TWENTY SEVENTH ANNUAL REPORT

OF THE

Department of Parks

FOR THE

YEAR 1887.

Brooklyn:
PRINTED FOR THE COMMISSIONERS.

1888.

TWENTY SEVENTH ANNUAL REPORT

OF THE

Department of Parks

FOR THE

YEAR 1887.

Compliments of Committee.

D. M. Somers, *Chairman*,
Geo. W. Oakley,
Anson Ferguson.

Brooklyn:
PRINTED FOR THE COMMISSIONERS.

1888.

Commissioners.

JAMES T. EASTON,
ROBERT B. VAN VLECK,
*CROSSMAN LYONS,
*HENRY HARTEAU,
DANIEL M. SOMERS,
GEORGE W. OAKLEY,
FRANCIS MARKEY,
*ANSON FERGUSON,

THE MAYOR, *ex-officio.*

Officers.

President,

JAMES T. EASTON.

Secretary,

ROBERT COURTNEY.

Superintendent,

JOHN T. HAMILTON.

*Resigned.

Commissioners Appointed to Fill Vacancies,

ELIJAH R. KENNEDY,
CHARLES H. LUSCOMB.

Contents.

Illustrations.

REPORT

OF THE

DEPARTMENT OF PARKS.

BROOKLYN, January 2, 1888.

To the Honorable the Mayor and Common Council of the City of Brooklyn.

SIRS:

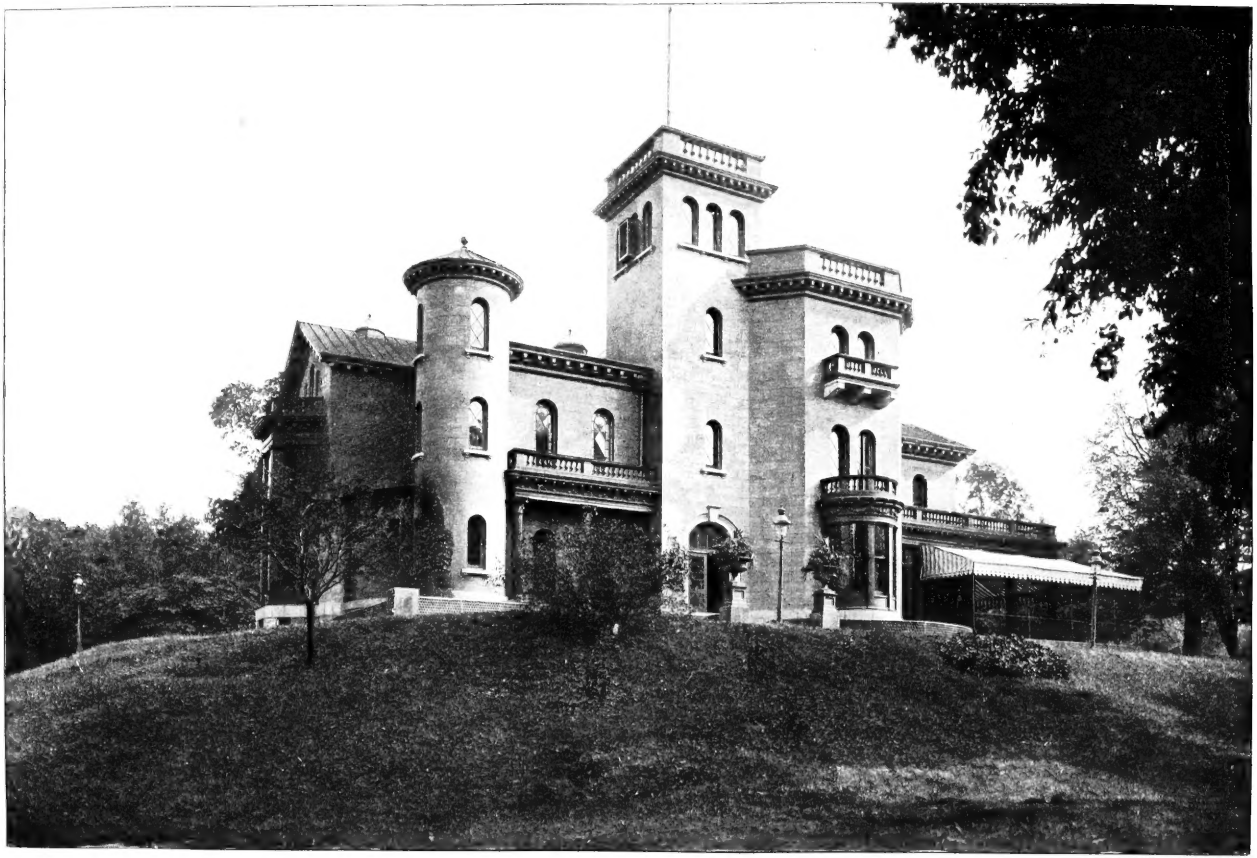
I have the pleasure herewith to transmit the Annual Report of the Department of Parks, for the year 1887; the preparation of which has been entrusted to a Special Committee, who have given it careful consideration.

It will be found to include the usual reports from the different divisions of the Department.

With great respect,

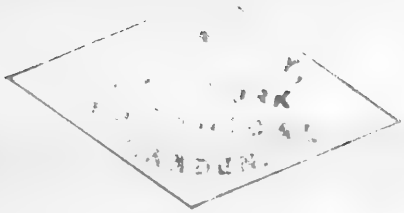
JAMES T. EASTON,

President.



PHOTOGRAVURE CO., N.Y.

Head Quarters of the Park Department formerly the Pitchfield Mansion



REPORT

— OF —

SPECIAL COMMITTEE.

In accordance with the law and city ordinances, it is required of the Department of Parks that a full report of its affairs and transactions shall be forwarded annually to the Honorable, the Mayor and Common Council, and through them submitted to the people. In conformity therewith, a special Committee of Three was duly appointed by the Board of Commissioners, consisting of one from each of the three standing committees, whose duty it should be to prepare such a report for the year 1887, including such suggestions and recommendations for the future as should be laid before the taxpayers of the city of Brooklyn for their inspection and approval.

In introducing this report to the attention of the public, the Committee beg leave to state that there are in the Department of Parks many things deemed important, of which its members would like to speak at length to the public, were it not that they feel themselves necessarily precluded from some of them from want of time and space.

They have therefore selected what has seemed to them, in their judgment, after careful consideration, the most important topics to be presented. With these they have dealt somewhat in detail, touching occasionally upon historical points connected with them, of which there are many of peculiar interest in the Park. The recent improvements in the photo-gravure process of printing, by which it can be cheaply done, have placed it within their power to illustrate the whole edition at a reasonable cost.

The Committee beg to refer the public to the following financial statement, with some degree of gratification, inasmuch as the footings result in something new, thus far, in the history of the Department. For the first time in the management of the park, so far as the Committee has been able to learn, all bills rendered for the current year have been paid. The books will show that the appropriations have not been exceeded, and consequently there remains no deficiency to be accounted for, while, on the contrary, the statement shows a balance left to some of the accounts at the close of the year. The statement, as submitted, further shows that $29,303.01 were expended in making good deficiencies of 1885 and 1886. The Board has changed the commencement of the fiscal year from the first of December to the first of January, so as to occur in consonance with the date observed by the other city departments, and also to conform to the date of the annual appropriation.

The Superintendent's report is necessarily abridged in some particulars, from the fact that many of the topics presented have been covered more or less in detail by the report of the Committee. The superintendent, however, has given some valuable information concerning the trees, vines and shrubbery, with which subjects, together with flowers, he is thoroughly familiar.

The Chief Clerk's, Paymaster's, Police and Meteorological Reports follow.

Maintenance of Parks.

WITH A GRADUAL CONSTRUCTION TOWARD COMPLETION.

The maintenance of Brooklyn's parks for a number of years past has been highly discreditable to the city. The reason hitherto assigned has been an insufficiency of funds. Be this as it may the time has come (and there should be no further delay) when a proper amount should be appropriated for the suitable and systematic maintenance of such parks. These popular resorts should be maintained, not with waste or

extravagance on the one hand, or, as has been too often unfortunately, the case, with parsimony and neglect on the other, but rather by observing between these two extremes a happy medium of business thrift and care, such as a judicious business man would bestow upon an estate in order to derive from it the best possible revenue. It is time that the taxpayers looked into and understood this whole subject, in order that they should be prepared intelligently to counsel and advise with the Board of Estimate concerning it. The object of this special committee in thus extending somewhat the volume of this report and entering in some instances into details and reminiscences, is to interest and inform the general public with a view to the accomplishment of this very end. The Committee will endeavor to see that the report reaches the prominent business men and taxpayers of the city, at least so far as the limited edition will allow.

Prospect Park, properly maintained, should present the appearance of a natural landscape park and garden, with all its walks completed and in perfect order, its drives well appointed and watered, its lawns and meadows properly mown, its trees and shrubbery carefully pruned and looked after, its waterways clear and unobstructed, its banks properly protected, its flowers in far greater quantity, displaying some skill and taste in their selection and arrangement, its buildings and bridges in good repair, thus disclosing in all the features of such a system the perfect maintenance of the park. Added to all this there should be a well devised system of gradual yearly construction toward its final completion.

The office of art, viz., to harmonize art with nature, as addressed to the park, should be to bring out in strong relief its features of natural beauty. To this end it should be intelligently directed. The drive system, as subsequently referred to in this report, needs but little to complete it. The North Circuit drive round the lake and the Ninth street entrance drive are still to be constructed. On the subject of walks much more remains to be done. The unfinished portion of the park requires a number of new walks, and even in the parts already

described as finished, several additional ones are needed. A sanitary system of drainage from the buildings in the park, is very important to the health of the visitors. There are a number of structures and buildings that the public require, some of which are designated in the original design of the park, but which have never yet been constructed.

The construction of many of the buildings and bridges of wood, is a mistake which should not be repeated. Twenty years of experience in these matters have shown that a number of such structures have to be replaced by new ones. They are expensive to the Department to maintain, and in the end cost as much as if originally built of durable material. Brooklyn should make up its mind to complete Prospect Park. Take ten years, if necessary, and let each year witness one tenth of the work done. Prior to such a project a finished plan or design should be made. The cost should be carefully estimated, and a yearly division of this amount should be allowed by the Board of Estimate, or the city issue bonds at low interest for the purpose of carrying out in sections such a systematic process of completion.

The city of Brooklyn is old enough and large enough to own a finished and properly maintained park, and the present generation should not be robbed of the pleasure of enjoying such a resort. The completion of Prospect Park should be accomplished as soon as practicable, without materially affecting the rate of taxation. Brooklyn should not fall behind other cities in the attractions of her noble park, unsurpassed as it is in some respects, if not unequalled, by any other park in the world. There should be within its grounds a zoölogical garden, a botanical conservatory and a museum. These institutions might be supplemented in the future with others, for the exhibition of all the departments of natural history. An extended mall would be a fine feature for the park, at the Nethermead, and would afford an opportunity to persons of artistic taste and substantial means to erect monuments commemorative of distinguished personages, and group pieces representing striking ideas. Prospect Park completed, with

all its drives, walks, bridges, buildings, well kept lawns, flower beds, variegated shrubbery, shady woods and fresh air, is what the people should be enjoying to-day, if the proper management in its development had been observed. Inasmuch as this has not been done, it would be criminal negligence on the part of those now entrusted with its care, should they fail to lay the matter plainly before the people. In the different topics that go to make up the following report, the Committee have sought to set forth in a plain, unvarnished way, what the Commissioners have done with the people's money, what they have asked for that the people needed, and what they propose to do with the fraction allowed, for the people's comfort.

Summary of Improvements Made in 1887.

First.—A large, substantial music pagoda, with walks, graded grounds and clearings around it. This structure, as now erected, stands in a beautifully extended grove.

Second.—A large and commodious ladies' and children's shelter, at the Willinck entrance, Flatbush, with new sidewalks on Flatbush and Ocean avenues.

Third.—A picnic ground, with the necessary conveniences, in the woods on the summit of Sullivan Heights, formerly an unimproved and unused portion of the park known as Snake Hill, near the Dairy Cottage.

Fourth.—The Litchfield picnic grove, between the west drive and Ninth avenue, at a point where Fifth street would intersect. This spot was formerly used as the dumping ground of the Park. A permanent sewer has been run through it.

Fifth.—Repairs and constructions, in and around the headquarters of the Park Department, formerly known as the Litchfield mansion. A general repairing and painting of the whole building. Meteorological offices fitted up and furnished and also provided with a complete set of new instruments. A museum room fitted up with cases for shells. Drawing room, offices, &c. A large summer shelter. Awnings around southern portico. A good pavement. Trees carefully trimmed and grounds improved around the building.

Sixth.—Improvement back of boat-house. The green, unhealthy pond, formerly there, replaced by a lawn and flower beds.

Seventh.—Two substantial bridges. One, the Valley Grove Bridge, over a bridle road, in a deep ravine, connecting the Dairy Cottage with the Sullivan Heights Picnic Woods. The other, "Music Grove Bridge," spanning Binnenwater stream, on the Picnic Woods walk.

Eighth.—New walks, six thousand four hundred and seventy running feet.

Ninth.—Cleansing all the small lakes, pools and water courses, from the accumulated leaves and filth that had lodged in and about them. Repairing of banks and cascades.

Tenth.—Thinning and pruning out the undergrowth and overgrowth of the trees and shrubbery of the park.

Eleventh.—By contract, with special appropriation from the county, the filling in of the Concourse lands at Coney Island.

Twelfth.—The erection at Coney Island of coast-line Dutch facine mattresses, to protect the beach against the ravages of the waves.

This list shows what special work has been done, outside of general maintenance and repairs, and will be referred to hereafter in detail, giving statistics and necessary information.

We feel satisfied that more special permanent work has been accomplished during the past year than during the whole time from the cessation of the construction of the park in 1876 to 1886.

This, too, when the net appropriation for 1887 (about $30,000 being deducted for deficiency and old accounts) was only about the usual annual amount devoted to park expenses.

The park and parkways are better maintained and furnished with police than formerly. Many of the structures have been repaired and painted, which had never been touched since completion. The maintenance funds have not been trenched upon for special work. Though the whole amount appropriated to the Park Department is not adequate for maintaining it as it should be, this seeming contradiction is readily under-

stood by any one familiar with the park. Nearly one-third of the area of Prospect Park has never been laid out or improved, another third has been entirely neglected and allowed to go to ruin, including structures, walks, &c., so that they are beyond maintenance, and will have to be reconstructed. The other third has been, and still is, passably maintained. The park was considerably over-planted at the first, and the overgrowth since then, hastened by the rich soil, can hardly be realized. This decaying overgrowth is so complete and the finished and untouched parts so blended, that it requires close inspection to tell where one begins and the other ends.

From the many things needed in the work of reconstruction and improvement, the Commissioners have selected the few above enumerated as being the most pressing and of the greatest use to the public.

New Improvements to be Made in 1888.

The Board of Estimate has allowed for the current year the following accounts for new constructions:

TOMPKINS PARK.	
New fence, walks, &c.	$10,000
CITY PARK.	
New shelter, walks, &c.	5,000
PROSPECT PARK.	
Storage sheds near stable	5,000
Croquet shelter, upper meadow	3,500
Men's closet, near boat house	2,500
New walks	2,500
Coal shed and closet at well	1,500
Swings and seats	1,500
Electric light experiment	1,500
Iron structure	1,000
Plaza improvement	1,000
Total for construction	$35,000

FOR RECONSTRUCTION.

Resurfacing walks in Prospect Park	$12,500
Resurfacing walks and the Gaut in Fort Greene	7,500
Resurfacing east drive, supplies, gravel	5,000
Repairs at large well	4,500
Repairs and alterations Litchfield Mansion	2,500
Carroll Park, walks, &c	1,000
Total	$33,000

Maintenance	$138,300
Police	60,000

These amounts for maintenance, construction and reconstruction, are more liberal than the Park Department has been allowed for a number of years, and the improvements will be of great benefit and comfort to those who visit the parks.

There has been no appropriation made for construction this year by the county, as was earnestly asked for by the Park Commissioners. Last year there was an appropriation of nearly $65,000. The improvements commenced at the Coney Island Concourse will have to remain, for want of such a fund, in an unfinished state. It is very unfortunate that the amount asked for to protect the beach against the waves, was not allowed, as it is highly probable that many times that amount will be required next year to make good what might have been preserved with timely intervention. We would therefore again most earnestly urge the Board of Supervisors to make the necessary provision, so that the Park Commissioners can save the county's property while it is within their power to do so, and not allow what has already been accomplished to be sacrificed.

The decreased appropriation of the county, taken with the increase of the city, makes the appropriation of 1888 about the same as it was in 1887.

The amount of money that has been granted to the Park Department for a number of years past has been much too small. It is false economy for the city to starve one of its

noblest public works by insufficient appropriation. Valuable work and costly structures have both been lost by such a mistaken course. Such buildings will have to be rebuilt and such work all done over again. Nor is this all. The shape and health of many of the trees have been so injured for the want of timely care that they cannot be regained. The neglect of the shrubbery for so long a time is particularly unfortunate.

Some very important things for the development of Prospect Park were asked for, but were not allowed by the Board of Estimate, viz: the building of a bridge, started more than fifteen years ago, over the middle channel of the Lullwater, and the drive over it, connecting Breeze Hill, near the pedestrian concourse, with the west drive by the way of the well at the head of the large lake. These improvements would have been a great acquisition to the park, and should not be delayed any longer to the driving public. They will be referred to and recommended more in detail hereafter. Another item asked for was a section of a commodious greenhouse, located near the new drive just alluded to, on what is known as the peninsula between the large lake and Look Out Hill. The old greenhouse is located close by the stables. It is in a very unsuitable and inconvenient place for the public, beside being in the last stages of decay. The amount asked for these constructions was $70,000.

Lullwood Bridge, near the boat-house, is in an unsafe condition, and a new one was asked for. We hope that this matter will not be much longer delayed.

Picnic Grounds and their Associations.

Picnicking in a public park is peculiarly a Brooklyn institution. No large city has given such encouragement to private parties, schools, and Sunday-Schools, to enjoy a jaunt in the woods or on the meadows of its parks, as Brooklyn has. The pleasure of spending a day in the open air, with guar-

anteed protection against annoyances of any kind, has been appreciated from the first, and each succeeding year the number of picnics has steadily increased, so that with the fostering care given, it has grown to be an annual permanency. Picnic parties by the score have come from distant places during the past summer to Prospect Park to seek recreation.

The four hundred picnics of the past year have ranged in numbers from the small family picnic to the large Sunday-School excursions of many thousands. The largest attendance was on May 20, the anniversary of the Sunday-School Union, when one of its divisions paraded in the park. Several of the schools put up large tents and had picnics of their own. About one hundred thousand people visited the park on this date. Picnicking commences in May, and lasts until October. The Park Department furnishes a permit for such purpose to all orderly persons who may apply, which, without cost, gives them public protection, good water, swings, tables, seats and shelter, with as fine picnic groves as can be found within many miles of Brooklyn. All these things, taken in connection with the dispatch and economy in getting there, the safety and freedom from crowds, the carousal, good food, plenty of fresh milk for children, with park amusements close at hand, account for the increasing popularity of the resort.

The number of persons, however, who visited the park this year, through this channel, is only a small percentage of the grand total of six million visitors.

The Old Picnic Grounds

are located in the West Woods, skirting the long meadow, between the Third and Ninth street entrances. The grounds have been overtaxed and worn out by constant use, no care having been given to the resuscitation of the soil. Much damage has consequently been done to the trees, especially the chestnuts, which largely predominate. Nearly all these noble trees are dead at the top.

By continued walking the grass has been worn away, and the ground has become hard enough to turn water. Until this season the soil has had constant use for fifteen years, having had no rest or nourishment and but little moisture. The steep descent of the surface sheds off the water on the hillsides from the roots of the trees and leaves them unnourished. To allow this to continue would result in killing the trees and disfiguring the park, as this skirting of the west woods on the long meadow is one of its finest features. To save this native woodland and not deprive the public of the pleasure of picnics was a question the Commissioners had to meet. It was decided by making new picnic grounds in parts of the park that had not yet been finished and that were not used by the public. This necessitated a large amount of work upon them. They were finished at last in time to give relief and rest to most of the old grounds. There has recently been hauled and placed on these premises a large quantity of good top dressing. In the spring it will be worked into the soil, levelled off, and sown in grass. It should then have two years' rest before being used again. Nearly all the trees in this section have had the tops sawed out on showing signs of decay when they should have been nourished and had the cause removed. They are old forest trees, from fifty to two hundred years of age, and cannot be replaced in a generation. Many of them show signs of rough treatment before they were owned by the city, caused either by wanton mischief on the part of some one or by cattle biting the bark when the grass was snowed under. The last theory is the more probable, as the barked and decayed parts are near the ground. The wood of the chestnut trees in the park seems to be quite brash. Nearly every severe storm robs these trees of some of their branches. The severe storm in the latter part of August last did considerable damage and was confined almost exclusively to these particular trees.

