" 16	C. A. Bloomingdale.....	"	436 85
" 18	Williamsburgh City Fire Insurance } Company.....	Insurance premiums, Shore Road property.....	181 75
" 18	James T. Shillinglaw.....	Horse medicines.....	1 90
" 18	The P Kane Harness Manufacturing } Company.....	Harness repairs, etc.....	20 80
" 18	James Maguire.....	25 loads of manure.....	31 25
" 18	James F. Sinnott.....	Top-soil	10 00
" 18	Janes & Kirtland.....	Grate, etc., for range.....	2 90
" 18	The Brooklyn Citizen.....	Book and envelopes.....	15 50
" 18	Flatbush Water Works Company.....	Water	11 15
" 18	William N. Kenyon.....	32 barrels Rosendale cement.....	35 20
" 20	The P Kane Harness Manufacturing } Company.....	Repairing harness, etc.....	9 10
" 20	James T. Shillinglaw.....	Horse medicines.....	2 05
" 20	Thomas W. Wood's Sons.....	One ton Cumberland coal.....	4 00
" 20	Millard F. Smith.....	Screw for Ludlow Gate valve.....	1 00
" 20	Samuel W. Cornell.....	Hardware.....	7 00
" 20	A. V. Benoit.....	Blue-print paper.....	4 00
" 20	Goodyear Rubber Company.....	Rubber boots.....	45 00
" 20	D. W. Binns	Catch-basin heads.....	33 00
" 20	A. H. Hews & Co.....	Seed pans.....	37 50
" 20	The Wilson & Baillie Manufacturing } Co.....	Cement pipe.....	171 05
" 20	Ruwe Bros.....	Cotton waste, etc.....	27 50
" 20	A. H. Hews & Co.....	Flower pots and pans.....	484 05
" 20	The Wilson & Baillie Manufacturing } Company.....	Drain-pipe.....	110 15
" 21	S. B. Kraus.....	3 barrels kerosene oil.....	12 56
" 21	C. A. Bloomingdale.....	Forage.....	282 28
" 21	Simon Feigel.....	Painting materials.....	337 05
" 21	Ruwe Bros.....	Blacksmithing materials.....	94 53
" 21	F. N. DuBois.....	Plumbing materials.....	135 38
" 21	Ruwe Bros.....	Tire bolts.....	6 30
" 21	A. H. Hews & Co.....	Flower-pots and pans.....	93 95
" 21	Union Sawdust Works.....	10 barrels sawdust.....	2 00
" 21	Harris & Maguire.....	One pair axle grease	90
" 21	C. W. Keenan.....	One barrel of turpentine.....	27 54
" 21	H. Aschenbach.....	Horse blankets and lap robes.....	112 50
" 21	Martin B. Brown Company.....	Letter paper and time ledgers.....	30 53
" 21	William N. Kenyon.....	Brick and cement	144 50
" 21	Harris & Maguire	Salt, soap and rye straw.....	47 15

DATE.	NAME.	FOR WHAT PURPOSE.	AMOUNT.
1899. Dec. 21	Kelly & Byrnes.....	Improvement of Bay Ridge parkway terminus...	\$10,803 53
" 26	John A. Scollay.....	Piping green-house.....	138 00
" 26	Brooklyn Union Gas Company.....	Gas, Litchfield Mansion.....	21 57
" 26	Edison Electric Illuminating Company..	Electric light, farmhouse and shelter house.....	528 05
" 26	Peter Gill.....	25 loads of manure.....	31 25
" 26	George Clark.....	25 "	31 25
" 26	Thomas W. Hare.....	25 "	31 25
" 26	John M. Fox	25 "	31 25
" 26	Patrick Connor.....	25 "	31 25
" 26	Charles J. Dunne.....	Meat and fish for animals.....	20 30
" 26	Department of Water Supply.....	Work on Fort Hamilton avenue.....	35 84
" 26	Page Woven Wire Fence Company.....	Wire fencing.....	147 20
" 26	Frederick W. Kelsey.....	Trees.....	203 74
" 26	Joseph A. Manda.....	Moss and peat.....	45 00
" 29	F. N. DuBois.....	Plumbing materials	532 98
" 29	S. B. Kraus.....	3 barrels kerosene oil.....	12 68
" 29	Harris & Maguire.....	Corn, meal and screenings.....	29 15
" 29	M. J. Drummond & Co.	Cast-iron pipe, etc.....	41 83
" 29	Martin B. Brown Company.....	One minute book.....	6 16
" 29	C. H. Joosten.....	500 climbing roses.....	60 00
" 29	Isaac Hicks & Son.....	Trees.....	6 25
" 29	Henry A. Dreer.....	Iron plant stands.....	93 15
" 29	The Fairbanks Company.....	Repairing valve.....	2 72
" 30	Roscoe R. Bell, District Veterinary } Surgeon.....	Professional services.....	42 75
" 30	Patrick McDermott.....	1,400 sods.....	14 00
" 30	Julius H. Zschorna.....	Plants.....	20 00
" 30	Ruwe Bros	Whiffletrees, etc.....	24 52
" 30	Tefft, Weller & Co.....	One piece of dotted Swiss for curtains at Farm- } house, Prospect Park.....	5 25
" 30	John F. Maillie.....	11,240 cubic yards of top-soil.....	10,003 60