In the selection of sites for the new picnic grounds, the close proximity of shelter and toilet accommodations was of great importance. It so happened that two large pieces of

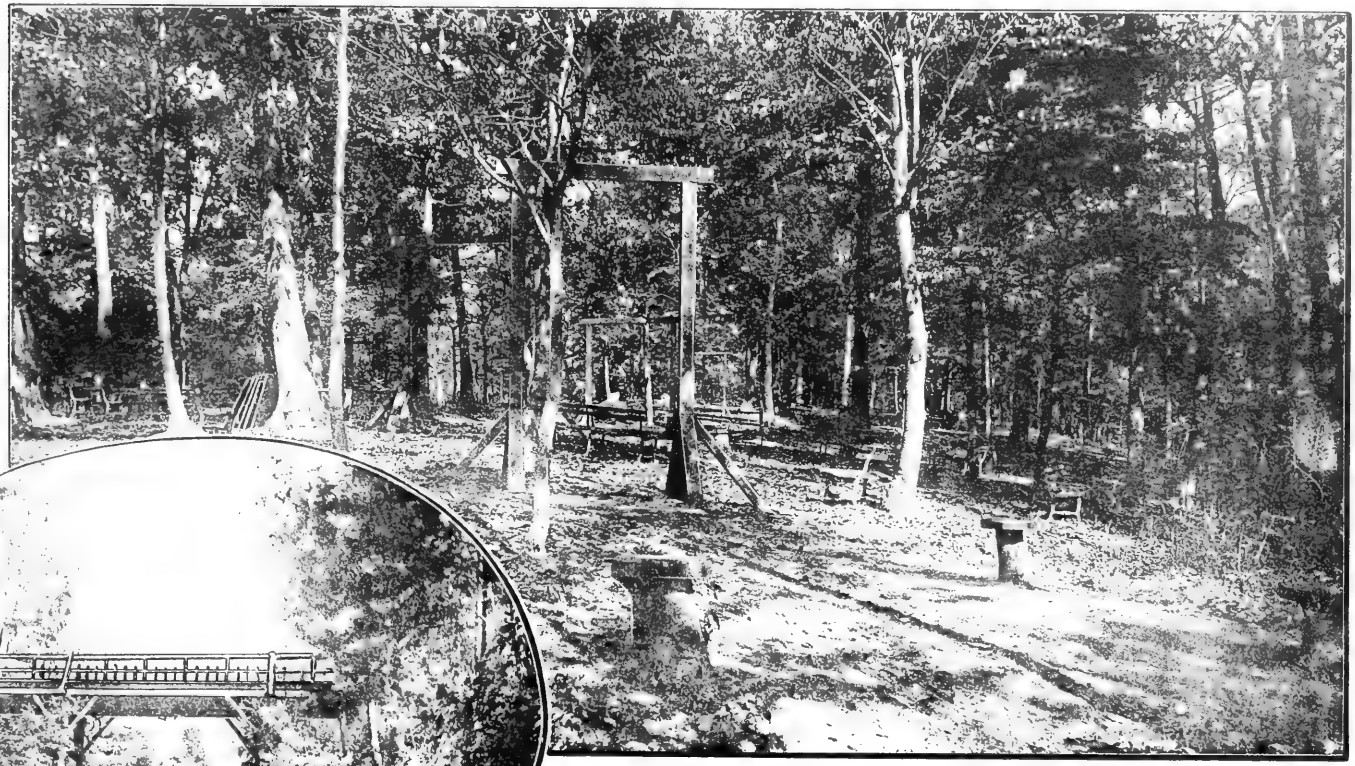
unimproved woodland stood hard by the two principal shelters and they were consequently selected: one, the Litchfield grove on the south side of the Litchfield mansion, just back or west of the present picnic shelter, thus having double shelter accommodation; the other, on the wooded heights back of the Dairy cottage. There are excellent public conveniences in the adjacent structures, and the cottage is not more than one hundred feet from the woods. This noble, rugged and historic piece of virgin woodland stood completely isolated and unused. Very few knew of its existence. It was known by the uninviting name of Snake Hill. It is now quite accessible and was named by the Commissioners in commemoration of Major General John Sullivan, who commanded at this place in the battle of Long Island.

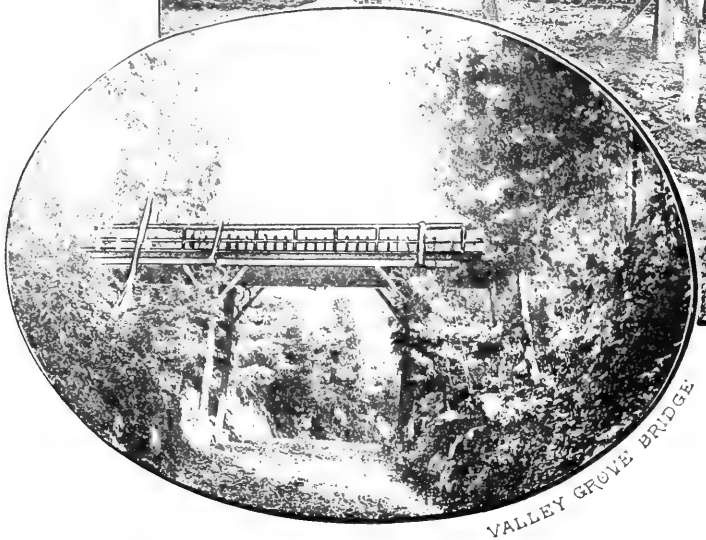
Sullivan Heights Picnic Woods.

These woods contain about twenty acres of virgin forest. They stand out on a high ridge containing a large number of huge boulders. Being unfitted for farming purposes this spot escaped the ax of the thrifty Dutch settlers. It contains the largest specimens of trees in the Park, some of which measure eleven feet around the trunk. The old forest trees abound, such as the white, red and black oak, hickory, chestnut, black birch, black beach and tulip trees.

This ridge commences at Battle Pass on the East drive and extends through to the Nethermead arches. The woods lie between the "East drive in the woods" and the Bridle path in the ravine.

A substantial new bridge (see cut), called Valley Grove Bridge, connects the Dairy Cottage with Sullivan Heights. It is fifty-five feet long, twelve feet wide and eighteen feet high. Its supporting timbers are made from Prospect Park trees, found felled by the Commissioners when they took office. A twelve-foot wide walk has been made from this bridge through the woods to Music Grove. The boulders from the crest of the ridge have been utilized in terracing the hill sides into





VALLEY GROVE BRIDGE

Sullivan Heights
Picnic Woods.

small parapets, thus preserving the historical association and appearance of the place. The rock in the foundation of the music stand was blasted here and proved to be of good quality. About one quarter of these woodland heights has been improved for picnic purposes, with swings, tables, &c. These grounds are capable of accommodating twenty thousand people. The shade is deep, and the elevation being high, the spot is delightfully cool. As this historic height will be largely devoted to the youth of Brooklyn, inasmuch as the battle of Long Island forms a part of their historical studies, it may not be amiss to locate some of its points of interest for the throngs of children that shall visit it. This report is as likely to be read by the young as the old in the household, for children love to hear and read all about those places which their little feet have visited.

The Battle of Long Island

was fought on the morning of August 27, 1776, on our outer line of defence, which was the high, heavily wooded ridge that passes through Greenwood and Prospect Park, to Ridgewood. General Greene, who had planned the fortifications, was taken sick about the middle of August, and General Sullivan was placed in command. The English, with their hired Hessian hordes, landed 23,000 men, a larger force than was expected. General Washington hurried over reinforcements from New York, making an army of 5,000 men. Three days before the battle he placed General Putnam in charge. Under him General Stirling commanded the right wing in Greenwood and General Sullivan the left in Prospect Park. Sullivan was much incensed with his supersedure, as he held the same rank as Putnam, or Greene, and having had more time to study the situation was convinced how the English would make the attack and advised accordingly. His advice, however, was not taken. The army was flanked at the extreme left, just as he predicted, by way of the Old King's Highway pass, near the Evergreen Cemetery. The larger part of the English army, under Howe and Cornwallis, marched down to the centre of Brooklyn before the Americans

knew that their flank had been turned. Then took place the worst rout and massacre of the war. One half of the American army was lost in those killed and taken prisoners. History records many brave deeds that were performed prior to and during the battle. There are also in existence minute records showing the part which the old settlers of this portion of Long Island took in gaining the independence of our country. A minority were brave and patriotic and did their duty, but the majority were tories of the worst type and did all that was in their power to prevent the country from having its freedom.

The troops that took part on our side were from Pennsylvania, Maryland, Delaware and Connecticut. The Long Island militia, which were thought to have been at the Bedford Pass, were at Jamaica Plains herding cattle and knew nothing of the battle. These Long Island tories are said to have formed themselves into a regiment in the few days during which the English had landed, and fought under the English General Grant against General Stirling at Greenwood Heights.

The British advance was expected by either the Gowanus road on the shore, or the old Flatbush road through Valley Grove in the Park, or both. General Sullivan's force commanding the pass at Valley Grove consisted of three regiments and a small battery, stationed as follows: Colonel Hands, Pennsylvania Rifle Battalion, on the right of the pass, covering the crest of Sullivan Heights. On the left, looking toward Flatbush, close to the East Drive, is a small round top hill, now covered with a clump of thrifty pine trees. This is the site of the two gun battery redoubt; its position enfilading the old Flatbush Road in both directions, as well as the Porte Road to Gowanus, which branched off at that juncture. From this point on the ridge crossing Flatbush avenue, to the East Side lands, lay the Connecticut Regiment commanded by Colonel Parsons. Beyond this, to the Clove Road, was stationed Colonel Miles' Pennsylvania Regiment.

On August 22d the Hessian division of the English forces, under command of General DeHeister, 8,000 strong, occupied

Flatbush. On the night of the 23d Colonel Hand made a sortie from the picnic grounds through the wood, where the music stand now is, to the west side of Flatbush. Here he attacked Colonel Donop's yagers while they were asleep and killed a number of them. On the night of the 26th the attack was repeated, being the fourth skirmish. A number of houses were burned, among which was the Leffert Lefferts' residence. On the memorable morning of August 27th, De Heister advanced upon the lines, but did not press the fight until the guns of Cornwallis rang out in the rear. They then rushed upon Sullivan's command like so many demons and gave no quarter. Sullivan's position was nearly surrounded. He had to contend with four times his numbers in the front, and six times as many in the rear. The result of the battle was a stampede and a massacre. Colonel Hands' men, seeing that no quarter was given by Colonel Donop's yagers, sold their lives dearly. The brave colonel succeeded in cutting his way through unhurt, and was given the post of honor by Washington on the night of the 29th, when the evacuation was made from the island. The brave Colonel Parsons, when there was no hope left, succeeded in concealing himself in a dense morass that was close at hand, and thus escaped. This foss has since been dug out and now forms part of the lake in the deer paddock. General Sullivan was taken prisoner, but soon after exchanged. Colonel Miles was also captured. He does not leave an enviable record for bravery in this engagement.

In constructing the park at Battle Pass the bones of some of Connecticut's brave sons, who died in the defense of this redoubt, were found, together with some cannon balls.

A case of great bravery is recorded of John Callender of Massachusetts, who voluntarily took command of the battery when the captain and lieutenant were killed. General Washington personally complimented him for bravery. On the opposite side of the road, toward Valley Grove, stood the monumental Dongan charter oak, which was felled across the road on the morning of the battle.

The projectors of Prospect Park pledged to the people of Brooklyn that the historic features of that sacred spot should be properly cared for and the site of the redoubt preserved.

This has not been done and there is nothing to designate it. On the contrary it has been changed in the development of the park so that it is much less prominent than it originally was.

In commemoration of this spot a bronze tablet has been placed upon a large boulder near by. The inscription, however, upon this tablet is incorrect, the distance being inaccurately stated. A public house of later prominence is mentioned, but nothing said about the redoubt.

This bluff is the site where the English and the United States regular organized armies first met, each having its commander-in-chief close at hand. Thousands of lives were offered up that day on that smoking altar to freedom, while as many more, less fortunate ones, found their way into those living hells—the English prison ships. As there was no engagement and no blood spilled at Fort Putnam (now Fort Greene) where the martyrs' tomb stands in Washington Park, is not Battle Pass mound the right spot where finally to place at rest the bones of the martyrs and erect the proposed national monument? A thousand persons would see it here, where scarcely a score would see it in Washington Park. It is a culminatory point of woodland and meadow, of lawn and precipice, of water and shrubbery, and needs a central commanding object to complete the picture. The soil stained with the blood of brothers who died in the same cause is the pall that should cover their bones, and it could rear its head in honor of both martyrs and heroes. It is to be hoped that Congress will not longer delay to place over the bones of these heroic martyrs, whose lives were sacrificed in the cause of freedom, each suffering more than a hundred deaths for the liberty we now enjoy, a suitable and noble monument. Commingled indiscriminately in the mortuary pile are the bones of patriots from most of the original States. They have been saved by a patriotic few for

the time when the National Government feels able and sees fit to render an act of justice long delayed. Is there not money enough in the treasury? Is the present generation ungrateful? Is patriotism dead? The chorus of a myriad voices from victims that were murdered calls from out the grave to the Fiftieth Congress for recognition, in commemoration of the greatest suffering endured at any period in the war for independence.

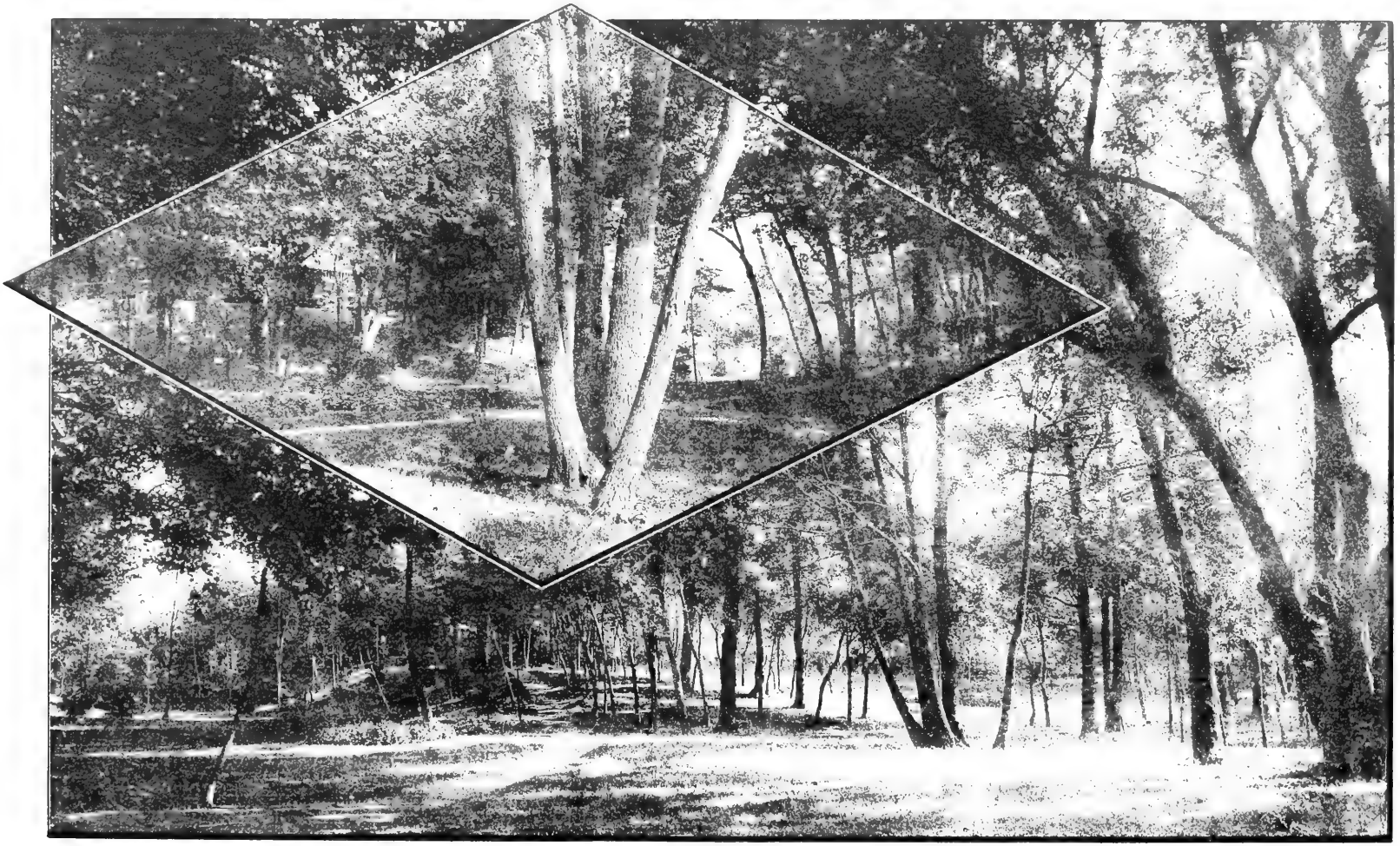
In fact, history does not record an instance in which civilized nations have been at war, when prisoners were treated with such indignity and cruelty as England inflicted upon these revolutionary captives on board her prison ships. It was only a matter of so many days, or weeks, as to how long the strongest constitution could survive. Barbarism furnishes but few cases where the torture was more complete.

In commemorating the name of General Sullivan on the heights that overlook the site of the redoubt in Battle Pass, it is at least a grateful reminiscence that during the remainder of the war Sullivan did not meet with any more such experiences. He was one of the six brigadier generals that were first appointed by Congress at Philadelphia; he was Washington's trusted friend; he fought in most of the battles under him, was governor of his native State, New Hampshire, and had all the honors conferred on him that the State could give. He planned and executed the first direct act of hostility against England by taking possession of the fort near Portsmouth, imprisoning the garrison and securing one hundred barrels of powder, fifteen cannon and a number of small arms. This was four months before the battle of Lexington and Patrick Henry's exploit in Virginia. In view of these facts the appropriateness of this name for the picnic woods is obvious.

The Litchfield Picnic Grove,

as before stated, is near the old Litchfield mansion, from which it takes its name. It is in the rear of the old picnic wood, on the long meadow, separated from it only by the west drive, thus placing the new grounds on the west drive of it, which formerly bordered it on the east.

The refreshment shelter in the old grounds is conveniently near to the new. It has an area of about eight acres and is admirably adapted for small picnics, especially where there are little children. It occupies a secluded locality, not liable to be disturbed when there are large numbers in the park. It is guarded on the western side by the Ninth avenue fence, on the southern by a fence to be built, enclosing the stable yards and sheds, on the east it is planted in with shrubbery from the West drive, on the north it is overlooked by the police station at the department headquarters. The grove, lawn and valleys are as fine as any in the park (see plate which shows one section). The Commissioners have decided that these grounds are suitable and safe for young children to have their picnics on. They were nearly finished during the past year, and were pushed as far as the limited means at the command of the Commissioners would allow. This year it is proposed to complete them, and furnish them with the necessary swings, tables, rustic seats, shelter, drinking fountain, &c. A picnic ground of this character has long been needed, where parents would feel at ease in having their little children secure from being run over by vehicles or bycicles, or hurt by large children and adults in their games or plays. The Station officer who grants the permits would thus have a large portion of the grounds in view of his office. The change in the appearance of these grounds is such that a person would hardly believe the place to be the same. This section has been used for a long time as a dumping ground for all sorts of things. It was the place where, in keeping the park in order, any and everything that was unsightly was hid away. Many things that were



VIEWS IN THE LITCHFIELD PIC-NIC GROVE.

good and useful were also stowed away there and forgotten. So, among the sweepings, leaves, ordure, brush, dead trees, timber and lumber, were run in, wagons, sleds, sleighs, scrapers, rollers and all sorts of utensils and implements used in the park. All this mass of rubbish rotted and enriched the ground so much that a dense undergrowth sprang up and hid all these things from view, so that they were forgotten, choking and killing many of the fine trees there. This tangle of briars, weeds, bushes and vines was so dense in many places that a bird or rabbit could not get through it. Parts of it were very unsightly and other parts when in full foliage, very picturesque. There were a number of places where holes or paths were cut in it into which persons could crawl, but could not walk. It was currently rumored that a number of workmen were in the habit of retiring to this place, after answering roll-call, to play cards and drink. In cold weather the adjoining sheds and stable buildings were used instead. This dense, overgrown, secluded tangle, soon became known to the vicious and wicked and was in great demand for immoral purposes. Some of the Commissioners heard of it, and on investigation found such a state of things to be true. And this den of infamy was within sight and hearing of innocent children in the picnic woods adjoining. The Commissioners at once discussed the matter and decided to break it up immediately. Inasmuch as the old picnic grounds had to have rest, and this site possessed all the requirements necessary to make a good picnic grove, it was decided to use it for this purpose. The Superintendent was instructed what to do, and to do it as soon as possible. It was an undertaking of some size, but it was pushed with vigor. The valley on the left (see plate) is where old Fifth street was. It has a sewer running through it connecting with the picnic shelter. A new sewer was laid through the valley, draining it off to the right. This sewer is to be extended to the stables and surrounding buildings so as to secure proper drainage.

In the clearing out of this thicket, in removing dead trees as well as the surplusage of ill-shaped and overcrowded ones,

the Commissioners felt satisfied in the consciousness that they were performing the duty of their office, besides morally benefiting the city at large by removing a rendezvous of vice, and iniquity.

It was this particular spot in the park that some time ago provoked a bitter and prolonged newspaper attack, that afforded the Commissioners no little gentle amusement. It is scarcely necessary to add that inasmuch as all such animadversions were not addressed to the Commissioners through the proper channel of communication, they have declined to take the slightest notice of them, feeling that all such controversy whatsoever would be entirely beneath them.

The Committee beg to thank the general public for the warm approval and encouragement bestowed upon their action in this matter as well as for the appreciation, so often expressed, of the beautified and greatly improved condition of the place.

The Beecher Monument.

The selection of a suitable site on which to erect the monument that is to honor the memory of Brooklyn's great and gifted citizen, Henry Ward Beecher, is a subject that naturally has occasioned much discussion. Inasmuch as such a site is soon to be decided upon, the suggestions here offered may have a timely bearing upon a matter in which all of us feel so deeply interested.