Salary Pay-rolls for the Year 1899.

Salary Pay-roll for the month of January.....	\$1,616 64
" " February	1,616 64
" " March	1,616 64
" " April.....	1,616 64
" " May.....	1,616 64
" " June.....	1,616 64
" " July.....	1,616 64

Supplementary salary Pay-roll for the month of July.....	\$40 00
Salary Pay-roll for the month of August.....	1,414 16
Supplementary Pay-roll for the month of August.....	141 13
Salary Pay-roll for the month of September.....	1,470 64
“ “ October.....	1,470 64
“ “ November.....	1,470 64
“ “ December.....	1,702 13
Total.....	<u>\$19,025 82</u>

Respectfully submitted.

ROBERT T. BROWN, Secretary.

THE CHIEF CLERK'S REPORT.

BROOKLYN, January 1, 1900.

Hon. GEORGE V. BROWER, Commissioner, Department of Parks, Boroughs of Brooklyn and Queens :

SIR—I have the honor to transmit herewith a statement of the weekly Pay-rolls of the Department of Parks of the boroughs of Brooklyn and Queens for the year 1899 :

1899.

Jan. 6. Weekly Pay-roll No. 939.....	\$3,423 69
“ 13. “ 940.....	4,914 87
“ 20. “ 941.....	4,534 03
“ 27. “ 942.....	4,607 70
Feb. 3. “ 943.....	3,756 41
“ 10. “ 944.....	3,877 04
“ 17. “ 945.....	3,719 41
“ 24. “ 946.....	4,099 54
Mar. 3. “ 947.....	4,430 62
“ 10. “ 948.....	4,230 98
“ 17. “ 949.....	4,395 34
“ 24. “ 950.....	3,967 54
“ 31. “ 951.....	4,538 69
Apr. 7. “ 952.....	5,483 21
“ 14. “ 953.....	6,112 34
“ 21. “ 954.....	6,359 27
“ 28. “ 955.....	6,554 40
May 5. “ 956.....	6,699 65
“ 12. “ 957.....	6,515 92
“ 19. “ 958.....	6,853 51
“ 26. “ 959.....	6,893 32
June 2. “ 960.....	6,937 02
“ 9. “ 961.....	7,005 69

1899.		
June 16.	Weekly Pay-roll No. 962.....	\$6,945 35
" 23.	" 963.....	6,945 35
" 26.	Supplementary Pay-roll No. 963.....	26 26
" 30.	Weekly Pay-roll No. 964.....	6,687 99
July 7.	" 965.....	6,248 98
" 14.	" 966.....	6,773 38
" 21.	" 967.....	6,672 62
" 28.	" 968.....	6,356 51
Aug. 4.	" 969.....	6,586 77
" 11.	" 970.....	6,267 51
" 18.	" 971.....	6,603 28
" 25.	" 972.....	6,579 55
Sept. 1.	" 973.....	6,603 16
" 8.	" 974.....	5,619 58
" 15.	" 975.....	6,226 64
" 22.	" 976.....	6,266 15
" 29.	" 977.....	6,314 07
Oct. 6.	" 978.....	5,846 84
" 13.	" 979.....	6,533 32
" 20.	" 980.....	6,608 42
" 27.	" 981.....	6,627 40
Nov. 3.	" 982.....	6,212 46
" 10.	" 983.....	6,431 85
" 17.	" 984.....	6,490 35
" 24.	" 985.....	6,606 45
Dec. 1.	" 986.....	6,083 50
" 8.	" 987.....	6,668 25
" 15.	" 988.....	6,421 99
" 22.	" 989.....	3,725 44
" 31.	" 990.....	4,049 46