The site should be selected before the design or base of the monument are decided upon, as they should be made to harmonize with the surroundings. The location of the site should also harmonize as much as possible with the life and character of the monumental man that it commemorates. It should be a characteristic as well as a commanding one.

In view of the fact that the proposed monument will, in all probability, be placed in some city park or square, so that it will eventually come under the protection of the Park Department, the Commissioners have considered the whole matter very carefully, and the Committee appointed for the purpose have studied the subject specially. As a result of such delib-

erations, they beg to present for earnest consideration, as the choicest and most appropriate spot that can be selected, the post of honor at the main entrance of Prospect Park. This site is conspicuously located at the divergence of the East and West drives, exactly facing down the line to the main entrance from the plaza. It would be necessary to raise a small mound on which the monument should stand, so that it would be slightly elevated above the level of the drives. Around this mound a circular walk could be laid, with a stone-edged bed of choice flowers on either side.

Such site would be conspicuously commanding. This is the first trait of coincidence that it should possess. Mr. Beecher was alike a conspicuous and commanding figure, from every point of view, physically, mentally, spiritually. He impressed men instantly. The site proposed, with its instant rather than long-protracted approach, is an appropriate one.

Such a site is easily accessible to all. It is pre-eminently a people's site. Mr. Beecher was a man of the people. He was a man among men. He was a citizen of the world and he lived for universal humanity. He stood for many years upon the broad platform of liberty and love, open to all creeds, all churches, all denominations. He was constantly surrounded by a great multitude. He stood as one of old at the gates of the city.

Such a site is no less strikingly appropriate, from the fact that, while it faces in one direction the busy life of the city, it faces in the other the quiet of repose. Mr. Beecher stood at imminent periods of peril in the life of the nation and faced calmly the buffetings of opposition and the uproar of controversy. But in the midst of the most conflicting circumstances he was calm. He looked on trouble. He also looked upon tranquility.

Such a sight gathers round it those natural objects of beauty so dearly loved and so exquisitely described by the great, kind man. The birds would sing for him, the trees bend over him kindly, the flowers bloom, the sun smile across his face as he was said to smile at the thought of death, the leaves whisper

as if echoing his innumerable thoughts. For why should he stop preaching? There, at the entrance of this great cathedral of nature and of art, with seats strewn about him in rustic simplicity on which the worshipers should rest, where flowers should breathe and little children should be brought to him once more as if for baptism or blessing, where pondering congregations could gather on the quiet Sabbath, there, just beyond the boundary of creeds and churches and clanging factions, where all could come without money and without price, the old times would be lived over again, for there he would stand and preach with his flowers among the people, with lips silent, yet for that speaking, with eye fixed, yet for that more watchful, with hand lost to cunning, yet for that more impressive than impassioned gesture whether lifted for solemn warning or lingering benediction.

In connection with the subject of monumental sites it might be well here to add that there are some good ones for group pieces on either side of the drive from the main entrance to the site selected for Mr. Beecher.

The National Soldiers and Sailors' monument will in all probability be erected in City Hall Square. Had a much larger sum been procured so that a large and elaborate monument could be erected and the surroundings improved, the site of the fountain in the plaza would have been very appropriate.

The site for the national monument to be erected to the memory of the martyrs who died on the English prison ships is referred to under the head of "Picnics, &c."

The Plaza

is certainly a great failure. No one cares to cross it. It is devoid of all life and is a stony waste. It is suggestive of Siberia in winter and Sahara in summer. The noble statue of Lincoln is dwarfed and made dismal by the surroundings. In life Lincoln was cheerful, but at night, around his monument, to add to the dreariness of the place, sounds the sad soughing of the surrounding pine trees. A

Music Pagoda & Lawn Tennis Lockers.

IN MUSIC GROVE.

park entrance should be inviting and not repellant. What could have been the landscape gardener's idea of such a large amount of street and pavement? The entrance drive to the park has to accommodate all the vehicles. Why thirty times as much outside? Why build those circular mounds to hide it from view? Brooklyn had no public garden, and needed one. The natural lay of the ground before it was changed was good. Near the main entrance of the park is the correct place to have one. Had the architect seen fit to make Plaza street a wide eliptical drive, connecting with all the city streets it came in contact with, but crossed by none, shaded with fine trees, &c., the entire elliptical centre concaved instead of ridged with mounds, so that every part could be seen from the drive and the walks—had he, with plants, flowers, grass and shrubbery, laid out a public garden—had all this been done it would have been an eminently proper place for the Lincoln monument. An excellent example may be seen on a larger scale at Boston in its public garden.

The improvement of West Plaza street by giving the proper grade and levels, has now become a necessity, and cannot be delayed longer without doing great injustice to adjacent property owners. Still the Committee feel that it would be continuing a great mistake. The question what to do with the Plaza will soon press as urgently as just now that other question, what to do with the east side lands. It looks to us, to say the least, as if a serious financial blunder has been made.

The New Music Stand.

During the year 1883, the Board of Estimate appropriated $12,500 toward new construction for the year 1887. The Commissioners were painstaking in their discrimination as to what constructions were really most needed. Foremost among the things that the Board deemed necessary was a durable and appropriate music stand. The old one had rotted down and the surrounding space was found to be too small to accommodate the yearly increasing influx of people to these concerts.

The proper site in the park on which to erect a music stand was very thoroughly discussed by the Commissioners.

Music Island, which was the spot originally designed by the architect for the pagoda was thoroughly tested. A temporary stand was erected there on which several concerts were given. So far as the acoustic effects were concerned the experiment was finally declared a failure. The sound of the music, however, as enjoyed by the people in the boats at some distance from the Island, was delightful.

The design of the new music pagoda is peculiar and appropriate to the place. It has the shape and general appearance of a fort provided with angled corners and loop-hole windows. The rock out of which it was built is from the hallowed ground of Sullivan Heights. Behind these very rocks and boulders our brave revolutionary forefathers fought the Hessian hordes. The site itself on which the pagoda now stands was traversed by brave men fighting stubbornly in freedom's cause. As no structure of such a character has been erected at Battle Pass, it seemed appropriate, as this site was hard by, and as the material brought to it had been used in the defense of its territory, that its identity should receive incorporation in some permanent and appropriate form. The Commissioners therefore decided that the foundation or base should partake of the shape of a fortification. In the massive foundation, as so constructed, it is intended to provide lockers and conveniences for the storage of sets of lawn tennis, croquet, &c. The games are played upon the Nethermead.

The upper part of the structure is made very durable, resting upon twelve substantial posts. The sounding board in the ceiling was designed and made with great care and has proved a great success, as the distance at which the music can be distinctly heard is three times as great as it formerly was. The site on which the pagoda stands was surrounded until a recent period with a dense growth of underwood and evergreen, skirting on Lily-pond Lake and Binnenwater Stream. This has all been removed, the trees trimmed up and a clearing made, ex-

tending five or six hundred feet in all directions, making a beautiful and extended grove. A walk has been laid around the pagoda, other walks have also been laid, diverging in many directions from it.

Across Binnenwater stream there are two drives, with open clearing through a levelled space, making an admirable concourse ground for vehicles, whose occupants can remain seated while listening to the music. The carriages, during the intervals, can continue in motion, circling round the loop of drives, or stand still, at the pleasure of their occupants. Across the Binnenwater is thrown a new rustic bridge which shows to great advantage, and which is a favorite resort for those who love to stand and listen to the sound of the music a little way off when softened by the intervening distance. The song of the near waterfall is a pretty running accompaniment. The music stand itself is located between two small lakes which are connected by a gracefully winding stream, showing three plashing cascades, adding greatly to the picturesqueness of the whole scene.

By the time that the next summer's concerts are given the pagoda will be painted and handsomely decorated. Its capacity is adequate for the accommodation of sixty-five musicians. With the extension of the grove twenty-five thousand people can gather within the circular space surrounding the pagoda and listen to the music.

Fifteen Saturday afternoon concerts were given last season. The first was on June 4th and the last was on September 24th. They were remarkably well patronized, and, so far as we have been able to learn, appreciated. The music was under the direction of Conterno and the musical selections were rendered by a band of thirty-two pieces. An appropriation in excess of former years was asked for, as there are a very large number of people in Brooklyn who are fond of music and who are strongly in favor of bi-weekly concerts. The introduction at these concerts of some accomplished singer, supported by the orchestra, as is done with such fine effect at the beach pagoda, would add immensely to the interest of these park concerts.

There has also been a great and steadily growing demand for Sabbath afternoon concerts, such as also are listened to with such solemn effect at the Manhattan Beach pagoda. There is a large class of music-loving working people who cannot attend the Saturday afternoon concerts who have begged piteously that Sunday music be provided and that they shall not be denied, in a life that has too often little in it of relaxation or rest, the comfort and the hope that music inspires in the weary heart.

Headquarters Park Department;

OLD LITCHFIELD MANSION, PROSPECT PARK.

This massive castellated mansion is located near the Third street entrance on Ninth avenue, upon a commanding elevation. It is conveniently adapted, by virtue of its location and construction for the administration offices of the Park Department During the past year the structure has been entirely painted on the outside, while on the interior many of its rooms have been put in order so as to serve the purposes of the Department. The appropriation of $2,500 has been allowed for the present year toward completing the interior of the building, with a view of receiving into it that part of the Department now having its headquarters at the City Hall, thereby saving in the item of clerical help and dispatching the business to be transacted.

There are several rooms in this commodious mansion which have been set apart for the purpose of collecting a cabinet of curiosities, with the ulterior object in view of finally expanding such a collection into a museum that shall include within itself the different departments of natural history. One of these rooms has been fitted up with cases for the reception of the fine collection of shells presented to the Department through the kindness of Mr. C. B. Nichols, of Brooklyn.

In one of the upper rooms of this building the meteorolgical offices are located.

The Police Department is quartered in the lower part of the building.

Some of the finest specimens of fresco painting and tiling, done by celebrated Italian artists at great expense, are to be seen in this old building.

The surroundings of this building have been materially improved in many particulars, in the trimming of trees that needed it, and the removal of unsightly or decaying ones, in repairing the walks and also constructing new ones, in laying out flower beds, &c. The view to the south has been greatly beautified and extended by the improvements elsewhere described as having been made in the new Litchfield Picnic Grove.

Walks in Prospect Park.

The walks in this park are generally in about as bad a condition as they well could be. At the time when the park was laid out most of these walks were made of asphaltum. This substance was not as well understood then as it is now, and proved to be by no means durable. In many instances it has rotted entirely away, leaving a black dust and a discoloration on the gravel and pebbles that composed its contents. Many of these walks have been relaid and resurfaced and are again in nearly as bad condition as before. The proper tests that should have been applied in the expenditure of the city's money seem to have been wanting.

During the past year the Commissioners have had short sections of different kinds of walks laid by different contractors at several points, so as to determine which one was the best suited for the park, when the necessary appropriation should be made for such construction.

Properly to resurface and put in good order all the hard surface walks of the park would require about $60,000.

The sum of $12,500 has been appropriated this year for this purpose, or less than one quarter of the required amount. There is also an appropriation of $2,500 for new walks

in Prospect Park. Many of these new walks are needed. The people, when passing through the park, have not followed the winding walk laid down by the architect, but by many devious routes have invariably taken the shortest cuts to those points of interest as well as to those buildings which they wished to reach. Notably, in passing from the Picnic Shelter to the Dairy Cottage there is a constant stream of people crossing the meadow at this point. Such travel soon wears away the green and leaves it in many places so shabby and trampled out that it is impossible to maintain it. It is therefore proposed to construct a new walk across the meadow at this point. The walk at some distance above, across the meadow, which was originally intended to accomplish the same end, is scarcely ever used, and might better be returned to lawn.

Another walk is badly needed from the head of the upper lake at the trout pool across to Nethermead. The amount appropriated is insufficient to carry out this project. In the construction of the new picnic grounds and music grove, a number of new walks were partly made, which are quite serviceable as they are. They represent, however, merely the foundation of a good walk, and can be used as they are until sufficient means shall be provided to complete them. They are constructed as follows: An excavation is dug for the bed of the walk of the proper width required, to a depth of twelve inches. In this bed a layer of sand is spread on which cobblestones are laid, as in a city street. On these stones are strewn black boiler ashes, which are raked in and rolled down, making a hard smooth walk. Many persons have expressed themselves as preferring these walks to the asphalt pavement. They can be used in this condition until an appropriation is made for their completion, when they may be covered with granolithic asphalt. Under a year or two's use they will settle down into a permanent road-bed. The cobblestones and ashes used in these beds for the walks were found in the park in making the the new picnic grounds and other new improvements; 6,470 running feet of new walks, varying from 5 to 13 feet in width, have been made.

One of the larger and more prominent walks of this kind runs from Music Grove through, to and over Sullivan Heights and terminates at Dairy Cottage, crossing Music Grove and Valley Grove bridges—two new constructions that have been made in the last year. Other walks have been constructed at the Litchfield Picnic Grove, the Music Grove, the Plaza entrance, and the Willinck entrance. There are many beautiful and hidden spots in Prospect Park that are lost to the public, from the fact of their being inaccessible, owing to the want of any path or walk by which to reach them.

Several structures have been erected in the park since its original construction. The walks bearing upon such structures have not been studied. Such a study would necessitate changes in walks already made, and would likewise call for new ones not as yet on the map.

Twenty years of development in Brooklyn have clearly shown that the width of some of the walks in the Park is utterly insufficient to accommodate the vast throngs that pass over their pavements. A notable case of this is the walk leading from the Willinck entrance around to the boat-house. There are many times when it is simply impossible for the jostling crowd that surges over this walk to be kept to the pavement. The high bank on either side is completely worn bare by persons who would much prefer to use the walk if it were not in an overcrowded condition. We have thus glanced hurriedly at some of the most needed walks for the park, and we have also specified the improvements which should be made in connection with the old ones for the better accommodation of the public.

Ocean Parkway.

Opening out of the southwesterly corner of the park, skirting the beautiful village of Flatbush and afterward passing through the lovely hamlet of Parkville, runs the famous Ocean Parkway straight down to the sea. It is five and a half miles long, 210 feet wide and slopes gradually down to the Coney Island Concourse. This broad drive is principally used as a

pleasure drive, although on a fine afternoon it is a favorite resort for the notables of the town who own fast trottters. The driving is increasing at a very rapid rate.

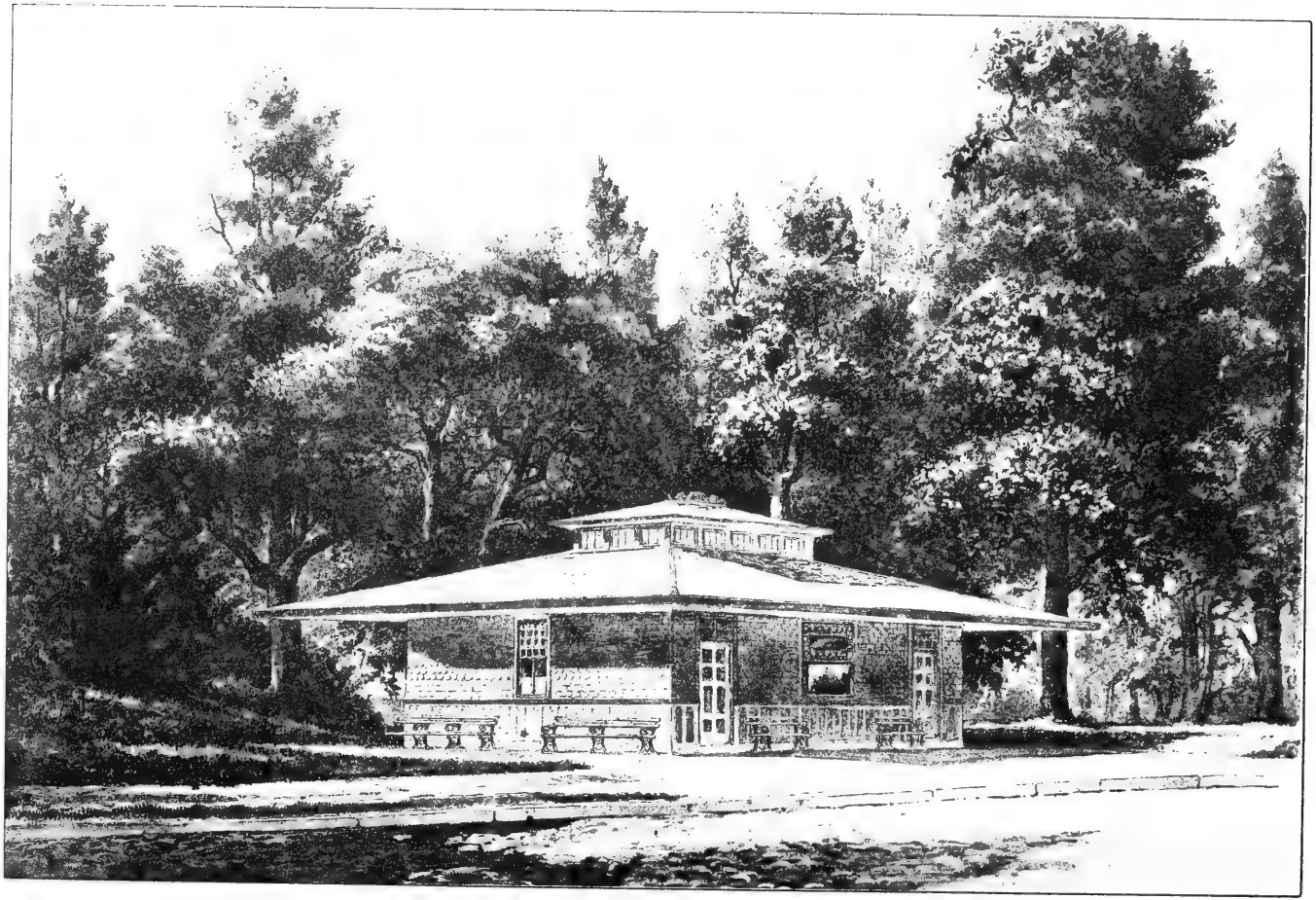
Three-quarters of a million dollars were originally expended in the construction of this drive. It is a graveled roadway mixed with sandy loam, which makes a soft elastic course for speeding horses. Property along the Ocean Parkway is steadily appreciating in value, and with a seaside park at Coney Island connected with Prospect Park by this great thoroughfare it is not liable to decline.

A large number of people much prefer this beautiful drive out of the city, through the park, down the parkway to the ocean, than to be whisked down in the cars and landed on the beach in a dusty ride of about fifteen minutes. The day will come when this great avenue of approach to the ocean will be all built up along its line with a fine class of hotels and residences. The cost of maintenance is greatly increased in view of the fact that it is not a concreted road. Its surface has to be constantly watered in the summer and the thirsty sand drinks up the water as fast as it is sprinkled upon it. Some idea of the large number of gallons of water consumed daily on this roadway may thus be gained.

The bridge over Coney Island Creek on this highway is rotten and in a very dangerous condition. There should be a new bridge built there, with iron girders, and stone butments. The appropriation for the Ocean Parkway for the next year is $15,000.

Eastern Parkway.

While naturally the main tide of travel will sweep down Ocean Parkway to the sea, nevertheless there is, so far as the geographical features are concerned, no comparison between these two roadways. The Eastern Parkway, from the time that it leaves Bedford avenue where the great crowd of carriages pours into it from the Eastern District, is an unfolding series of splendid views as you rise higher and higher upon it. There is nothing else like the views from this boulevard in



THE WILLINK ENTRANCE SHELTER.

the world. In sight of seven waters, overlooking three great cities, 210 feet in width, planted with eight rows of trees, through which run three drives macadamized with the Belgian pavement at a cost of over a million dollars, two and a half miles long, although not connected with any particular point of destination it rises steadily back on the high ridge of Long Island, a climax of natural wonders. The advantages of this great highway, if its metropolitan pathway were prolonged from the reservoir to Jamaica, for becoming the greatest boulevard in the world are beyond question. An appropriation of $5,000 has been granted for its maintenance during the coming year.

The New Shelter at Willinck Entrance.

A new and much needed shelter of attractive appearance has been built at this largely used entrance during the past Summer. This shelter is erected only for the accommodation of women and children. The structure for men will be erected further on between the entrance and the boat-house. The number of people entering the park at this point is greater by two-thirds than that at any other park entrance. The cars from central Brooklyn, and especially the Eastern District, bring great crowds to this gateway. When such crowds pour in here as attend the Saturday concerts, skating pond, &c., the walk is utterly unable to accommodate the people who press over its pavement to reach the point of desired destination. The crowd breaks over the banks and does much damage to the grass and tender vines, shrubs and flowers. We have elsewhere recommended the widening of this walk. In the original purchase of the park the people of the Eastern District declined to share with the people of the Western District in bearing part of the taxes necessary for the maintenance of the park. This was on the understanding that the Eastern District was to have a park of its own. This it has never had. At the same time it is a fact that the park is more largely patronized through the Willinck entrance by the people of the Eastern District than by any other part of the city.

The Parade Ground.

This space is used at present not only for military parades, but also for baseball, lacrosse and other games. During the past year the Second Brigade, under General McCleer, was reviewed on October 12th by Governor Hill. On September 3d, the Thirteenth Regiment was here reviewed. A fence is being built around these grounds that is to take the place of the old one, which was rotten and broken down in many places.

The parade ground, in our judgment, is not large enough for all these purposes. Its area should be broadened so as to afford a larger ground for parades and for games. The number of people who attend these games increases yearly. To this end we recommend the purchase of all that tract of land lying on the opposite side of Caton street, which can now be purchased at a reasonable figure. On this enlarged ground games which are too severe for the tender sward of the meadows of the park could be played with impunity.

The North Circuit Drive of Lake.

This drive would be less than 1,800 feet in length to build and would open up the grandest and most picturesque part of the park to the driving public. It would be an extension of Breeze Hill drive, which is seldom used, connecting it with the West Lake drive on the western side of the park at the head of the large lake. It would also bring into general use the Nethermead Circuit drive, which intersects it near the proposed new terrace bridge. Persons driving in the park usually take the east drive and pass to the south of the lake. Until recently, however, since the shrubbery has been thinned out, they have not been able to enjoy this lovely view. In the design of the park there is no piece of shore road on this large and beautiful sheet of water. The plantations between the drive and the lake on the south were so dense as entirely to obscure the water view. On the west the view is nearly as much intercepted. By turning into Breeze Hill drive, just

before reaching the pedestrian concourse or flower garden, one would have an elevated drive across the park on the north side of the lake, having almost a continuous view of its different parts, as well as overlooking the Nethermead, the peninsula, and passing under to the south of the towering heights of Look Out Hill. Breeze Hill with its concourse, is a plateau of some elevation and is quite picturesque, being a peninsula lying between the Lullwater and the upper end of the large lake, overlooking the pedestrian concourse. It rises from the valley into a breezy headland (from which it takes its name) and would afford a splendid view, were it not for the fact that it is so densely planted with evergreen trees that this noble view is lost.

It is artificial and was a heavy and expensive construction. Cleft Ridge Span, over which the drive passes, spans the walk that leads from the boat-house to the flower garden. It was also an expensive structure, built upon piles of artificial stone.

This structure has been seriously damaged in some parts by disintegration and by being forced apart by the frosts. As so much money has been expended where it is of so little use to the driving public, it does seem that true economy would dictate that the bridge and drive should be completed, thus finishing the entire system of drives in the park, with the exception of a short entrance drive at Ninth street to connect with the west drive. The temporary wooden bridge built near the site for the new terrace bridge has nearly rotted down and cannot be made to do service much longer. For terrace bridge it is proposed to spring a span of ninety feet across the Lullwater channel as well as to provide for two promenade walks.

There would be the drive and a walk over it, with two stairways; the abutments to be of stone and the span of iron. It would take two seasons to fully complete it, and would be quite conspicuous, standing a considerable height above the water and affording a splendid view of the boating.

There are now for the drives in the park four arches and one bridge, all stone; namely, near the Plaza entrance, Esdale

and Meadow-port arches, near the Willinck entrance, Eastwood arch, and near the flower garden the Cleft Ridge, all crossing the walks, for pedestrians. The Nethermead bridge and arches span a walk, the Binnenwater stream and a bridle path. It is the only one that a person driving would notice in passing over it. It is doubtful if persons who only drive in the park have ever seen any of these elaborate and costly bridges. They appear to be placed with singular fatuity just where they cannot be seen from the drives, and the long distant views seem to be studiously planted out by shrubbery and trees. From the new bridge the drive would wind with a gentle curve to the south of the large well and by a causeway cross the head of the large lake to the west drive. This causeway would be straight and would be the only piece of straight drive in the park. It would have proper guarding on each side so that there would be no danger of driving off into the water.

Persons driving through the park to the Ocean Parkway would find this the shortest route. In this drive from the East to the West drives a person would find grand scenery of an entirely different character from that of any on all the rest of the drives in the park combined. In leaving the East and entering the Breeze Hill drive the view is extended, owing to its elevation, overlooking toward the south the pedestrian concourse and surroundings as well as the eastern end of the large lake, with Duck Island in the distance, to the north the boat-house with the meandering Lullwater and its merry boating parties reaching to the bridge, with the Nethermead in the background. From the bridge would stretch away another grand view with the precipitous side of Lookout Hill towering up one hundred and fifty feet and crowned with tall trees, while all around it to the south lies fifty acres of water. Were a chalet perched against the precipice one could imagine themselves to be in some respects in Switzerland.

Our Meteorological Department.

A new and complete set of instruments has been provided for this department. Preparations have been made to give Brooklyn a signal service and a meteorological office that shall be on a footing with that of any other in the United States. The site for such a service is unsurpassed and very probably unequaled. Situated as it is, 220 feet above the sea level, its advantages for recording climatic phenomena are obvious.

It is hoped to put this department in direct communication during the year to come with similar institutions all over the world and thereby to make it in intelligence and, if possible, original discovery, the equal of any of them.

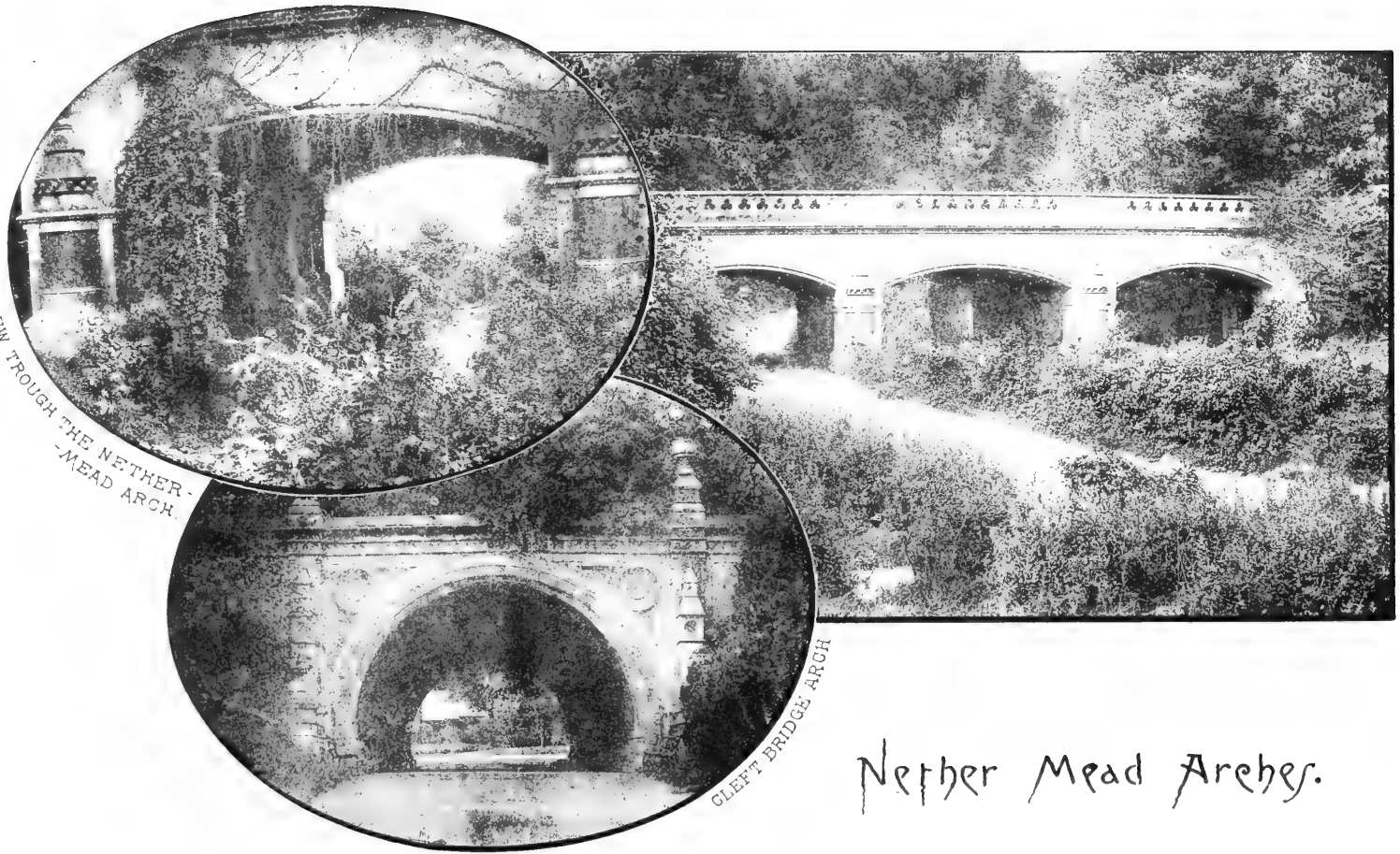
The Ninth Street Entrance.

There has been a growing demand for several years for a commodious entrance at Ninth street and Ninth avenue with a walk for pedestrians and also a drive for carriages, connecting with the west drive in the park by a roadway about 600 feet in length. Ninth street is the principal outlet at that particular point of South Brooklyn for large numbers of people. Following the car route the main line of travel and of traffic tends along this thoroughfare. It is faced with handsome residences and is justly regarded as the dividing line between what is considered to be the very finest portion of the park slopes and what is relatively of declining value. The number of persons who throng this entrance is greater than at any other on Ninth avenue, and yet the only opening into the park at this point is a narrow little wooden gate through which only one person can enter at a time, a standing affront to South Brooklyn people who use and pay an extra assessment for the park. Moreover, all those who wish to drive into the park from the Ninth avenue side are obliged to do so through other entrances, which are a considerable distance from the point in question.

The entrance proposed would be similar to that built at Fifteenth street, and also to the one at the Smith street rail-

road car stables at Windsor Terrace. This last named entrance should never have been made, as there was not the slightest need of it for park uses. An appropriation was asked for to be applied to the construction of such an entrance at Ninth street, but it was not allowed. Such an approach to the park would be a vast accommodation to the throngs who enter it from that side, beside being at the same time, by reason of its sightliness, a spur to the development that is taking place in the city in this direction. In connection with this entrance it may not be irrelevant to glance for an instant at the whole park line along Ninth avenue from Union street or the main entrance to Fifteenth street, in order that we may consider it in its relations to the subsequent development of Brooklyn in that direction and so in its relations to the value of adjoining real estate.

Laws have been recently enacted providing that Ninth avenue shall be placed under the charge of the Department of Public Works. For years the whole line of the park facing on this avenue has been infested with nuisances of various kinds. This has been peculiarly so by reason of the lonely character of the place as a largely unpatrolled district. Persons of immoral character and conduct have made it nightly a reproachable resort. It is time that such nuisances were abated. The whole Ninth avenue side, from Union street to Fifteenth street, should be properly graded, fenced, paved and lighted and a proper police force established there. If such were the case the effect upon the value of adjoining property would be felt immediately. To this end we call upon the adjoining property owners to unite with the Department of Public Works and also with the Park Department in the carrying out of such much-needed measures for improvement. The Prospect Park slopes, from a geographical point of view, furnish the very finest building sites in Brooklyn. The air of this elevation is excellent, the outlook over city, bay and ocean unobstructed, the proximity to the park a most desirable feature. When it is remembered what a sanitarium it affords for convalescents and little children it is not surprising that the



Nether Mead Arches.

highest priced lots in the whole city are here. We feel persuaded that if, in accordance with this recommendation, the whole Ninth avenue line of the park between the points already designated, were improved in the way above indicated, thus making the approaches to this beautiful retreat safe, sightly and commodious, instead of leaving them as they now are, repellant to all who visit the park, the rise in adjoining real estate would of itself, in taxable equivalents, far more than justify the expenditure of money necessary to such an improvement. It will be enough, in support of these views, simply to state in conclusion that the testimony of the residents living in the immediate neighborhood of Central Park, New York, fully verifies the statements which are here made in this review of the whole subject.

The Water System.

The water system of Prospect Park is unique, picturesque and extensive. It traverses the highest ground in Brooklyn and is entirely artificial. The water courses which form the conduits of such a system are composed of sand and gravel, interrupted at intervals by pools and shelving declivities of overhanging rock, over whose clustering ledges the water in fantastic forms streams down for several feet. Great care and large expense, together with no little ingenuity, were required in the construction of this system, it being found necessary that the beds of the water courses and the basins of the lakes should be rendered impervious, as, without such a precaution, the thirsty earth would greedily absorb the water as fast as it could be pumped. The source of this intended water-system is a large well, 50 feet in diameter and 60 feet in depth. This well is situated at the foot of Look Out Hill, on the southerly side of the park. The spring which feeds it rises out of the gravel strata, along whose streak the spring water flows through the entire island. In this well is placed a large duplex pumping engine, that forces up the water 160 feet into the large reservoir on the top of Look Out Hill. The capacity of

this engine is sufficient to pump 400,000 gallons of water every ten hours. The capacity of the reservoir is about 1,000,000 gallons. This reservoir has an elevation of 13 feet above the city reservoir, near the entrance of the park. The entire water pressure system of the park is produced from this reservoir. Some of its pipes extend as far as Coney Island. There is also connected with this pumping engine a 12-inch pipe that runs across the park, past the quaker cemetery, discharging its contents into the trout pond, which is located near the upper lake in the meadow.

This trout pond is the head of the lake system that lies in a chain of lakes some distance below. From this pond a linking stream of water passes over a cascade of some height into the upper lake which is known as "The Pool." From this pool it passes over a smaller falls into the lower pool of the Long Meadow, rippling down its rocky bed, skirting the Long Meadow in its sweep it draws under Esdale bridge, through the woods, into the Ambergill. From this point it passes darkly through the deep ravine, under the shadow of Sullivan Heights, over numerous cascades and little falls, shooting under the Nethermead arches to the Nethermead, out of which it flows into the Binnenwater pool, thence through Music Grove the Binnenwater stream rolls out over tinkling little cascades into Lily Pond Lake, till at length under Binnenwater bridge it tumbles over Binnenwater falls into the lake system below. Passing under the boat-house its speed is slackened in the bosom of the Lullwater. This winding, shady sheet of water is the course over which the boats glide in the summer and the merry skaters skim in winter. Drowsing sluggishly along under the old wooden bridge of the Breeze Hill drive, it doubles on itself again in the north arm of the large lake, facing down on Music Island in front of the pedestrian concourse. Thence, changing its course once more, it turns into the large lake proper, where, with Duck Island on its left, it finally merges into the broad expanse of more than fifty acres of water. The bottom of all these lakes and pools has been puddled with good clay,

which is so thoroughly impervious to water as completely to retain the contents of all these concave lake basins. This clay fortunately was found in the park at a spot known as the lake in the deer paddock. There is no outlet to this large lake. In warm weather the amount of water pumped into it is just about evenly counteracted by the amount of water lost by superficial evaporation. In hot, dry weather the evaporation reaches from three to four hundred thousand gallons in twenty-four hours. There being no outlet to this lake and, consequently, no means by which its feculent impurities might be cast off, parts of it have for a long time past been growing steadily worse and worse. This process of stagnation has progressed to such an extent as seriously to endanger the lives of those who breathe these noxious exhalations. While the amount of money appropriated for the purpose was not sufficient to enable the commissioners to undertake the cleansing of the large lake, they did, however, cleanse thoroughly the whole water course system above it. In these beds and pools, and smaller lakes, an accumulation of debris had gathered, choking their channels. This debris was composed of the detritus of sand from the drives and walks, the ordure of sheep, horses and water fowl, the green sap of grasses and clots of leaves. The lakes and pools were stagnant, and unsightly and noxious to health. The mass of vegetable matter that had accumulated on the bottoms sent up a rank breath. Such a morbid state of things was, to say the least, detrimental to the health of all those who visited the park, particularly to little children. The public recognized the fact, several notable physicians interfered, warning the people of danger and advising them to shun this locality. As a consequence it lapsed largely into ill-favor. During all this time, strange to relate, the pumping engine was taxed to its utmost capacity, pumping water at the rate of over 10,000,000 gallons per month. And yet the water courses were scarcely more than mere dried up beds. It may throw light on the whole subject in hand to state just here that when Coney Island came to be a metropolitan resort and needed fresh water, this beautiful water course was robbed of

its life and beauty for the sake of serving purely commercial purposes. Such was the state of these once attractive but now disfigured and deserted water courses, in which the Commissioners found them.

They immediately set about their renovation. More than one thousand wagon loads of black sediment were taken from their beds, deposited in a remote part of the park, treated with lime, composted and prepared for top dressing. The removal of this large amount of debris from the pools, smaller lakes and waterways, the edging of the shores with white pebble and gravel, together with the repairing of the banks and cascades, was no slight undertaking and required time and persistent effort. It was completed, however, early in the spring before the people visited the park to any considerable extent. The connection with the Coney Island system of pipes being severed, the water was turned on from the well, and when the visitors thronged at last through the park they were surprised once more by the clear and exhilarating spectacle of this wonted stream as it ran down to meet them with its old bounding step for the first time in many intervening years. The design of the architect was thus restored and one of the finest charms of the park regained for the tax payers in all its lines of grace and beauty. There are required for the use of the park, for its buildings, shelters, small fountains and watering carts, during the heated term, about 150,000 gallons per day. On the Ocean Parkway, in former years, three watering carts have been in daily use during the summer. These carts consume a fraction of the above amount. Along this parkway is laid a six and four-inch pipe to supply the hydrants at which these carts are fed. The capacity of this pipe is sufficient to supply several times this number of watering carts. Still the present Board of Commissioners found, on examination, certain contracts in existence with a local water company, permitting their system of pipes to be connected with the park pipes. The pretext for such a connection was that there was not a sufficient head of water readily to fill these watering carts, when in reality the head

was over one hundred and sixty feet. The company was willing to run a pipe two miles, without customers, to connect with the park pipe where it was of large diameter, while a few feet would have answered to connect with the four-inch pipe and give the same pressure. These systems of pipes during the past year have been severed. It was then found, as was already known to be the case, that there was an abundance of water for these watering carts, besides supplying in addition forty odd customers with park water. This heavy pressure of park water on the pipes of the other system caused in some cases considerable damage. In one instance one of the large mains of their system burst at night and flooded the whole ground in the neighborhood below the race-course. The same night several hundred thousand gallons were missed from the park reservoir owing to the bursting of these pipes. In another instance, at night, when their pumps were not in operation, their reservoir overflowed, while at the same time the park reservoir was perceptibly lowered. Since the connection between these pipes has been severed, the water courses and upper lakes and pools of the park, as already stated, have regained their pristine beauty and volume.

There are in the park two other small lakes not connected with the lake system. They are on the east side. One is the deer paddock lake, the other the playground pool, about half way between the deer paddock and the plaza entrance. These lakes are nothing more than stagnant ponds without any natural outlet. The playground pool became exceedingly foul and repulsive. It was, however, cleansed by the Commissioners and is now in a better condition. The deer paddock lake is still in a foul state. Being quite deep and heavily shaded, the sun has not been able to reach the impurities contained in it as it has in the shallow lakes. The architect, in its construction, duplicated the same mistake that was made in Central Park, which caused such instant and indignant protest on the part of the neighboring residents and on account of which many people lost their lives. It was an exceedingly simple matter, from an engineering standpoint, to have had all these

pools supplied with a periodical change of fresh water, by using the overflow of the plaza fountain on stated occasions. The water should have passed through these pools on its way to the lower lake system. Thus a circulating current of fresh water would pass through them, cleansing them.

This matter cannot be neglected—it must be met. Fortunately, so far as health and life are concerned, this section of the park has been abandoned by the people and allowed to go to ruin for a number of years.

The past season has been somewhat remarkable for its rainfalls—the precipitation being as large as has occurred for a number of years. This, taken in connection with the constant flow of water from the well, through the water courses to the large lakes, has raised its level to a height greater than is remembered to have occurred since the completion of the park. There being no natural outlet to this lake and no system of sewerage through which to drain it off, the only remedy within reach of the Commissioners, in case of high water, is to allow it to overflow its banks and settle down in the gravel. It is not a wise thing to allow water containing vegetable matter to flow into a lake that has no outlet, with no chance to throw off its impurities. It is dangerous to the last degree. The Commissioners have been met by this engineering problem, viz: how to purify this body of water and then preserve its purity. A current of fresh water should flow through the entire length of the lake to cause the necessary circulation that nature requires in a body of water in order to precipitate and get rid of its impurities.

To accomplish this result we would therefore beg to suggest that a powerful force pump be placed near the large well, that a suction pipe connected with this pump be introduced at the extreme end of the lake, that the water of the lake be taken up through this suction pipe and forced through a force pipe to the head of the water system at the upper pool, placing in this body of water the nozzle of the pipe. By this means the upper pool becomes the bed of a large fountain. The water being thus driven with sufficient force to cause it to be

sprayed to a height of a hundred feet or more, would be cleansed of its impurities by aëration. In this way the whole sheet of water would be thoroughly sifted. Added to this refrigerating and rarefying process the geographical features of such a fountain would not be by any means insignificant. A fountain placed on this body of water, throwing up streaming jets to a great height, could be seen at longer distances than from any other spot in the park. The view of it from the long meadow reaching to the plaza would be in direct line from the proposed site of the Beecher monument.

From the Fifteenth street entrance, over the long meadow, it could also be seen, as well as from the high ridge of woodland that crosses the park to the south.

This powerful force pump could be driven by the same engineers and firemen that operate the pumping engine at the well, the only additional expense being the coal bill for the summer. Moreover, such a large volume of water added to that of the pumping engines passing through the water courses and over the cascades with increased volume, would be a most refreshing spectacle in the park.

Three objects would thus be accomplished by the simple purchase of a force pump and the laying of the pipes, viz: the purification of the lake, the fountain view on the water from the long meadow and surroundings, and the propulsion of the water in greater volume through the water courses, thus not allowing the green scum to form on the surface and preventing any impurity from condemning this most beautiful resort of the people.