Respectfully submitted,

FRANCIS X. KERRIGAN, Chief Clerk.

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

NAME.	LOCATION.	AREA IN ACRES.
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 street and West street.....	0.318
Central Park.....	Fifth to Eighth avenue, Fifty-ninth street to One Hundred and Tenth street.....	813.019
Christopher Street Park..	Christopher street and West Fourth street.....	0.139
City Hall Park.....	Broadway and Chambers street.....	8.239
Cooper Park.....	Third avenue and Seventh street.....	0.229
Corlears Hook Park.....	Corlears street and South street.....	8.303
Duane Street Park.....	Duane street and Hudson street.....	0.108
East River Park.....	Eighty-fourth street to Eighty-ninth street, East River.....	12.546
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.....	Avenue St. Nicholas and One Hundred and Twenty-third street.....	0.072
Harlem Lane Park.....	Seventh avenue and One Hundred and Fifty-third street.....	1.270
Hudson Park.....	Hudson street and Leroy street.....	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 street to One Hundred and Twenty-third street, between Columbus and Amsterdam avenues.....	31.238
Mount Morris Park.....	Mount Morris avenue 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
Rutgers Park.....	Rutgers slip and South street.....	0.478
Ryan Park.....	Second avenue and Forty-second street.....	0.180
Sherman Square.....	Boulevard 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 Waverley place.....	8.115

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 Edgecombe avenue.....}	12.790
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.....}	15.409
High Bridge Park.....	One Hundred and Fifty-fifth street to Washington Bridge, west of { Driveway.....}	64.343
William H. Seward Park..	Canal and Jefferson streets.....	2.651

IMPROVED UNNAMED PARKS.

.....	Triangle at Boulevard and Sixty-third street.....	0.344
.....	Triangle at Boulevard and Sixty-sixth street.....	0.069
.....	Triangle at Boulevard 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

UNIMPROVED UNNAMED PARKS.

.....	Triangle at Broadway and One Hundred and Sixth street.....	0.072
.....	Triangle at Avenue St. Nicholas and One Hundred and Thirty seventh { street.....}	0.038
.....	Triangle at Avenue St. Nicholas and One Hundred and Fiftieth street....	0.024

PARKS IN PROCESS OF CONDEMNATION.

Alexander Hamilton Park.	Ninth to Tenth avenue, Twenty-seventh to Twenty-eighth street.....	3.117
DeWitt Clinton Park....	Fifty-second to Fifty-fourth street, North river.....	7.377
John Jay Park.....	Seventy-fourth to Seventy-sixth street, East river.....	3.004
St. Nicholas Park.....	One Hundred and Thirtieth to One Hundred and Forty-first street, { Avenue St. Nicholas and Tenth avenue .....	.....
Park west of Harlem { River Driveway....}	From Washington Bridge to Dyckman street	22.817
Riverside Park Extension.....	Seventy-second street to One Hundred and Twenty-ninth street, New { York Central Railroad to Bulkhead of Hudson River.....}	.....

BOROUGH OF RICHMOND.

IMPROVED PARK, WITH NAME.

Washington Square.....	Bay street, Water street and Canal street, Stapleton.....	1.46
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IMPROVED UNNAMED PARK.

NAME.	LOCATION.	AREA IN ACRES.
..... {	Broadway, Bennett street, Heberton avenue and Vreeland' street, Port Richmond	1.28

PARKWAYS, STREETS, AVENUES, ETC.

(Under the Jurisdiction of Department of Parks.)