The next question which presents itself for consideration is, how to cleanse the large lake of its existing impurities. The question is by no means an easy one. The process of emptying and filling this lake would in itself require at least a year for its accomplishment, with all the facilities now at hand, while to suffer its bed to be exposed to the bleach of the sun with its foul lining of feculent matter, might cause a pestilent epidemic. The bottom, being of puddled clay, as before mentioned, there would be danger of injuring it and thus ren-

dering it liable to leak. Just such an instance as this serves to illustrate the one bad feature of puddled clay, viz: that its particles are so fine, being of almost the same specific gravity as the water, that they are taken up and held in solution, thus clouding the clearness of the lake and leaving it thick and discolored. A lake, to be beautiful, clear and healthy, as well as in a proper condition for the fish that inhabit it, should have scattered about it, in spots, a sandy and gravelly bed and shore; at other points, rich earth, in which water plants and flowers would thrive, thus consuming those mephitic gases which would otherwise be noxious, and creating the proper foods for the fish. It would be cheaper, therefore, inasmuch as the lake is of sufficient depth, to haul and deposit in it the necessary sand, gravel and soil at the proper places, covering up the vegetable matter that there exists and leaving a natural bed for the lake instead of an unfinished and artificial one.

The foulest part of the lake was at the boat-house, about which the visitors to the park daily swarmed. The Commissioners covered up this bed of unhealthy matter with over a thousand loads of earth, leaving a pool at the foot of Binnenwater falls and converting the remaining space into a greensward with fine beds of variegated flowers. This change was much appreciated and admired by the public.

This lake abounds in beautiful islands, peninsulas, vistas, shady nooks, and romantic, capricious turns and twinings, with their life of water fowl and merry boating parties.

The waters of this lake were stocked years ago with several varieties of fish. There are quite a number of black and Oswego bass, several varieties of perch, two varieties of carp, and gold and silver fish in great abundance. The latter, as also the perch, abound in large numbers.

It has lately been discovered, however, that, owing to the muddiness of the water and the lack of feeding places, large numbers of these fish have died, while those that survived are not in a very healthy condition.

Some of the officers of the State Fish Commission, who are familiar with the facts in the case, have offered

Scenery on
Large Lake, Deerfield Park.

to stock the lakes of Prospect Park with such varieties of fish as might be deemed suitable, provided the Commissioners would have these lakes put in such condition as that the fish would thrive. In accordance with such a suggestion the Commissioners would recommend that fish be placed in these lakes in such quantity that permits might be given, under necessary restriction, for scientific fishing (hooks without barbs being used) so that the fish could be tossed back instantly into the water without any comparative injury being done to them. Skilled fishing is a sport that affords more fascinating pleasure to some natures than almost any other. It would certainly be a strong park attraction to the general public. Inasmuch as the park is, in certain portions of it, given over, under proper regulations, to certain pastimes, and inasmuch as the sight of casting a fly and landing a game fish is something peculiarly interesting, even to those who take no part in such sleights of skill, and furthermore, inasmuch as the State officials have guaranteed a supply of such fish in sufficient quantities, the Committee see no reason why the people should be denied participation in such a fascinating pastime under the proper restrictions.

Drainage and Sewerage of the Park.

The park has an elaborate and excellent drainage system for surface water by which to keep the drives, walks and meadows properly drained during storms and wet seasons. It is provided at a number of points with pockets of silt basins for arresting the detritus, which can thus be removed without necessarily flowing into the lakes. This drainage system, however, has been extended beyond its natural and legitimate boundary and is connected with areas outside the limits of the park. A very different state of things prevails in regard to the sewerage. There is only one sewer in the park, and that necessarily covers but a small fraction of its area, viz., the one at old Fifth street. This sewer passes close by the headquarters of the park, giving it drainage, continuing thence to the picnic shelter. A branch to this

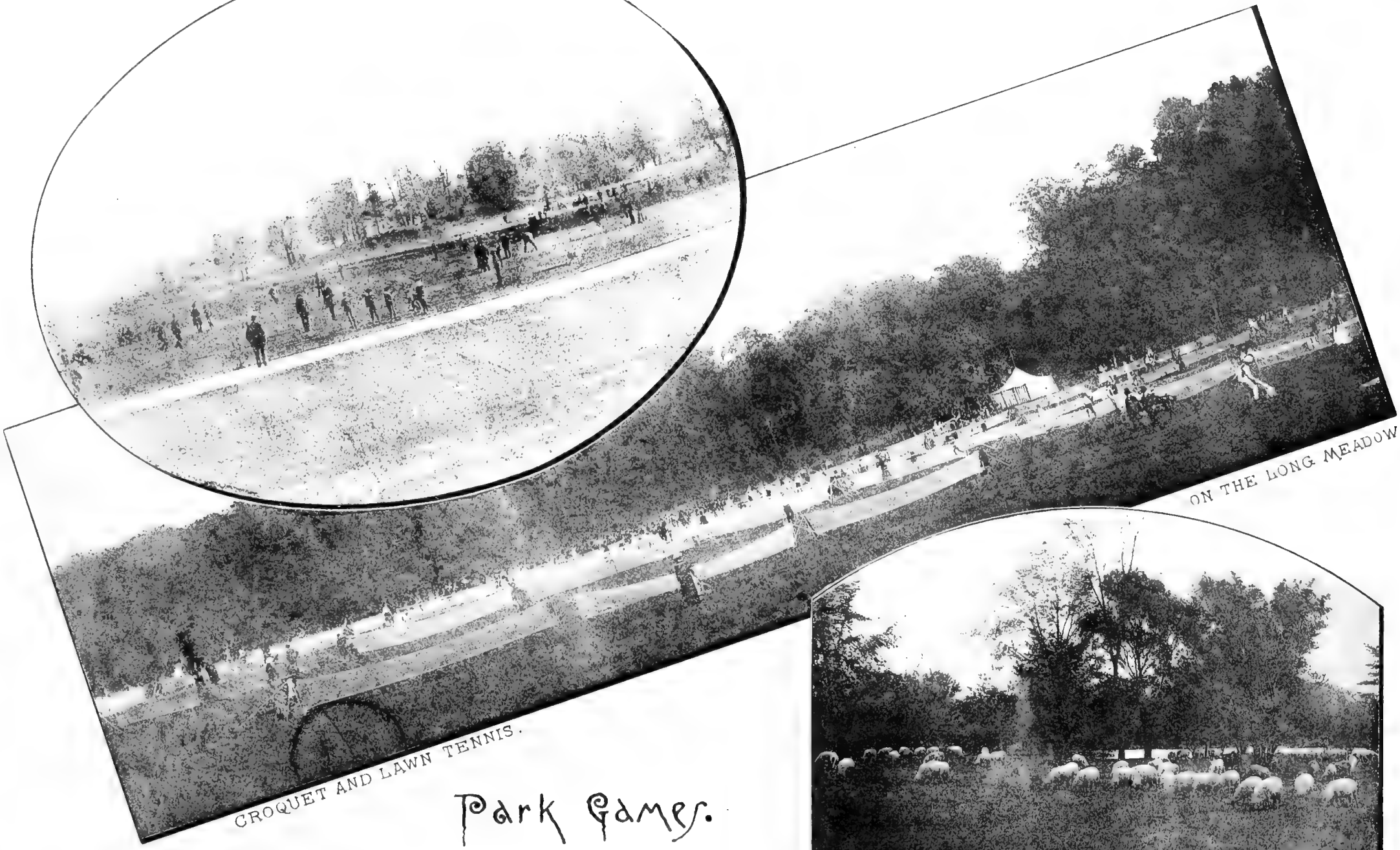
sewer is laid, as already described, which will be extended to the stables and surrounding buildings. All the buildings in this portion of the park will thus be properly severed. The other buildings and shelters are provided with cesspools only. Such receptacles contain deadly ingredients of disease, which are transmitted in a thousand imperceptible forms to those who frequent them. They should be done away with as soon as possible. Inasmuch as Prospect Park is divided by a high ridge, and the southern section being the lower, it will not be feasible to connect the southerly portion of it with sewers running toward the north. When there is a proper sewer built for the town of Flatbush, it would be advisable to connect the buildings on the southerly side of the park with it, until then it will probably be necessary, unless some plan can be devised for relieving the difficulty, to retain the objectionable cesspools or else try some of the sanitary inventions proposed for disinfection. Those in charge of such a public trust as Prospect Park, sacred to the health and lives of great multitudes of men, women and little children, should bestow on such a subject, so vital to the city, the greatest care and the most conscientious thought.

Park Recreations.

The Park has many uses. It is the lungs of a great city, where people can draw a full breath of fresh air. It is a field for the student, a retreat for the meditative philosopher, a resort for artists, poets, painters and all who have imagination. It has another use, viz., recreation. It is when the long meadow is covered with courts and dotted with little children and youth of both sexes, filling the joyous sunny air with happy shouts beneath a cloudless sky, on a summer day, that Prospect Park may be said to be at its meridian.

Let us look for a moment at some of these recreations.

CROQUET AND LAWN TENNIS.



ON THE LONG MEADOW.

Park Games.

SHEEP ON THE PENINSULA.

Lawn Tennis.

This invigorating and beautiful game is one of the most popular sports of the park. It is indulged in by both ladies and gentlemen, and even in the most scientific play, where the ball is cut down close across the net from the bat, in many instances the finest and most wary players are women. They seem to possess a peculiar power for divining the direction of shots. This splendid game is on the increase. One hundred and thirty courts were in daily use last year on long meadow and probably more will be used this year. The marking of the courts with whiting, inasmuch as dew will fade them and rain wash them out entirely, keeps three men busy most of the time, and incurs expense. But it is money well expended.

Croquet.

This gentle game is another of the merry recreations of long meadow. It is played by young people and even more by older persons. It possesses many scientific points, requires a steady hand, a well trained use of the arm at long shots, an accurate eye and considerable practice. Several of the parks were constantly used whenever the weather would permit, by the patrons of this game.

Base Ball.

Although the oldest and most generally indulged in by youth, of all games, base-ball still, in many respects, stands at the head of the list. It is very doubtful if it will ever be superseded. There is so much motion in it, so much consummate skill, so much art and science and long training, and so much chance for feats of dexterity, in running, getting under sky scrapers, trapping red hot daisy cutters at short stop, throwing on a straight line at long distances, stealing bases by sheer subtlety, and all like the movements of clock work, that it will probably bear the same relation to all other games, that chess does to checkers, domi-

noes or backgammon. This game is played on the parade ground, where on special occasions it is witnessed by thousands. The parade ground is now too small to accommodate the demand and there is much feeling and disappointment among the players in consequence.

Lacrosse.

This brilliant game is played upon the parade ground and affords considerable amusement. It is confined mostly to well known clubs who play the game finely. It is also enjoyed by college students who find their way to these grounds during the summer vacation.

Archery.

At safe distances from each other in the park tri-colored targets may be seen standing on a clear day before a merry group of archers. Ladies and gentlemen alike enjoy this peculiarly fascinating game. Some of the best shots in the park are ladies. During a single season the archers grow very proficient in archery and often succeed in taking the target. This game is particularly good for the right hand. It steadies the nerve, braces the blood, and hardens the muscle. Persons who are fine shots at archery learn to shoot a rifle or a pistol with ease, and are the best shots with such weapons.

Equestrianism.

Winding through the tree shaded bridle paths, on a fine morning, may be seen horsemen and horsewomen enjoying the pleasures of equine recreation. No sight is more beautiful to behold than a finely mounted woman on a horse. The trailing habit, the jaunty hat, the graceful curveting of the steed, the fine contrast, (especially if the horse be white or dappled,) against the dark or rich coloring of the shrubbery, is a beautiful picture. Would that people could be brought to realize

that of all the recreations that are known to man, no exercise is so thoroughly beneficial to kidney, liver, head, heart and lungs and even conscience, as horseback riding. The instances of fast riding in the park are not numerous, as the mounted guard are on the lookout for any violation of the rules as to the rate of speed. Riding in the park has increased during the last year to a large extent.

Driving.

There is not an hour in the day when the crunch of wheels is not heard on the hard road drives that wind through the park. Ladies and little children, infants, and delicate, sick and aged persons, enjoy from morning till evening this quiet recreation. At intervals through the park provision is made for the watering of the horses, and for the convenience and comfort of visitors. A view, out of a carriage window, from the top of Breeze Hill, of the great ocean that lies below is a sight that is especially enjoyable. The number of vehicles of different kinds varies as much as the persons that stray through the park.

The police report gives a detailed statement of the number of vehicles that visited the park.

Bicycling.

Yonder on a wheel goes a tightly girt youth. When the shadows skirt the ground he seems to float along in the air. What keeps him up in the misty moonlight is a mystery. But lo, another, and another, and still another, all following their leader as the swans on the winter sky follow their trumpeting guide. Down and on they go over bridge and hill and meadow, till at last they fade out in the deep forest where only the glow-worm gleam of their many-colored lamps is caught at gay intervals as they blink through the trees along the wood-skirted meadow. But enough, they are gone. Sometimes accidents happen to these wheelmen, but rarely. The sport is so well regulated that as a general rule horses are not scared by it and danger is avoided.

For grace of motion the wheel somehow seems to belong by right of way to the beautiful park. The gentlemen who ride the wheels are—for the most part—polite and require no admonition from the officers.

Harriers.

This exciting game, participated in by the heads of royal households abroad, is performed by giving the hare a sufficient start and then pursuing his trail. This trail is left behind him by dropping bits of paper along the ground at every step. If adroitly done the hounds may be badly deceived and sometimes thrown from the trail altogether. It is a harmless, exciting and intensely invigorating game.

Boating.

Twinkling little boats go flashing along the deep shaded lakes in the flush of the evening or the glow of the moonlight. The songs of gay parties of children as the sound floats over the water and up through the wooded steeps, are very mellow and sweet. Sometimes the sound of musical instruments—as a flute or clarionet or zither—strays out sweetly upon the air.

The plashing dip of the oar, with its measured stroke, the low sound of voices, the lap of the water on the shore—all go to make the effect a very charming one. There are several miles of rowing water and a very large head sweep at the top of the lake, around which the little steamer, with its long trail of smoke, makes a pedantic detour. Boats may be hired with or without an attendant to row them.

Skating.

Although the city rinks that once were so fashionable have all died, skating in the open air is just as much indulged in as ever. There is a grace and a beauty about this sport which is quite as fascinating to those looking on as to the skaters themselves. There have been fifteen days of fine skating at the

Prospect Park this year. There have been crowds of persons on the ice, and there is every evidence that this winter pastime has lost none of its old-time popularity. Skating is a particularly healthy exercise, and if indulged in with a proper degree of care is perfectly safe. The accommodations for skaters are not more than half sufficient to meet the demand, and an appropriation should be asked for.

Walking.

Year after year sees more and more regular walkers through the park. These persons make daily detours of long distances around the park, and in some instances it is continued as far as Coney Island.

More people should follow their example. The asphalt walks and the green sward furnish a fine opportunity for the prosecution of this splendid exercise.

The Goat Carriages.

Last, but not least, we must not forget to mention that one object in the park which stirs many a fond mother's heart as we recall it, the Goat Carriage. What an institution. Never did a tourist climb an English diligence with such an unmistakable air of importance as these little tots climb up into these goat carriages. And then how pompously they grasp the lines, as if they held the reins of government. How the baby crows and chuckles as the goats rush away. How he plies the whip till they tingle with it. And how over it all the mother hangs, following the little wagon far down the broad walks and the deer look up and sniff through the iron fence as the tiny train speeds by. Let the goats alone for the sake of the mothers and the babies, for like the merry swing of the carousal, round which the happy children galop on their dappled horses, they are the marks, and soon will be the pleasant memories of days when childhood knew no care, and sorrow and adventure were ghost stories told by some skilled wonder-smith when the winter nights had grown heavy.

The Smaller Parks.

WASHINGTON PARK

This park is the largest and most beautiful of the smaller parks of the city. It is located on the brow of that commanding eminence known as "The Hill." This choice and conspicuous park possesses a peculiar interest to those who visit it as well as to those whose residences face it, from the Revolutionary traditions connected with its history. It was here that the first fortifications on Long Island were thrown up by the American army. General Greene, in honor of whom the fort is named, had his headquarters on this spot. No battle ever occurred here, as is sometimes erroneously stated, but the advance of the British was checked by these fortifications to such a degree as to characterize it as a signal spot in the history of the Revolution. Washington Park contains thirty acres. It is filled with many varieties of handsome trees, for the most part well arranged and in a good state of preservation.

Washington Park is the resort of a great number of young people who gather there to play croquet, lawn tennis and other games. The gentle undulations of its surface render it peculiarly attractive to the eye and enhance the value of adjoining real estate. The appropriation for this year, toward improvements in this park, amounts to $7,500. This amount will be expended in repairing the walks in the park, in flagging the Myrtle avenue sidewalk of the gant, in putting the shelters in good order, top-dressing the grass, &c. It is desired, whenever the necessary appropriation shall be made, to furnish this park with music. It is very much desired by those living in the neighborhood. The view from the plaza is very fine. On this height the annual display of pyrotechnics takes place on the evening of the Fourth of July. This display is always witnessed by a large concourse of people. Taken in connection with all its surroundings Washington Park is one of the most conspicuous ornaments of the city.

TOMPKINS PARK.

This park ranks next in relative importance to Washington Park. Its surface is perfectly level, affording a fine opportunity for the enjoyment of such gentle games as lawn tennis, croquet, &c. Such games are largely indulged in by young and old alike. Shade trees cover the lawn at grateful intervals, and excellent shelter makes this park peculiarly attractive to nurses and little children. There are $7\frac{3}{4}$ acres in its area. There has been an appropriation of $10,000 set apart for the improving of this park during the coming year, repairing walks, enriching of soil, trimming of shrubbery, &c. It is proposed to erect a substantial fence around the whole space occupied by the park, or to light from the centre of this park with a tower electric light of great power, thin out the shrubbery and properly police it Tompkins Park, owing to its level surface, would be an excellent place on which to test by experiment the feasibility of such a project.

CITY PARK.

There has been but $5,000 appropriated for the year 1888, toward the improvement of the City Park.

This park, while resorted to and used to some extent by the residents of the immediate neighborhood, is used even more extensively as a thoroughfare by the working people and by others, employed in the neighboring factories and manufacturing establisments, many of whom come from more or less remote parts of the city. These people invariably take the most direct route to any point to which they wish to go, in this instance entirely ignoring the asphalt walks laid for their accommodation, which if used would involve the taking of only a few more steps in crossing the park.

The consequence has been that the green sward of this park has been cut up into numerous sections by worn pathways, diverging in the direction of the different gates and presenting anything but an attractive appearance to the eye.

To meet this obvious want of direct routes for the persons who daily pass through the park, and compel them to keep to

the ways provided for their use, it is proposed to close the central gates on Flushing avenue and Canton street, and lay a straight asphalt walk running directly from the gate on the corner of Flushing avenue and Canton street to the gate on the corner of Park avenue and Navy street. Also another crossing this from the gate at the corner of Park avenue and Canton street to the gate at the corner of Flushing avenue and Navy street. Such a plan will leave the present asphalt walk running from the gate in the centre of Park avenue to the point at the centre of the proposed asphalt walks, where they will all intersect. The same plan is proposed for the asphalt walk running from the central gate on the Navy street side. This latter pavement will be a great convenience and accommodation to the children of the public school which is in close proximity to this gate.

It is recommended that the hummocky green sward and the asphalt pavement, not indicated in the above proposed plan, be ploughed up, manured, seeded and rolled. Also that when in proper condition certain proportions of it be allotted to the children for use as a playground. Also, that all unsightly and decaying trees be cut down and replaced with such others as will take kindly to the soil.

It is also recommended that the street on the Park avenue side of the park be flagged with good blue stone and that the flagging on Flushing avenue be repaired wherever needed.

If sufficient funds be appropriated the Commissioners would recommend the flagging of Navy and Canton streets, where they bound the park.

It is further suggested that a structure for the use of men be placed on the Park avenue side of the park, near the central gate, that being the point considered the least objectionable and the best suited to the purpose.

It is proposed to place a small drinking fountain in the centre of the park, at the point where all its walks intersect.

A shelter house for the park is named in the appropriation for next year. It is a question with the Commissioners whether, with the present police protection, it would be desira-

ble. To keep objectionable characters from frequenting it and abusing its use, would require additional policemen as well as the services of a female attendant to look after the building and preserve decency and order, in and about it. The expense attending such a structure would more than counterbalance any advantage that might accrue from its erection.

If, after making the repairs as above indicated, any funds are left, small roof shelters will be erected, and as these shelters will be open on all sides, and under the eye of the police, they cannot be clandestinely used by immoral characters for improper purposes.

If the city would provide five electric lights in the place of the forty gas lamps now used in and around the park, they would afford additional protection to persons having business in the park and the neighborhood, and would be an improvement that would be greatly appreciated by all classes of citizens, besides diffusing a moral influence over the entire place by dissipating the darkness that conceals the vice which infests at night so many of such public resorts.

CARROLL PARK.

Of this park there is little to be said. It needs repairs at almost every point. $1,000 has been appropriated for the next year toward its maintenance. This sum will be utilized to the best possible advantage in order to restore it to its former condition. Its most favorable feature is the substantial iron fence surrounding its entire enclosure. This shady park is a great source of comfort in the intense heats of summer to convalescents and little children.

East Side Lands.

This subject demands the earliest attention and action. The recent decision of the Court of Appeals, that the city can give valid title of the land to purchasers, and the present auspicious opportunity for disposing of the property at fair prices, demand that no time should be lost in converting at least the larger portion of such lands into taxable property,

thus removing the blight that has settled upon the surrounding neighborhood, caused by the uncertainty as to what would be their final disposition. As the question of just what to do with these East Side lands must now come before the public for disposal, it might be well to give a short history of them, together with some detail upon the subject.