LOCATION.	LENGTH.	WIDTH.
Cathedral parkway (One Hundred and Tenth street, west of Seventh avenue).	4,061 feet	100 to 126 feet
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 "	70 "
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 "

BOROUGH OF BROOKLYN AND QUEENS.

PARKS.

NAME.	LOCATION.	AREA IN ACRES.
Bedford Park.....	Brooklyn and Kingston avenues, Park place and Prospect place.....	4
Bensonhurst Beach.....	Bay parkway, Gravesend bay, Twenty-first avenue and Cropsey avenue.	3
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

NAME.	LOCATION.	AREA IN ACRES.
City Hall Park.....	Junction of Court and Fulton streets.....	0.500
Concourse Park.....	Foot of Ocean parkway, Atlantic ocean.....	70
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 avenue, Fourteenth avenue and Gravesend bay.....	144
Forest Park.....	Jamaica avenue, Union turnpike, Flushing avenue and Myrtle avenue, Jamaica.....	536
Fort Greene Park.....	DeKalb avenue, Washington Park, Ashland place, Willoughby street, Canton street and Myrtle avenue.....	30
Fort Hamilton Park.....	Fourth avenue, DeNyse street, Fort Hamilton avenue and New York bay.....	7
Flushing Park.....	Main street and Broadway, Flushing.....	1.200
Highland Park.....	Terminus of Eastern parkway extension, Sunnyside avenue and Force Tube avenue.....	26
Institute Garden (East Side Lands).....	Washington avenue, Eastern parkway and Flatbush avenue.....	50
Irving Square.....	Hamburg and Knickerbocker avenues, Halsey street and Weirfield street.....	3.500
Kings Park.....	Fulton street, Alsop street, Grove street and Ray street, Jamaica.....	7
Lincoln Terrace.....	Eastern parkway, Buffalo avenue, President street and Rochester avenue.....	12
Linton Park.....	Bradford street, Blake avenue, Dumont avenue and Miller avenue.....	3
Municipal Park.....	Joralemon street, opposite City Hall.....	0.333
Monitor Square.....	Junction of Jackson avenue and Third street, Long Island City.....	0.250
New Lots Playground.....	Sackman street, Newport avenue, Christopher avenue and Riverdale avenue.....	3
Parade Ground.....	Coney Island avenue, Caton avenue, Fort Hamilton avenue and Parade place.....	40
Prospect Park.....	Ninth avenue, Fifteenth street, Coney Island avenue, Fort Hamilton avenue, Ocean avenue and Flatbush avenue.....	516.167
Poppenhausen Park.....	Junction of College avenue and Thirteenth street, College Point.....	0.143
Red Hook Park.....	Richards, Dwight, Verona and Williams streets.....	6
Saratoga Square.....	Saratoga and Howard avenues, Halsey and Macon streets.....	4
Stuyvesant Park.....	Junction of Stuyvesant avenue and Broadway.....	0.125
Sunset Park.....	Forty-first street, Forty-third street, Fifth avenue and Seventh avenue.....	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 avenues, 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

UNNAMED PARKS AND SMALL GORES.

NAME.	LOCATION.	AREA IN ACRES.
Unnamed Gore, College Point	Junction of Martel avenue and Thirteenth street.....	0.060
Unnamed Park, College Point	Fourteenth and Fifteenth streets and Fifth avenue.....	1.100
Unnamed Park, Long Island City.....	Junction of Jackson avenue and Eleventh street.....	0.020
Unnamed Park, Ravenswood	Vernon and Nott avenues and Hancock street.....	0.250
Unnamed Gore, Long Island City.....	Junction of Jackson avenue and Twelfth street.....	0.060
Unnamed Gore, Long Island City.....	Junction of Jackson avenue and Sixth street.....	0.060
Unnamed Gore, Long Island City.....	Junction of Jackson avenue and Ninth street.....	0.100
Unnamed Gore, Brooklyn...	Junction of East New York and Pitkin avenues.....	0.250

PARKWAYS.