The East Side lands are included in the first purchases of land made for Prospect Park. They are bounded on the west and southwest by Flatbush avenue, Plaza street and Vanderbilt avenue; on the north by Prospect place, or Warren street; on the east by Washington avenue, and on the south by the Flatbush town line. In this area there are 132½ acres, of which 11½ are owned and used by the city as the Prospect Hill Reservoir grounds, leaving 121 acres. This tract is about equally divided by the Eastern Parkway, which was cut through in 1872 and 1873, necessitating the removal of 231,000 cubic yards of earth. In this cutting a slight curve had to be made, so as not to weaken the reservoir. Soon after this was done, a commission of three was appointed to appraise the value of the grounds around the reservoir in order to sell them to the Department of Public Works. The sum of $215,365 was agreed upon, and an act of the Legislature was passed May 15th, 1876, authorizing said amount, with interest, to be paid to the Park Commissioners, such sum to be applied "to the improvement of the park lands so authorized to be sold," viz., to drain, sewer, grade, pave and gutter the streets to be laid out.

The Annual Report of 1877 acknowledged the receipt of the above amount. This was the first sale of east side lands, and the price obtained was much better than that subsequently realized at auction.

Much public discussion has taken place pro and con on the advisability of selling these lands. In the Spring of 1869, a proposal was made by Edmund Driggs, J. W. Hunter, Charles Jones, Wm. W. Goodrich and J. Carson Brevoort to lay out and finish these lands into a park, with Gen. Viele as engineer, for the sum of $625,000, furnishing security, &c.

On April 23, 1870, an act was passed at Albany, giving the Brooklyn Park Commissioners authority to sell the larger part of the east side lands for the city of Brooklyn, the proceeds to be placed in the sinking fund. This act was amended on March 31st, 1871, and June 18th, 1873.

Under these acts, maps and plans were made, showing the reserve on Flatbush avenue, from the reservoir to the town line of Flatbush, a strip of 250 feet deep along said avenue.

After much delay—on November 17, 1881—a sale was held, and about one quarter of the lots laid out were sold. They comprised nearly all the choice ones, as, for instance, the Plaza, Plaza street and Eastern Parkway. The prices realized were not near what was anticipated, and the sale was stopped. In many former discussions and estimates it was said that this whole tract would bring $3,000,000, or, at the lowest estimate, $2,500 per lot 25 feet front. This amount was not realized, though about all the finest lots were sold.

Total number of lots	1,014
Number sold	279
Remaining unsold	735

The 279 lots sold for $538,300 or $1,930 each. Highest price for single lot $9,650; lowest for full lot $625.

The account of sales and disbursements shows as follows:

Sales (total)		$538,300 00
Cash received	$151,900 00	
Bonds and mortgages	223,837 50	
Ninety per cent. of $180,625 (yet unpaid)	162,562 50	
		$538,300 00
Cash received for land	$151,900 00	
Interest	563 18	
		$152,463 18
Cash paid for advertising, printing, &c	2,685 49	
" unpaid taxes	13,804 18	
" loan and interest	51,420 06	

Cash paid for interest Johnson.....	$410 80	
" cost in Johnson's surrender	300 00	
" Commissioners' Sinking Fund	61,768 19	
		130,388 70
Deposited in Brooklyn Trust Company.....		$22,074 48

Nine purchasers have not yet paid the second instalment of 20 per cent. on sixty-two lots, sales amounting to $180,625. At the prices that ruled at the sale had the 735 lots been sold they would not have averaged $600 each. Thus the total sale would have been less than $1,000,000, with large expenses to be deducted, the amount of which we do not know and are not able to find out, as there seems to have been a very imperfect set of books kept. Mr. Wm. A. Brown in his report in 1882, says on this subject, "There appears to be a regular set of books for these east side lands, in which no entries have been made, I have found it necessary to collect information from a petty cash and memorandum book. I desire to state that since January 1st, 1879, some receipts and disbursements have not been entered, neither has the ledger been posted for some years. The check books since 1866 do not show the entries of any deposits, neither do they show any balance that tallies with those of the bank books."

We know that the Legislature was liberal in having the land improved for sale. The first act passed, already spoken of, applied the proceeds of the sale of the reservoir grounds—$215,365—for such purpose; the next act, of June 18, 1873, authorizing $200,000 for the same purpose, and on June 16, 1877, authorizing a still further sum of $200,000 for the same object.

Just what bonds were issued and sold under these two acts we are unable as yet to state definitely. All that actually appears as a matter of record is the loan of $51,420 out of the sale and the $215,365 from the reservoir fund. It is currently reported, however, that $150,000 worth of bonds were sold and used.

The improvements made on the lands are not many or extensive, aside from the Eastern Parkway, which appears to have been a matter by itself, special commissioners having been appointed and the regular assessments made.

The improvement map adopted for the East Side lands shows thirteen avenues, streets and places through it. Of this number only three have been made, viz., Underhill avenue, Butler street and Park place. All these are now in bad condition, the banks having fallen on them. There has been some grading done near the Plaza and Eastern Parkway. The report of 1879 says: "The removal of the material having been done at a very small cost, in one or two instances contractors requiring filling for their own purposes elsewhere, have been permitted to take it from the East Side lands without cost to the Park Commissioners."

After the sale in 1881, the Commissioners did not see fit to have another sale, and many expressed the opinion that the city could not give a good title to the land, it having been condemned and bought for park purposes. The opinion has also been expressed that if these lands were not used for their original purposes they must revert to their original owners.

As before recited, some, after purchasing and paying ten per cent., refused to pay more and take title. Suit was commenced by the city to compel delinquents to take title, and a test case was made of George Copeland. The case was tried before Judge Pratt, on April 15th, 1885, and was decided in favor of the city. Copeland appealed to the General Term and the case was heard at Poughkeepsie, May 13th, 1885, before Joseph T. Barnard, presiding Justice, and Jackson O. Dyckman, associate Justice, judgment affirmed, opinion by Judge Barnard. He then carried the case to the Court of Appeals, decision was rendered on October 4th, 1887, judgment affirmed by Judge Peckham, all the justices concurring

The question of the city's ability to give title being settled, the Corporation Counsel is now actively pushing the delinquents for a settlement.

The Park Board appear to be unanimous that an early sale of these east side lands should take place.

The question as to whether it is for the city's interest to sell them as they are (in extenso) or improve them, is now being discussed. To improve—means expense and delay, and a loss of a year's taxes, and the work not so well done (when the object is to sell the land) as the Public Works Department would do it under assessment, having everything up to the requirements of the law.

This Committee would recommend that the lots remaining unsold in the section north of the eastern parkway be sold as they are, as early in the Spring as practicable, and that the section south of the eastern parkway or the reservoir side, be held, until it is increased in value by the improvement of the north side. If the latter were thrown on the market now, without any improvement on any side, and shut off from the park by the 250 feet strip on Flatbush avenue, it would sell at a nominal figure. It is a desirable piece of property and will soon command its real value, and should not be sacrificed. It has some advantages that no other spot in Brooklyn has, the principal of which may be summed as follows. It is the pivotal point of Brooklyn, in which the round horizon can be seen better than at any other. The circle of sky line is complete, with the exception of a few degrees shortened by Cemetery and Breeze Hills in the park. To those who have not seen this grand view, a short description might be interesting.

From a position on or near the reservoir, there is in sight the ocean, several bays, the Sound, the harbor and East and North rivers. It is doubtful if there is another spot in the world that has this variety of water scenery. To the east, Long Island unfolds to view its scattered villages nestling down among fields and woodlands.

To the north, you look up the East River, which stretches off to the Sound. A bird's eye view of the whole city of New York is obtained. Every part of Brooklyn can be seen. You look down on the towers of the East River Bridge. Turning westward the North River and Jersey City are in full view,

with the heights beyond rising up in the distance. In full view the noble Statue of Liberty stretches forth the hand of welcome to the world, while the forts of Governor's Island seem to nestle at her feet. The waters of the upper bay glisten in the sunlight in front of Staten Island. The lower bay is partially obscured by the beautiful arborescent growth of Prospect Park.

The view to the south in this enchanting kaleidoscopic panorama is Coney Island, with the ocean in the background and Flatbush in the foreground. The next to come in sight is Rockaway's mammoth hotel, and to finish the circuit, the whole of Jamaica Bay lies out in full view before us with the beautiful Flatland scenery intervening.

This commanding spot would make a most admirable site for a world's fair. It is most time to have one, and Brooklyn is the coolest and most suitable place in which to have it.

The Concourse at Coney Island.

This is an important subject. It has attracted considerable attention and caused much comment during the past ten years. It must necessarily continue to do so until it shall finally be decided how the questions it proposes shall be settled.

It has had much discussion during the year by the Park Commissioners. The plan of improvement being carried on there is to abate a nuisance by filling in a malarial marsh, thus leaving a foundation on which, whatever improvements may be decided upon as to its future development, may be readily carried out. Whether or not to protect the beach from the erosion or violent incursion of the waves, or to allow it to shift its form at pleasure, is yet an open question. The policy of several commissions has been to save it. This has now become a matter of great urgency, as the recent tides have made much more destructive inroads than for several years past, until at last they threaten the entire east end of the concourse lands, with all the hotel property lying between it and the Manhattan Hotel. A natural tendency of the tides has

always existed at this point to wash away the shore, but the aggravated and immediate cause is that the Manhattan Company has built out crib and stone piers for breakwaters in front of their premises (which are not essentially necessary for its protection,) these breakwaters arresting and retarding the edge of the strong current that flows at times down the coast from the east and southeast. The momentum of the current, which has had its coast side infringed by these jetties, is deflected in its course against the shore, which, being loose white sand, is readily washed away. This cutting through of the Island to Sheepshead Bay at this point commenced as soon as these obstructions were put there.

Tradition and records show that twice, near this spot, there has been an inlet to Sheepshead Bay; once caused by a ship being stranded on the shore, its track closing again on its removal. The inner portion of this inlet may yet be seen, and is known as Sandy Creek.

As the county may be called upon to protect its property, which is of such great and peculiar value to this whole metropolitan community; and as the taxpayers should be familiar with what is really needed, and aware of what difficulties we are confronted with, it would be well, perhaps, before stating the nature of these difficulties, together with the recommendations we have to make, to give a short history of Coney Island and the remarkable changes that have taken place there, as such changes have a direct bearing on the advisability of taking measures to protect this portion of the county's property.

Coney Island was discovered in 1527, by Verazzano. It was visited in 1609 by Henry Hudson, the great navigator. Its Indian name was Narrioch. The original purchase in 1649, of the land from the Carnarsie and Nyack Indians was confirmed in a patent to Guisbert Op-Dyck.

In 1661, Op-Dyck sold the Island to Dick DeWolf, who started a salt works there. This was the first manufacturing enterprise in Kings county.

In 1685 a charter was obtained from Governor Dongan, securing the island to the town of Gravesend. The concourse portion of it was sold for a nominal sum to Kings County, to remain under the control of the Park Department.

Its name at this time was Cunny Island, while the Dutch called it Conijnen Eylandt. It had two inlets through it, making three islands. The first, at the eastern end, now the Manhattan property, was known as Sedge Bank Island; the second, known as Guisbert's or Johnson's Island, extending from a point between the Brighton and Manhattan Hotels up to Paul Bauer's, where the Piney inlet was located. West of this inlet lay Piney Island. At one time it was much larger than it is now, and was well wooded with cedar and pine trees. This Piney inlet was the direct entrance for the fishermen of Gravesend through which to deal with New York.

There are several old maps in existence which seem to be well authenticated—one as long ago as 1666, made by a Mr. Hubbarde. Jeremiah Williamson made a map in 1765; John Terhune made another in 1806. Lifford and Strong made maps at an early date. The U. S. Coast Survey made maps in 1835 and 1855. A study of these maps, together with the shape of Coney Island at the present time, show a continued and considerable change of its contour.

There are many accounts of the wonderful changes that have taken place on this changeable island. On one of the older maps spoken of may be found these words: "This beach has, within the memory of living men, washed away more than a mile in one night."

Mr. John Van Dyck declared a number of years ago that Coney Island had on it high and long sand hills, where now it is flat and level, and covered at intervals by the tide. He further said that he had cut grass where the shore now is, as well as a considerable distance out in the ocean. Mr. Court Lake, in 1839, when he was seventy-nine years old, "stated that his grandfather, about one hundred and ten years before that time, had cut a quantity of cedar posts on a part of Coney Island, which was then two miles from the shore, and he himself had

cut fire wood at a place that was a mile and a half from the shore. There was a house on Piney Island owned by a Mr. Brown, the site of which is now a great way out at sea. Plumb Island (a part of Barren Island) was once covered with fine timber. There is none however there now, the greatest part of the land having washed away."

Reports on record show that Piney or the Western end of Coney Island extended miles out to sea, had high dunes or sand hills near the coast and was well wooded and fertile on the Gravesend side. Guisbert's, or the middle Island, was quite fertile, and furnished grass and pasturage to the Gravesend people. It was divided into thirty-nine lots, the original number of members in the Dongan charter, and large quantities of hay were harvested there. It had similar dunes along its sea front. Sedge Bank, or Manhattan Island, was covered with Sedge grass and was of no particular value.

A phenomenal storm occurred and one half of Coney Island was washed away in a day. Its high ridges of sand that had been piled up by the wind were leveled; its inlets closed and a straight beach left, which, as a whole, had been growing smaller of later years. A large and threatening shoal to navigation is steadily growing out to sea. This shoal extends between Sandy Hook and Rockaway inlet, and can be readily located by watching the detour of the Rockaway boats made on their trips

Fortunately this sort of storm does not come often, not once indeed in a century, but as certain conditions will produce such terrific disturbances, and as we never know how near they are at hand, it would be well to consider them in recommending or building a shore protection.

The conditions that would have to exist to bring about one of these coast storms are, first, the trend of the coast straight ahead to the east for one hundred and fifty miles, with neither promontory or estuaries to break the momentum of the waves started. They would come in with increasing velocity. When the highest Spring tide takes place, involving the combination of the solar, lunar and sidereal influences, in conjunction with

a storm of almost hurricane power from the east, veering a few points to the south, and thus causing the waves to lash and churn the shore, under these tidal and meteorological influences all the business part of Coney Island would be submerged, and the unprotected eastern and middle coast of the island would be washed away. A northeast storm would build out the coast, the shoal above spoken of would have a tendency to force the volume of water against the shore, and with the fury of the tempest the waves would do great damage. One could readily imagine, with the syzygies of the tides, how old Neptune, roused by the tempest to his fiercest fury, would thunder against the Long Island coast and speed with increasing velocity down this trend of the shore to spend his energy in snowy billows on and near Coney Island.

This open and straight coast line has a great advantage in another way. It prevents the damming up of the tide as is the case where there are bays, &c. Thus the sum of the height of the tides caused by the sun and moon at Coney Island is only $5\frac{1}{2}$ feet, while the same tide at Boston is 11 feet, or twice as much. This is caused by Massachusetts Bay affording place for the tides to cumulate, while with our open coast they are freely dissipated.

This also holds good as to long continued driving storms from the east and south on our coast, where the storms alone can only raise the level of the water 4 feet, and 8 feet at Boston. The greatest height of submersion, outside of a tidal wave, that can take place at Coney Island, is $9\frac{1}{2}$ feet. This, however, is sufficient to flood the whole island. In addition to this the devastating force of the waves is sufficient to batter and destroy everything in its sweep. The short time that the tide is at its height is long enough to produce a wonderful change in the appearance of things. The concourse is just six feet above mean high tide. Several times during storms, at the ordinary tide, the waves have dashed a foot above it. Thus it is seen what would be necessary to contend against in providing shore protections. It would not be wise to build short of this.

The concourse lands at Coney Island originally contained 70 acres. They have a sea frontage of 2,750 feet and a uniform depth of one thousand feet. The shore front has materially changed. The depth at the eastern end is not half what it was. The beach and the end of the concourse drive are both gone. The west end has gained 200 feet. While an area of about eight acres has washed away at the east end, three acres have been added to the west end. These lands are intersected on the north side, near the centre by the renowned Ocean Parkway. This triple drive, 210 feet wide and 5½ miles long, with the concourse lands and improvements, cost complete, approximately, $1,000,000. A portion of this expense was borne by the adjacent property owners. The concourse lands alone, with these shore protections, are now worth this amount; and if rated from a sanitary point of value to those who live within a half hours ride of them, many millions would not compensate for their loss.

This tract of land, before its improvement, had quite an uneven surface. The northerly sides, especially the neighborhood near Bader's Hotel, were low and swampy and covered with swamp grass. Longitudinally near its centre and crossing obliquely where the concourse drive extends, was a ridge of sand hills or dunes, some of them ten feet above high tide. These erratic sand formations are made entirely by the wind on the dry sand, whose action is the same as dust in the streets or sand in the desert. The height to which the waves raised the sand is easily determined by the strata of shells that are thrown up by the sea after a storm. This detritus of white ocean sand, or sea dust, is caused by the ceaseless action of the waves on the coast, constantly rolling and grinding pebbles, rock and gravel, together, the attrition wearing them to sand. This restless moving, generated by centuries of motion, seems to remain in it even long afterwards. If contained in the ocean it will travel thousands of miles along the coast. If cast upon the shore, it is constantly shifting by the action of the wind.

The concourse was partly improved and open to the public in 1876. The improvement consisted of a beach concourse made of bituminous concretes running the entire length of the ocean front, 100 feet wide, for carriages and pedestrians. It did not prove very durable, as in 1884 it was not fit to use, and had to be replaced by a new covering at a cost of $30,000. It is located about 500 feet from the north boundary. This concourse was protected on the shore side by an inclined asphalt surfacing, three inches thick, and about eighteen feet wide, buried in the sand to low tide mark, and connected with the edge of the concourse concrete. It has protected the concourse from being undermined by the waves when they came from the front, but has proved useless when attacked obliquely at the side on the east end. Thus the great storm in January, 1878, washed over the entire concourse and did not injure it, while merely high tides with an eastern current now do great damage. The inclined bituminous concrete shore protection does not seem to offer any adequate resistance.

In the Annual Report of 1885, the Chief Engineer says, "During the storm which prevailed on the 24th November, the ocean face of the bituminous concrete upon the embankment of the concourse was carried away for a length of 250 feet by 15 feet in width at the easterly end, this has been inevitable in consequence of the gradual encroachment of the water under the influence of northeast storms, from which direction the greatest amount of damage to this shore results. The system of rectangular bulkheads or enclosed cribbing, composed principally of rough timber, which had been adopted by the Manhattan Improvement Co., has long tended to invite the attacks of the elements upon the easterly shore of the island, and the destruction of that part of the beach has been so general, as to completely modify the configuration of that portion of the ocean front between the Oriental and the Concourse property."

The result of this was that the next Board of Estimate, in 1886, appropriated $10,000 to be spent in 1887, to protect the beach. In the meantime each succeeding storm had con-

tinued to encroach, and when a plan could be decided upon, and the contract awarded, the amount was too small to meet the requirements. Such a construction partook of the nature of an experiment. To hold the shore where it was, and watch the action of the waves on it, was necessary in order to know how far it would be well to recommend it in the future. After inquiring into several systems and consulting with engineers, the Commissioners decided to try the Dutch Fascine Mattress system and a contract was awarded to R. Kanters & Son, Holland, Michigan, being the same plan as has been used for a century past on the dykes in Holland. The contractors have been slow in putting it up and have allowed the severe November storms to surprise them with a portion unfinished, which was destroyed. The completed part has stood, though in an exposed position, and subjected to very strong currents and tides, and saved the concourse back of it. At either end of this protection the concourse is being rapidly washed away, and not having length enough along the shore, will in all probability, by Spring, be exposed on all sides. The heavy Spring tides may destroy it entirely. This strong flanking current from the east, we think, has not been considered at its full value by these engineers, as was the case with the former ones. We are of the opinion that a strong barrier heading out at the east end is necessary to break the force of the waves and make it easier to contend against them from the southern front.

During the recent storm, old Neptune appeared to be in a petulant mood and seemed to act as though a fancied insult had been intended to him in these shore protections, for he took a number of large timbers from under an adjacent hotel and with fiendish delight hurled them with well directed blows against the inclined asphalt. The blows were as accurate as if delivered by human hands.

An appropriation of $50,000 was made to fill in the space back of the concourse, an area of nearly forty acres. White coast sand was first hauled in and leveled to a height of $3\frac{1}{2}$ feet at one end and $1\frac{1}{2}$ feet at the other, below the

surface of the concourse drive. On this is placed two feet of good earth, which is being hauled from Brooklyn by the Brighton Beach Railroad for the contractors, Cranford & Vallentine, at a cost of 47 cents per cubic yard, to the Park Department. On this is to be placed one foot of rich loam earth, which is to be sown in grass, and will leave the greensward above the line of the concourse. The present appropriation will finish about two-thirds of the area. The western section will be finished first. Fifty thousand dollars more was asked for and was allowed by the Board of Supervisors to finish the filling and making of a lawn, put in a substantial sewer and build a drive on the extreme western side, thus making a circuit drive as a terminus of the Ocean Parkway. The Board of Estimate, however, did not see fit to grant it, and as a consequence the concourse will continue to have the unfinished and forlorn appearance it has always had.

Having stated with some detail the condition and state of affairs at Coney Island, we would recommend that a strong and durable pier and breakwater be built on the eastern boundary, from a secure point inland opposite Dixon's Hotel, southerly out to sea to the original 1,000 feet shore line, turning the corner with an easy curve and running westward parallel with the concourse about 400 feet. Such a pier should be made of piles, cribbed and filled with rock. It should be twelve feet high above mean high tide, well put together with piles driven deep. It should be backed on the inside of its entire length to a width of a hundred feet or more, with strong earth or clay. The eastern front would act as a breakwater, shielding and protecting the property against the strong eastern current which would then flow around the curve to the southern face of the barrrier. Thus the natural direction of the current would be restored by the straight and non-retarding face of the sea wall, which would tend to guide it back into its old natural course. The accretions at the west end would in time probably be lost, and the coast straightened as before. The small bay behind the coast defense would gradually fill with sand, owing to its sheltered position.

The action of a strong eastern current on Coney Island, with this improvement made, would be, to strike the Manhattan shore with great force, being warded that way by the Rockaway bar. Being now retarded on one side by the jetties there, the course of the tide is deflected shoreward, and as there is no inlet yet for it to flow through, it has to double on itself in a small bay, and swirl around in contracted quarters, scooping up the sand as it goes. In its natural tendency to straighten itself out it would break over the southeast corner of the concourse lands, thus destroying them. The tendency of its course seaward is attested by the fact that sand has continued to form on the shore at the west end. With the improvement made, as referred to, the result would be that the current closely following the coast would strike against it obliquely and be driven to sea, where it would come in contact with the heavy off-shore current and be carried with it straight down the coast. This breakwater would, under the present condition, be struck at the opposite angle to that at which the Manhattan breakwaters are struck.

In making this sea wall 12 feet high above mean high tide, the sea would never wash over it, but would only wet it with the spray. The drives should all be 10 feet above tide. There would be no danger of the lands being flooded, and whatever flowers, grass or shrubbery might be there would be safe, if the coast line should straighten up again between the concourse and the Manhattan and the current strike the breakwater from the southeast. The coast line can easily be maintained by taking it in time, and using light fascine mattresses at exposed points, similar to those now being used.

The building of this sea wall is not a matter of such magnitude as might at first appear. It would need to be 1,000 feet long, 20 feet wide, and would average 20 feet deep. The driving of piles is not expensive, as it is quickly done by hydraulic forcing. The rock ballast can be had in many cases for the hauling of it, while the filling in of earth at the back can be done for 47 cents per cubic yard. It can thus be seen at a glance that the whole improvement would not be an expensive

one, as the building of this mural wall and embankment is in no way an experiment. It has been accomplished at numerous points on the sea coast. Even if it were expensive, however, the best and most permanent things are always in the end the cheapest and most satisfactory. This Committee would most earnestly urge that no time be lost in its completion. The above result can be also obtained by piling up stone into a massive shore protection, making what is known as rip-raps.

This broad embankment, projecting well out to sea, would be a favorite resort and the eight acres reclaimed would be worth as much as the cost of the undertaking.

The protections already alluded to would present two points open to criticism. First, that they would destroy in a measure the beach and the breakers; and second, that they would to some extent obliterate the grand spectacle of a natural ocean shore.

The sea park could be securely built by retreating inland to a safe distance, thus allowing for all shiftings of the shore, and at the same time high enough to be insured against inundation.

Inasmuch as the ocean front of the concourse grounds is limited, it is therefore necessary, in order to the thorough completion of any system of coast protection, that adjoining property holders on either side of the concourse front should co-operate with the city in the construction and carrying out of such a system.

The value of a sea side park to this great city, as a sanitarium and pleasure ground is too well known and admitted to make it necessary for us to argue in its behalf. Brooklyn is more than fortunate in her location, and has more advantages than any other large city, the greatest of which is its close proximity to the ocean and other water surroundings. Brooklyn and San Francisco are the only two cities on this continent that have sea parks. New York is ambitious in this direction and feels proud that it has secured a site on the narrow part of the Sound. In Europe Stockholm appears to be the only city that has a sea park, and it of course is on an inland sea.

Japan possesses one at Tokio. It is thus seen how scarce they are. None of them compare with Coney Island in the grandeur of its breakers. The sea air there is as richly laden with medicinal qualities as any part of the coast. Both infants and adults can be immediately revived and benefited by it.

Brooklyn being favored over any other city in the world in this respect, would be remiss beyond expression, were it to neglect or lose its interest in its sea park.

The connecting of Brooklyn's beautiful park on Prospect Heights, by the five mile Ocean Parkway, with a sea park on the ocean shore, is one of the grandest conceptions that could be formed, and the name of its projector will live as long as Paris' great Haussmann.

In all improvements made there, care should be taken to have them durable and permanent beyond question and the surface raised, so as to be out of reach of the waves.

The feature of a white sand beach should never be given up, as it can be maintained under the most adverse conditions. If the very worst should come, a sea wall could be made at the west end, similar to the one at the east, leaving a wide gate in the centre and a circular coast inside, affording safe and more protected bathing.

By having a proper understanding of the worst dangers that the concourse lands can be subjected to from the ocean, it is fully and completely within the power of engineering skill to make them as safe as if located inland.

The Parks of Brooklyn and Their Bearing Upon The Future Development of the City.

It is doubtful whether the original site of any American city, prior to its settlement, ever offered more rare and beautiful natural advantages for the systematic construction of parks than did that particular portion of Long Island lying in and about the locality of Brooklyn. The serried slopes ranging down to the river on either side of the long ridge that

Views at Pedestrian Concourse.

traverses the island, presented at each successive point of declination superb features of natural beauty which ought to have been relieved by art, rather than remorselessly covered up and lost to sight in the construction of the city. The persistent sacrifice of such superior sites with their natural advantages for parks and squares is one of the most deplorable and mischievous mistakes that has ever been made by Brooklyn. As time breeds its own revenges, the force of this statement will be more and more felt in the future growth of the city.

The most conspicuous instance of this short-sighted folly is Brooklyn Heights. In old Indian days the Algonquins and Iroquois were the two great races of red men occupying the eastern part of the Continent. From them we get the original roots of the Indian language. Scattered through the different States were their tribal and sub-tribal divisions. The Montauks were the generic tribe of Long Island. Large heaps of broken shells at scattered points along the shore tell of their industry in manufacturing the circulating currency of the country, viz., wampum or seawant, which was made by cutting out the inner pillars of the quahog or conch shell, or the circular eye of the hard-shell clam and periwinkle. The blue ones were specially valuable. The tribes through the interior were supplied with shell money and shell beads and trinkets from these seawant mints. The Montauks were divided into several tribal and sub-divisions, among which were the Canarsie Indians. A favorite watching ground of this tribe, whence its plumed warriors might view the meeting of the waters and devoutly contemplate the Great Spirit in the setting of the sun, was the spot now known as Brooklyn Heights. The name given to this cedar-crowned bluff by the aborigines was "Ish-pa-tig-oga" (high place of trees). This harsh appellation became gradually softened by use to the beautiful name of "Ihpetonga."

Towering back on this high bluff stood its stately temple of cedars. Hundreds of years had been busy in its architecture. The cycles of lost centuries slept in the rings of its great trees.

In this temple the Indian tribes reverently gathered with emotions of religious awe. It was their popular resort. It was open for all to use and to enjoy. To this beautiful spot at length came the settlers. They warned off the Indians. They cut down most of the high trees. They desecrated the ancient temple and replaced its solemn architecture with rows of residences, fronting on the water, gradually shutting out from view, save to a few favored eyes, the splendid spectacle that lay beyond; till at length nothing remains to tell of the great temple of cedars save the lingering echoes of its lovely name, "Ihpetonga." In all this let us be distinctly understood. We are not animadverting upon the arts of civilization as displayed in the architecture of Brooklyn Heights. We are not questioning the right of occupancy or ownership. We are simply stating in this report what should obtain, as a constructive principle, in the laying out of great cities, viz., that those particular spots which are specially notable for the favors of nature and from which noble views can be obtained by the common people should, in part at least, be, so far as possible, thrown open for the public use.

With such a praiseworthy object in view an attempt was made in 1825 by H. B. Pierrepont (be it remembered to his honor forever), to preserve a portion of this peerless eminence for such public purposes. Feeling the importance of a park at that point for the people, he went to no small expense in laying out a plan for its construction. At that time a few of these cedars were still standing. This plan was submitted to the village trustees, as well as to the parties in interest, and was by them approved. It was finally, however, defeated through the obdurate selfishness of one individual who held a small interest in the property. Thus the project fell through.

Another signal spot that should have been reserved as a city square was the conical knoll, formerly known as Cobble Hill, situated at Atlantic avenue and Court street. Other superior sites might be likewise mentioned, *ad seriatim*. This continual surrender of rare natural sites at length aroused a number of citizens to the sense of their duty in the premises.

An appeal was made to the Governor in behalf of a park system. In 1835, he appointed the first Commission to project the plan of such a system. The Commission worked faithfully and finally, in 1839, submitted the plans for such an undertaking, recommending that eleven sites be reserved for parks and squares as follows: Johnson Square, Lafayette Green, Bedford Green, Marcy Square, Prospect Square, Reid Square, Fulton Square, Mount Prospect Square, Tompkins Park, Washington Park and City Park. Even the three last named came very near sharing the fate of the rest.

As late as 1868, when all necessary laws had been passed providing for the improvement of Washington Park, a determined effort was made to defeat such a project by attempting to divide up this beautiful historic spot into building lots and to dispose of them at auction; the only argument in favor of such vandalism being that the property would fetch a good price. The authors of such an attempt were betraying the future development of Brooklyn as the Iscariot betrayed his Lord. He, however, set such men a good example. In this way the city has been defrauded of a system of equal distribution in her parks. A distributive ratio of real estate values has also been lost through the failure of such an enterprise. The value of property would have been advanced in the vicinity of such parks and squares, and consequently a larger revenue would have accrued to the city from such improvements. The uniform testimony of foreign cities has been, that parks enhance property not alone by beautifying it, but also by arresting a continuous order of architecture. There is nothing so surfeiting to the eye as that long drawn sameness, bred of interminable blocks of city houses, all built on one pattern of architectural uniformity. No difference in device. No modification in design. No change in color. The contagion catches by reason of the contiguity. Throw in at different points fine parks, and you break up all this uniformity. Unity is not uniformity. The arrangement of bricks in a building is uniformity. The outline of a tree, including all its parts in one living whole, is unity. The more perfect the unity the

more complex the diversity. The power of this constructive principle is no where better demonstrated than in that great work of art, viz., the construction of a great city.

But there is something far more serious than the lack of architectural art or the failure of governing powers to reserve, for public purposes, a sufficient number of suitable sites. It is the embarrassing fact that the beautiful crests of the hills, lying just beyond us in the very path of the fast growing city, have been with infinite unwisdom converted into cemeteries, Once more we must beg to be distinctly understood. No spot is too sacredly beautiful for the dead. No anxious guard too eternal for the mortuary marble. But in reverencing the dead we must not be recreant to the living. The health, the life, the collective welfare of great multitudes of human beings, are things far more important than the sepulture of those to whom health and disease alike have long since ceased to be either a blessing or a curse. Such an embarrassment is exasperating by the monstrous fact that New York buries most of its dead in these great necropolises of Brooklyn. Nearly every ferry-boat at stated hours conveys a funeral. Thus the city of the dead is fast becoming larger than the city of the living. There should be a law restricting the construction of cemeteries in the proximity of great cities, in view of the ghastly reflections with which old cities have found themselves at last confronted. A more discerning provision should be exercised for the future. Fortunately Greenwood, the beautiful *Père la Chaise* of America, is exempt from this harsh comment by reason of its wise situation to the sideward of the city. The conclusion seems unavoidable, that the time will come when the cemeteries, lying in the central rush of the current of the city's growth, must be removed to some outlying locality, unless the ancient custom of cremation, already in vogue at the Fresh Pond Furnace, shall be universally adopted.

In connection with the Department of Public Parks, the Committee beg to recommend that a Topographical Commission be appointed, by the Mayor, whose duty it shall be to

study the future development of Brooklyn, with a view to the proper establishment of a system of parks, squares, commons, and drives; taking into consideration the yearly rate at which population is increasing and what it will be fifty years hence, being governed in these conclusions by the statistics of the past fifty years, while, at the same time not forgetful of the increased facilities which will enormously quicken its growth in the future. Other countries have produced beautiful cities by such a plan of systematic study. The results of their experience should be carefully examined and a comparison made in order that it might be shown just how much park acreage is needed. The following statistical tables will show how far Brooklyn is behind every other large city in the world:

TABLE OF COMPARISONS OF PARK ACREAGE.

UNITED STATES.

Cities.	Population.	Park Acreage.	Population to one acre	Acreage per 1,000 inhabitants.
*Brooklyn	750,006	678	1,106	.90
†New York	1,200,000	5,157	232	4 29
Philadelphia	847,000	3,000	282	3.54
Chicago	503,000	3,000	168	5 96
Boston	390,000	2 290	170	5.87
St. Louis	350,000	2,232	157	6.37
Baltimore	332,000	776	428	2.33
San Francisco	234,000	1,181	198	5.05
Washington	188,000	1,000	188	5 32
Buffalo	160,000	900	178	5.62
Total nine cities			2,001	44.35
General average			222	4.93

* Ocean and Eastern Parkways not included in acreage.

† Including late purchases of sites.

FOREIGN CITIES.

Cities.	Population.	Park Acreage.	Population per one acre.	Acreage per 1,000 inhabitants.
London	3,832,000	22,000	174	5 76
Paris	2,270,000	58,000	37	25 55
Berlin	1,122,000	5,000	224	4 45
Vienna	1,103,000	8,000	138	7.25
Tokio	1,000,000	6,000	166	6.00
Brussels	380,000	1,000	380	2.63
Amsterdam	350,000	800	437	2 28
Dublin	250,000	1,900	131	7 60
Total eight cities			1,687	61.52
General average			211	7.69
Average of all			216	6 31

The number of inhabitants to one acre of land, the number of acres allotted to one thousand inhabitants in each city, the ten principal cities of the United States and eight of the principal cities of the old world, are given in these tabulated statistics. They also disclose the fact that Brooklyn has not, in her area, one fifth of the space devoted to parks that the other American cities have; while as compared to the cities of Europe she has seven times less park acreage. Taking, as shown in the tables, these different centres, scattered all over the world, representing different races of people whose representative minds have bestowed great thought and study upon this subject, the conclusion clearly reached proves that in order to the proper maintenance of the public health, there should be an acre of ground, reserved for public use, to every 250 inhabitants.

The inhabitants of Brooklyn are crowded in at the rate of over 1,100 to the acre. Think of this a moment—every acre in the city is about the size of a city block, viz., 208 feet square. Every person in Brooklyn has a right to use the public parks at the same time. Suppose this should happen, how could 1,100 people use simultaneously a space 208 feet square, for public purposes?

Why is it that Brooklyn is so far behind all other cities in her quota of parks? How does it happen that she has a park at all? Simply and solely because, in spite of their being heaped with calumny, a few intrepid public minded men persisted in carrying out such a project and could not be diverted from its forthright.

Recently, leading men of Boston and New York have recognized the fact that those cities were behind the great cities of the world in this important particular, and set themselves about remedying this defect. To this end they secured additional territory and placed New York and Boston on the scale of computative comparisons at a respectable percentage.

Another important topic for consideration that follows in the track of great cities, is good sewerage. We find on exami-

nation that the largest cities on the continent, with the least natural advantage for either parks or drainage, have been made by artificial means the healthiest cities in the world.

Thus Paris, situated on low ground, intersected by a small river, but having in her survey an acre of public land, reserved for public uses, to every thirty-seven persons out of her more than two millions of inhabitants, even throwing out the great forest of Fontainebleau, still maintains her lead in park acreage.

With the largest drains in the world she has the lowest death rate of any of the larger cities, while in Brooklyn, in spite of her splendid natural advantages, where health is a drug in the market, the death rate is higher than in most other large cities. And this fact glares at us with an uglier look as we remember that Brooklyn is the third city in the Union and, China and Japan counted out, the seventh city in the world.

Should she not take better care than that of her traditions? Should she not begin the redemption of her record? Should she not consult with some alarm her census? Should she not have a better class of houses built for her working people? Should she not have such broad streets lined with stately mansions as are seen in Cleveland, Boston, and Washington? Should she not have commodious hotels? Should she not give a cordial welcome to the world's capital that is at her gates? At the very least her face should not be set against these things.

Such a state of things, in spite of cheap unworthy defences, argues a lack of that local pride, that hand in hand with high intellectual attainments, goes forward as the leading power in the development of other cities.

Why is there such a self-confessed lack of public spirit in Brooklyn?

Against such an anomaly stands out in grateful contrast the public spirited self-sacrifice and sagacity of a group of men, whose very fewness only serves to set them off in a stronger light. In that little group the prominent figure is that of J. S.

T. Stranahan. To him belongs the honor of inaugurating a system of public parks and boulevards, and starting it well upon its way.

The system of elevated railroads that is weaving its spiderous web over this great city is on the road to completion. With the opening of its aerial highways, the influx of people into Brooklyn will be greatly increased. This generation will yet see the boundary of the city limits drawn on the map by a line running from Flushing Bay, taking in Jamaica, across to Jamaica Bay. The parks and boulevards should be the avant couriers of the city in its mighty strides forward. To fully develop New Brooklyn, as it should be, along the high ground of the island, Kings County should be extended to this line The present area of Kings is almost identical with that of the city, and soon the county will find itself with many of its public duties of a merely perfunctory character. A county should be large enough for a city to grow in. No city should be crowded on any side in its natural and symmetrical development. The area of Queens County is quite large while that of Kings is small. It would be a much more equitable division of territory were the boundary line of Kings County extended below Jamaica. All of this portion would then be a guarantee of increased valuation for the land ceded to Kings County, and consequently a corresponding benefit to its owners.

Could New Brooklyn be laid out in advance of its actual growth on the same prospective plan as that pursued in constructing the new parts of Boston, Washington or New York, so as to develop the idea as suggested of having a continuous drive through or around the city by a system of parks, squares and betterments, linked together in an unbroken chain by noble and well shaded parkways; could this be done, the future of the city would at least redeem its past. And just here it is that the whole discussion of this subject, to which we have devoted this closing chapter of our report, climbs into importance.

The city is striding forward at an almost spectral rate, laterally as well as longitudinally. She will soon knock at the doors of Jamaica. Her whole area will be traversed by a system of elevated railroads, to be itself in turn traversed by another lateral system of iron roads connecting North and South Brooklyn. The surface cars will be moved by better motors. The East river will be spanned by bridges at important points between the upper and lower parts of the two great cities. All avenues of communication and intercommunication that can be opened to facilitate traffic and travel, will be opened. Brooklyn has the room in which to grow. There is nothing in her way. The whole of Long Island is the landscape garden of her dreams. Coral isles have not risen out of the water in a single night with more astonishing celerity than has been the growth of this great city of the sea.

The important question is—*How* shall she grow? Shall her growth be an adventitious graft or shall it be rather as the result of a germinal plan, a definite and well devised construction.

Nothing really worthy of the name of art is ever attempted until the artist has first clearly conceived in outline the whole plan or plot of his undertaking.

There are no accidents. There is no amateur art. Precisely such a topographical prospectus applies to a great city. A large tract of territory should be acquired in advance of its growth. A topographical commission should be appointed to survey its area and study it in all its features and surroundings. The proper sites for parks, squares, commons, broad boulevards and fine drives, should be selected and reserved. Proper restrictions should be placed on property. In short, all that has not been done in the old city should be done in the new; and this should all be done in advance.

Should such a plan be pursued Brooklyn would become the first residential watering place in this country. Thither would flock persons of leisure, who would spend their incomes on the island and add to its wealth and general well being. In their train would follow those permanent public institutions

so much needed in Brooklyn, that abound in older cities, where persons of wealth, culture and refinement make their homes. These places of art, information and recreation would be correspondingly beneficial to the general public. In this way also the architectural aspects of this city would be greatly improved. In place of long caravansaries of cheap tenements would be erected substantial edifices and stately dwellings.

Let the future construction of this great city of homes be carried out upon that great constructive principle, "Never construct an ornament, but always ornament construction."

D. M. SOMERS,
Executive Committee.

GEO. W. OAKLEY,
Finance Committee.

ANSON FERGUSON,
Auditing Committee.

MAINTENANCE OF PARKS.

Certified to City Auditor:					
Expended for labor, police and salaries		$111,790 90		Appropriation for maintenance of Parks	$160,000 00
" music		2,395 00		Money drawn for team service, not used and returned to the Comptroller	627 50
" gas		404 10			
" electric lighting		3,059 25			
" supplies		15,915 94			
" labor, supplies, &c., deficit of 1885 and 1886		27,062 31			
			$160,627 50		$160,627 50

CONSTRUCTION OF ERECTIONS AND IMPROVEMENTS IN PROSPECT PARK.

Certified to City Auditor:				Appropriation for 1887	$12,500 00
Expended for labor		$7,169 12			
" supplies		4,839 87			
" supplies, deficit of 1885 and 1886		491 01			
			$12,500 00		$12,500 00

MAINTENANCE OF EASTERN PARKWAY.

Certified to City Auditor:				Appropriation for 1887	$7,500 00
Expended for labor and police		$4,918 65			
" electric lighting		1,974 00			
" supplies		413 91			
" labor and police, deficit of 1885 and 1886		193 44			
			$7,500 00		$7,500 00

Financial Statement for the year 1887—Continued.

CITY.

MAINTENANCE OF OCEAN PARKWAY.

Certified to City Auditor:				
Expended for labor and police	$18,560 18		Appropriation for 1887	$20,000 00
" supplies	387 50			
" labor and police, deficit of 1885 and 1886	847 57			
Balance carried to the credit of "Ocean Parkway" for the year 1888	204 75			
		$20,000 00		$20,000 00

COUNTY.

MAINTENANCE OF CONCOURSE—CONEY ISLAND.