NAME.	LOCATION.	LENGTH, IN MILES.	WIDTH, IN FEET.
Bay parkway (formerly Twenty-second avenue)	From Ocean parkway to Bensonhurst beach.....	3	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....	3	320 to 900
Bushwick avenue.....	From Eastern parkway extension to Jamaica avenue.....	$\frac{1}{4}$	100
Buffalo avenue.....	From Eastern parkway to East New York avenue.....	$\frac{1}{8}$	110
Dumont avenue.....	From New Lots avenue to Fountain avenue.....	$\frac{1}{4}$	70
Eastern parkway.....	From Prospect Park to Ralph avenue.....	$2\frac{1}{2}$	210
Eastern parkway extension..	From Ralph avenue and Eastern parkway to Highland Park.	$2\frac{1}{4}$	110
Fourth avenue.....	From Flatbush avenue to the Shore road.....	$4\frac{1}{2}$	120
Fort Hamilton parkway	From Ocean parkway to Fort Hamilton.....	$4\frac{1}{2}$	100
Glenmore avenue.....	From Stone avenue to Eldert lane.....	2	60
Miller avenue.....	From Eastern parkway extension to Jamaica avenue.....	$\frac{1}{10}$	60
New Lots avenue.....	From Riverdale avenue to Dumont avenue....	1	60
Ocean parkway.....	From Prospect Park to Coney Island.....	$5\frac{1}{2}$	210
Ocean avenue.....	From Flatbush avenue to Fort Hamilton avenue.....	$\frac{1}{2}$	100
Pennsylvania avenue.....	From Jamaica avenue to Jamaica Bay.....	$2\frac{1}{2}$	100
Pitkin avenue.....	From East New York avenue to Stone avenue.....	$\frac{1}{8}$	80
Riverdale avenue.....	From Stone avenue to New Lots avenue.....	$1\frac{1}{2}$	70
Rockaway parkway.....	From Buffalo avenue to Canarsie Beach.....	5	100
Stone avenue.....	From Eastern parkway extension to Riverdale avenue.....	1	80
Seventy-fifth street.....	From Fort Hamilton parkway to Bay parkway (Twenty-second avenue).....	2	100
Union street.....	From Fourth avenue to Prospect Park.....	$\frac{3}{4}$	60
Shaw avenue.....	From Jamaica avenue to Forest Park, Borough of Queens...	$\frac{1}{4}$	80

BOROUGH OF THE BRONX.

PARKS.

NAME.	LOCATION.	AREA IN ACRES.
Bronx Park.....	One Hundred and Eighty-second street, Southern Boulevard, St. John's College property, New York Central and Hudson River Railroad and White Plains road	661.60
Cedar Park.....	Walton avenue, One Hundred and Fifty-eighth street and Mott avenue.....	17.47
Crotona Park.....	Fulton avenue, Third avenue and Arthur avenue.....	154.60
Claremont Park.....	Teller avenue, Belmont street, Clay avenue and One Hundred and Seventieth street.....	38.00
Fordham Park.....	Fordham road, Sedgwick avenue and One Hundred and Eighty-eighth street.....	5.87
Macomb's Dam Park.....	Jerome avenue, One Hundred and Sixty-second street, Cromwell's avenue and Harlem river	27.00
Pelham Bay Park.....	Northeast end of New York City.....	1,756.00
Poe Park.....	East One Hundred and Ninety-second street and Kingsbridge road.....	2.33
St. James Park.....	Jerome avenue, Creston avenue, and East One Hundred and Ninety-first street.....	11.83
St. Mary's Park.....	St. Ann's avenue, One Hundred and Forty-ninth street and Robbins avenue	28.70
University Park.....	Cedar avenue, One Hundred and Eighty-first street and Sedgwick avenue.....	2.75
Van Cortlandt Park.....	Northern boundary line of city, Broadway, Van Cortlandt avenue, Jerome avenue and Mount Vernon avenue.....	1,132.35
Washington Bridge Park..	Sedgwick avenue, Harlem river, Washington Bridge.....	8.45
.....	Boston road and One Hundred and Sixty-fourth street.....	0.06
.....	Boston road and One Hundred and Sixty-ninth street.....	0.16
.....	Franklin avenue and One Hundred and Sixty-ninth street.....	0.15
.....	Fulton avenue and One Hundred and Sixty-seventh street.....	0.20
.....	Fulton avenue and One Hundred and Seventieth street.....	0.95
.....	Throgg's Neck, Fort Schuyler road, Eastern Boulevard.....	0.45
.....	Washington avenue, Brook avenue and One Hundred and Sixty-third street.....	0.06
.....	Washington avenue, Third avenue and One Hundred and Eighty-eighth street.....	0.15
Total.....		3,849.13

PARKWAYS.

LOCATION.	AREA IN ACRES.
Crotona parkway—200 feet wide, 3,815 linear feet, or 0.72 miles long	12.00
Spuyten Duyvil parkway—60 to 180 feet wide, 11,500 linear feet, or 2.18 miles long.....	24.50
Moshola parkway—600 feet wide, 6,035 feet, or 1.14 miles long.....	80.00
Bronx and Pelham parkway—400 feet wide, 11,861 linear feet, or 2.25 miles long	95.00
Total acreage.....	211.50

RECAPITULATION.

	Acres.
Park area, Manhattan and Richmond (exclusive of Parkways).....	1,343.754
Park area, Brooklyn and Queens (exclusive of Parkways).....	1,573.368
Park area, The Bronx (exclusive of Parkways).....	3,849.130
Total (exclusive of Parkways).....	<u>6,766.252</u>

LIST OF STATUARY, MONUMENTS, MEMORIALS, FOUNTAINS, ETC., IN THE PUBLIC PARKS.

BOROUGH OF MANHATTAN.

Central Park—

Bolivar.
 Schiller.
 Beethoven.
 Eagles With Prey (group).
 Daniel Webster.
 Indian Hunter With Dog (group).
 Columbus.
 Shakespeare.
 Robert Burns.
 Walter Scott.
 Fitz Greene Halleck.
 Humboldt.
 Thorwaldsen.
 Statue of Commerce.
 Seventh Regiment Monument.
 Mazzini.
 Morse.
 Pilgrim Fathers.
 Still Hunt (group).
 The Falconer.
 The Tigress.
 Moore.
 Hamilton.
 The Obelisk.
 Richard M. Hunt.
 Shepard Fountain.

Riverside Park, near Eighty-eighth street—
 George Washington.

One Hundred and Fourteenth street, Morning-
 side avenue, East, and Manhattan
 avenue—

Washington-Lafayette.

Hancock Square, One Hundred and Twenty-
 third street, Manhattan and St. Nicholas
 avenues—

General Winfield Scott Hancock.

Thirty-third street, Broadway and Sixth Ave-
 nue—

Horace Greeley.

Madison Square—

Chester A. Arthur.
 David Glasgow Farragut.
 Roscoe Conkling.
 William H. Seward.

Bryant Park—

J. Marion Sims.
 Washington Irving.

Thirty-fifth street, Broadway and Sixth avenue—
 William Earl Dodge.

Washington Square—

Washington Arch.
 Garibaldi.
 Alexander L. Holley.

Third and Fourth avenues and Seventh street— Union Square—

Peter Cooper.

Lincoln.

Willis James Fountain.

Twenty-fifth street, Fifth avenue and Broadway—

City Hall Park—

Nathan Hale.

Major-General Worth.

Bowling Green Park—

Abraham DePeyster.

Union Square—

Lafayette.

Battery Park—

Washington.

Ericsson.

There are no monuments or statues in the boroughs of The Bronx or Richmond upon Park territory.

BOROUGH OF BROOKLYN.

Soldiers' and Sailors' Memorial Arch.

Panthers, at each side of the Third street entrance, Prospect Park.

Equestrian Groups at each side of the Ocean parkway entrance to Prospect Park.

Lioness and Cubs, to be erected at the Fifteenth street entrance to Prospect Park.

J. S. T. Stranahan, at main entrance to Prospect Park.

General G. K. Warren, at Prospect Park plaza, near main entrance.

Abraham Lincoln, flower garden, Prospect Park.

Henry Ward Beecher, with children, City Hall Park.

Mozart, flower garden, Prospect Park.

Beethoven, flower garden, Prospect Park.

Washington Irving, Prospect Park, opposite the flower garden.

John Howard Payne, near the farm-house, Prospect Park.

Thomas Moore, flower garden, Prospect Park.

BOROUGH OF QUEENS.

Poppenhausen, Poppenhausen Park, College Point.