Expended for labor and police	$2,689 70		Appropriated by the Board of Supervisors of Kings County and received from the County Treasurer	$5,000 00
" supplies, &c	1,210 43		Balance from 1886	1,918 56
" labor, supplies, &c., deficit of 1885 and 1886	572 18			
Balance carried to the credit of "Maintenance of Concourse" for the year 1888	2,446 25			
		$6,918 56		$6,918 56

Financial Statement for the year 1887—Continued.

COUNTY.

MAINTENANCE AND CARE OF THE PARADE GROUND.

Expended for labor and police	$2,383 82		Appropriated by the Board of Supervisors of Kings County and received from the County Treasurer	$3,500 00	
" plumbing work	1,035 98		Balance from 1886	555 51	
" supplies	459 50				
" labor and police, deficit of 1885 and 1886	136 50				
Balance carried to the credit of "Maintenance and Care of the Parade Ground" for the year, 1888	39 71				
		$4,055 51			$4,055 51

GAS LIGHTING—CONCOURSE.

Expended for gas, &c	$879 88		Appropriated by the Board of Supervisors of Kings County and received from County Treasurer	$1,000 00	
Balance carried to the credit of "Gas Lighting Concourse" for the year, 1888	120 12				
		$1,000 00			$1,000 00

RESTORATION OF EAST END OF CONCOURSE.

Expended for labor	$535 50		Appropriated by the Board of Supervisors of Kings County and received from County Treasurer	$10,000 00	
" supplies	179 50				
" on account of contract	4,828 43				
Balance carried to the credit of "Restoration of the east end of Concourse" for the year 1888	4,456 57				
		$10,000 00			$10,000 00

Financial Statement for the year 1887—Concluded.

COUNTY.

FILLING IN LOWLANDS AT CONCOURSE, CONEY ISLAND.

Expended for labor	$18,444 50		Appropriated by the Board of Supervisors of Kings County and received from County Treasurer	$50,000 00	
" supplies	528 10				
" on account of contract	20,509 45				
Balance carried to the credit of "Filling in Lowlands at Concourse, Coney Island," for the year 1888	10,517 95				
		$50,000 00			$50,000 00

REPAIRING MILITARY SHELTER.

Expended for labor	$895 27		Appropriated by the Board of Supervisors of Kings County and received from the County Treasurer	$1,000 00	
" supplies	98 07				
Balance carried to the credit of "Repairing Military Shelter" for the year 1888	6 66				
		$1,000 00			$1,000 00

RENEWING FENCE AROUND THE PARADE GROUND.

Expended, paid contractor	$721 00		Appropriated by the Board of Supervisors of Kings County and received from the County Treasurer	$4,250 00	
Balance carried to the credit of "Renewing Fence around Parade Ground" for the year 1888	3,529 00				
		$4,250 00			$4,250 00

Revenue derived from the Public Parks of the City of Brooklyn, and paid into the City Treasury.

Paid City Treasurer	$2,029 22		From sale of sheep	$184 37	
Balance to credit of account for 1888	3 00		" sundry sources	501 68	
			" water	133 60	
			Balance from 1886	1,212 57	
		$2,032 22			$2,032 22

The contracts for the privileges of the Park have been so drawn by our predecessors that no funds can come into the hands of the present Commissioners.

ROBERT COURTNEY,
Secretary.

Office of General Superintendent,

PROSPECT PARK.

BROOKLYN, January 1, 1888.

To the Brooklyn Park Commissioners.

GENTLEMEN :

The work during the past year upon the several parks, parkways, &c., under the jurisdiction of the Brooklyn Park Commissioners, has been similar to that performed in previous years, save on a larger scale.

The report of the Committee, as elsewhere presented, covers so exhaustively all items of improvement, etc., that any recapitulation of them on my part is unnecessary.

I submit herewith the bookkeeper's statement, showing how the money was spent in labor and material.

Also the report of the Captain of Police.

The usual meteorological report is also submitted.

As the life of the park is its trees, shrubs and plants, and the public is justly mindful of them, I think it would be well to describe some of them.

It would require too much space to enumerate all the species of trees, shrubs and vines on the park, as there is no catalogue in print containing the number and variety which may be found there.

The following description of some of the most beautiful and rare trees, shrubs, &c., of both native and foreign origin, and their general locality in the park, may be of some interest.

Trees of Prospect Park.

Commencing with the deciduous, there are the quercus, or oaks—such as the quercus nigra, or black oak ; quercus fastigiata, or pyramidal oak ; quercus alba, or white oak ; quercus coccinea, or scarlet oak ; quercus robinia, or English oak ; and many others. These may all be found in the vicinity of the deer paddock and battle-pass and other portions of the park.

Near the main or plaza entrance the quercus cerris pendula, or weeping oak, is the only one of its kind in the park. It is five inches in diameter and over twenty feet in height.

Fagus pendula, or weeping beech, a very fine specimen, is at the road steps near the main entrance on the west drive. It is about thirty feet high and is well furnished from the ground to the top. Near the same vicinity is a fine specimen of gymnocladus canadensis, or Kentucky coffee tree—the only species of this genus growing in the United States. It is found from Canada and Western New York to Louisiana, and grows only on the richest soils. It is a beautiful and lofty tree, but slender in proportion to its height. The wood of the coffee tree is of a rosy color, finely grained, compact, strong and durable, and very suitable for cabinet work. The barren and fertile flowers are produced on different trees. The seeds are large and grow in a large curved pod which remains on the tree until Spring. This tree takes its name from the use of its seeds as a substitute for coffee.

They are propagated by cuttings from the root, and seeds sown early in the Spring. The seeds should be soaked in warm water for twenty-four hours before planting.

The maples on the park are very fine and of great variety, many of which are to be found near the main entrance.

The acer pseudo platanus, or sycamore maple; acer negundo, or ash-leaved maple; acer rubrum colchicum, or red maple; acer dasycarpum, or silver-leaf maple; acer compestris, or English field maple; acer saccharinum, or sugar maple; acer platanoides, or Norway maple; acer saccharinum nigra, or black sugar maple; and acer rubrum, or swamp maple; all grow well, and many are exceptional for their size and vigor.

The acer saccharinum, or sugar maple, is by far the most valuable species of its genus.

This species is often found of the height of seventy feet, with a diameter of three feet.

The wood is hard, heavy and strong, but not durable when exposed to the weather; but, as fuel, it ranks next to hickory.

It is finely grained, and has a silky lustre when polished, and is extensively used for cabinet work and in naval architecture. From the sap of this maple a large quantity of sugar is produced yearly, it having become quite an extensive industry in Vermont and other parts of the country.

This species of maple should never be planted in low, flat lands, as it will not live where the soil is saturated with water during the growing season.

The undulations and inflections of fibre called curled maple and bird's eye maple, are used in veneering articles of furniture and are highly esteemed.

The acer platanoides, or Norway maple, resembles the sugar maple, but is of slow growth for the first three years from planting the seed, but afterwards increases in size rapidly. As an ornamental tree it has some advantages over the sugar maple, its foliage being more dense, and its leaves appear earlier in the Spring, and retain their verdure later in the Fall.

Near the border of the lake, towards No. 4 gate, is a choice collection of ulmus campestris, or English elm, some of which have been attacked by a new comer in the small grub which perforates the leaves, and makes them turn yellow early in the Fall. To destroy them, I have experimented this Fall with a few trees by strewing small quantities of salt around some, and lime-water on others. I have been advised by Professor Pike of Brooklyn to sow the ashes of burnt tobacco over the ground. I intend to lay a covering on the ground of the stripped stems of tobacco, such as are of no use to the manufacturer. This little pest resembles the larva of the fly.

I think it would be well to try a few common tin lamps, such as peddlers use on street corners, secure them on poles, and at the proper times at night light them, which would no doubt destroy many thousands of moths, and a little perseverance in this experiment might be a certain cure in the future.

I have often scraped the bark of fruit trees and given them a coat of whale oil soap with good results, and believe the eggs which escaped the scraper were afterwards destroyed by the solution washed from the trees by rain.

I hope the coming year will furnish satisfactory results to our experiments.

Near the bridle road leading from Nethermead arches to the farm house may be found a variety of the carya, or hickory, natural order Inglandacæ. The hickory, common in most parts of the United States, is exclusively American. The different species grow in a variety of soil, but resemble each other in the qualities of their timber. So close is the resemblance that no difference can be detected in the grain or color of the wood; they are all heavy, and combine, though in different degrees, the qualities of hardness, strength and elasticity. They have also in common the disadvantages of speedy decay when exposed to heat and moisture, and a peculiar liability to injury from worms.

For new plantations of these trees the nuts should be planted in cold frames in the Fall, as they do not transplant well, and it would be best to use a four-inch pot for each nut before putting in the frame, as if sown in the ground they are sure to be discovered by rats, mice or squirrels, who are cunning in hunting them up. When transplanted the young trees should receive clean culture until they are no longer in danger of being smothered by weeds, &c.

In the same vicinity may be found a variety of the Castanea Americus, or American chestnut; several of which have a diameter of over four feet. In propagating this tree the same methods and precautions should be taken as with the hickory.

Near the temporary bridge and Quaker cemetery there are several of the robinia psendacia, or common locust; the locust is generally a medium-sized tree, although it grows in Kentucky and Tennessee to the height of seventy feet, with a diameter of three to four feet. It has been widely desseminated for ornament, and occasionally planted for the sake of its very valuable wood. As an ornament it is very handsome while young, but becomes homely as it advances in age. The wood is hard, compact, and strong, and resists decay longer than many other kinds.

The varieties of the locust are white, yellow, black, and honey, all differing principally in the durability of the wood.

TILIA EUROPEA.
EUROPEAN LINDEN.

SALSBURIA ADIANTIFOLIA,
OR JINKGO TREE (MAIDEN HAIR.)

ULMUS AMERICANA.
(NELLIE TREE), AMERICAN ELM.

The yellow locust is grown on Long Island. It was introduced from North Carolina about one hundred and fifty years ago, and is greatly esteemed—this variety producing seed very sparingly.

The white locust is so called from the color of the heart wood. It grows in similar soil, but is not very durable. This variety is sometimes called seed locust, from the abundance of seed which it produces. The locust may be propagated from suckers, but is best grown from seed sown in the Spring, which is usually prepared for sowing by pouring boiling water upon it and allowing it to stand until cool. The seed should then be sown immediately.

There is a species of borer "arhopalus robeniæ," peculiar to the locust, which destroy many of these trees.

The Maclura aurantiaca, or osage orange, is a pretty tree, grown alone as a standard. When kept in shape I have seen it throw shoots up ten feet long in one season. The flowers are white and very small, but the fruit is larger than an orange and of a brilliant golden yellow. It is very ornamental. The male and female flowers grow on different trees. It is supposed that the leaves of this tree would be equally as good as those of the white mulberry for feeding silk worms, as they abound in a milky juice which is very tenacious.

The Maclura succeeds better in a rather poor soil when grown for hedge purposes, for which it is admirably adapted. Some fine specimens of this tree may be seen in the neighborhood of three arch bridge.

Salisburia Adiantifolia, the Maiden Hair, or Ginkgo Tree.—A fine specimen of this tree is to be found growing near the main entrance back of the thatched cottage on west walk. The ginkgo has its origin in Japan, and in its native country is said to grow to a very large size. It is cultivated here as an ornamental tree, and is admired for the singularity of its foliage.

It is commonly propagated from layers or cuttings, but it is said that plants grown from seed become the finest trees, although I have never seen a tree bearing seeds. The tree here

described is over one foot in diameter, forty feet high, and one of the largest in the vicinity. The veins or lines in the leaf grow straight from the stem, and are not interlined like other leaves.

Near the playground, to the left of the main East Drive, are some fine specimens of the magnolia acuminatata, or cucumber tree ; and magnolia tripetela, or umbrella magnolia.

Castanea vesca, or Spanish Chestnut.—The only one of this kind in the park is growing on the East Drive, near Battle Pass, and is noticeable in the Spring for its long, pendulous, light-green catkins. This tree is nearly two feet in diameter and thirty-five feet high.

On the bridle road leading from Nethermead arches to the farm house are some fine types of liriodendron tulipifera, or tulip tree. They are stately and interesting specimens, with straight stems of considerable height, and although a native tree are not very familiar to ordinary observers. Some of them are over four feet in diameter. These trees are covered in the early summer with beautiful blue flowers.

Opposite Music Island, near the pedestrian concourse, there is a fine grove of platanus occidentalis, the plane or button ball tree, of twenty years' growth, which furnish a pleasant shade in summer.

All the varieties of the cornus Florida, or American dogwood, which produces a large white flower, Fagus ferruginea, or American beech ; and the fraxinus, or American ash, succeed well on the park. All the European species of ash are subject to the borer, such as the fraxinus excelsa aurea, or golden barked ash ; fraxinus excelsa punctura, or blotch leaf ash ; fraxinus salixfolia, or willow-leaved ash ; the ornus fraxemifolia, or flowering ash, is a sweet morsel for the borer, which they bore from root to branch. A number of these trees may be found on South Lake drive.

In the neighborhood of battle pass, the Inglans nigra, or black walnut tree, is the only one left of a former group which occupied the high ground near valley grove road. Close by is the salix bablonica, which is also the only one remaining of a former group of weeping willows.

In the woods between battle pass and the dairy cottage may be found many fine specimens of betula lenta, or black birch, and the nyssa multiflora; pepperige, or black gum. The pepperige is a medium sized tree that grows in both wet and dry soils. The fibre of the wood is so interwoven that it is almost impossible to split it. It is held in some estimation for ornamental purposes, but is difficult to transplant unless often removed. It is grown from seed, which generally remain in the ground a year before vegetating.

In the vicinity of the play-ground to the left of the east drive, are to be found the sophora japonica, or Japan sophora; the sophora japonica pendula, or weeping sophora; much of it decays every year under the blighting influence of winter.

The cladrastis tincloria, or yellow wood; many fine specimens of which are growing in the park, and the kolrenteria paniculata, or Chinese kolrenteria; the foliage of which is very handsome. It produces a large quantity of seed in bladder-shaped capsules, which remain on the tree all winter.

Around the pool at the children's play ground there are many fine specimens of the aralia nudicaulis, or Hercules club, with a beautiful foliage. This tree bears a large quantity of seed, resembling that of the elderberry, the high-holders are particulary fond of these berries when ripe. The oleagenus augustifolia or oleaster; very fragrant when in bloom, and commonly known as the American olive, the oystrya Viriginica, or American hop horn beam, which does well on all parts of the park; the rhus cortinas, or smoke tree, a very pleasing and airy shrub; the rhus cappallina, or dwarf sumach, very beautiful in the autumn from the rich coloring of its foliage; and the tillia Europoea, or European silver linden; many fine specimens of which can be found on west drive east of three arch bridge. It also grows well in all parts of the park.

Ulmes latifolia Americana or American broad leaved elm. A most perfect type of this tree can be seen south of play ground near battle pass. It is about fifty feet high. This particular tree is known as the Nellie tree, from the fact that a beautiful young lady, known as Nellie, read for hours every

fine day under the shade of this tree. After the death of the young lady her friends caused a tablet to be nailed on her favorite tree with the simple inscription, "Nellie."

The present Park Commission caused three flower-beds of bright-foliaged plants to be made and planted around the tree with the name "Nellie" formed out of them in the centre, in memory of her love and affection for Prospect Park.

The large number and variety of evergreens in the park comprises one of its most interesting features.

Opposite quaker cemetery on the west drive, near the junction of the drive toward Look-out Hill, is a specimen particularly worthy of notice, the cedrus atlantica, or Atlantic cedar, the only one in the park. It is some fifteen feet high and of a beautiful form, with dark green foliage.

Larix Europoea, or European larch, is a native of France and Switzerland, and rises to the height of eighty or ninety feet, with a proportionate diameter.

Soudin devotes fifty pages of his "Arboritum" to this species alone. This larch appears to combine the qualities of rapidity of growth, symmetry of form, durability of wood and adaptability to a variety of uses. It grows from seed to about twenty or twenty-five feet in height in ten years, requires but very little pruning and seems to grow best on high ground. Our American larch seems equal in all respects to the European variety.

The buxus semperoirens, or box tree, is a native of the temperate climate of Europe and Asia, growing from twenty to twenty-five feet in height. The wood is yellow and very hard, is finely grained, and so heavy as to sink in water. It is used principally for wood engraving. It is a beautiful tree, and appears at its best in winter when the ground is covered with snow. Its foliage is most brilliant when partially shaded by other trees. The seed should be sown as soon as ripe in dry rich mold, and in a shady spot. It is more commonly grown from cuttings about five inches long, which readily root if put in a frame of sandy soil early in the Fall and transplanted in the Spring.

The leaf of the box is the only one that I know of that is double, the upper and lower surfaces not being connected except at the edge. There are a few fine specimens of these growing south-west of Cliftridge span bridge.

The dwarf box is generally used for edgings, and grows freely from cuttings some six or seven inches long, which require to be watered freely until rooted.

June is the best month in which to clip box edgings, for then it makes a new growth immediately; when cut later they show the withered shear marks until the new growth takes place.

Ilex opaca, the American Holly.—There are a few plants on the east mound now bearing fruit. In December, when the bushes are covered with snow, it is very pleasing to see the bright berries peeping through.

Taxus baccata, or English yew, a genus of tree of the natural order taxaceæ, which is generally regarded as a sub-order of confiræ, and is characterized by solitary and terminal fertile flowers, and with solitary ovule sessile in the centre of a fleshy disc, forming a sort of drupe when in fruit and by dicotyledonous seeds. The genus taxus is distinguished by a solitary terminal seed surrounded by a succulent cup. The species are diffused over the whole northern parts of the world, and are a large and beautiful evergreen with narrow lanceolated leaves.

The common taxus baccata is a tree that grows thirty feet high, and the trunk is sometimes of great thickness, branching a few feet above the ground and forming a large and dense head. It is a native of the middle and south of Europe and of Siberia, and noble specimens are to be seen in many parts of Britain. It attains the great age of from three to four hundred years. Bows are made of the wood, which is very hard.

The heart wood is of an orange color, and the fruit is red and was long supposed to be poisonous. The pulpy part is not. The seed, however, is a dangerous poison, and the leaves are a powerful narcotic. Although they are sometimes used as a vermifuge, their use is attended with danger. There are

many fine specimens of this tree distributed through the park. Near the main entrance and playground are many fine specimens of the pinus.

The pinus austriaca, or Austrian pine, are conspicuous for their lofty growth and fine form; pinus cembra, or stone pine; pinun excelsa, or lofty rhotan pine, with long deep foliage; pinus laricis, the Corsican pine, resembling the Austrian, but slower in growth.

The pinus sylvestries, or Scotch pine, is subject to mildew. Its growth is shaggy and burnt looking. The same may be said of the pinus strobus, or white pine in some locations, after a growth of some twenty years.

There are many fine abies or spruce, in this vicinity, particularly the abies danglasie, or Douglass spruce, which are very choice.

Nordmaniana picea amabilis; or silver fir; picea nobelis, or noble fir; picea cephalonica, or cephalonica fir; picea pectinata, and many others of fine growth can be found in the vicinity of rocky pass, and many other parts of the park.

At three arch bridge, near the road steps, there is a fine specimen of retinospora pisifera aurea, or golden retinospora, twenty feet in height; and cryptomeria lobia, or Japanese cedar.

The Cunninghamia sinensis, or Chinese pine, is a half hardy tree and requires a sheltered situation. Some fine specimens are in the vicinity of rocky pass.

Abies orientalis, eastern spruce, is a most desirable shrub. It thrives well in all parts of the park. It is of close, compact growth and is not subject to scald or decay, as some of the abies alba, or white spruce.

Climbing Plants.

Many hardy climbing plants may be seen in the vicinity of the dairy cottage.

The aristolochia sipho, commonly called Dutchman's pipe, is a very curious and conspicuous flower.

The Ampelopsis Virginaca, or Virginia Creeper.—Its leaves in autumn are a deep crimson; and ampelopsis vertchie, which comes from Japan, are very fine plants for covering, and may be seen to advantage growing on the dairy cottage building.

The bignonia radicans, or trumpet flower, is very showy and bears a bright orange flower early in summer.

The celastrus scandens, or American bitter sweet; bearing bright berries, brilliant orange color all the Fall, and resembling those of the fire bush. The wistaria japonica, or glycina, bearing white flowers. The wistaria sinensis, or Chinese blue flower; periploca graeca, or virgin silk; clematis virginica, or virgin's bower; kasinum, or jasmine, bearing white flowers; lonecera belgicum, or honeysuckle, striped monthly; and aurea reticulata, or golden leaf, are all in the same neighborhood.

The akebia quinata, with flowers of deep chocolate color; a fine specimen is growing under the weeping birch at road stop on west drive, near main entrance.

There are also many on the rustic shelter near the playground and dairy cottage arbors.

House Plants.

The Agave Americana, or American Aloe.—Two fine specimens of this plant have been presented to the Park Commissioners.

Their appearance would indicate an age of about thirty years.

The large leaves of the agave render it by no means adapted to the greenhouse, but as it only requires protection from frost, it may be kept in the cellar or potting shed, where there is but little light during the winter, and in summer may be set out on the lawn. It requires but very little water while in a state of repose, but a rich and loamy soil is necessary for its proper growth.

It was formerly supposed that it blossomed only once in a hundred years, but this is an error, as it sometimes produces

its flower in hot countries in from fifteen to fifty years, varying according to the climate and the care bestowed on the plant.

The flower stem is frequently thirty feet high, and the plant dies as soon as it has done flowering.

The aloe is a native of Mexico and other tropical parts of this continent.

Flowering Shrubs.

The collection of flowering shrubs on the park is of great variety and beauty, a few choice specimens of which are here enumerated.

The calycanthus floridus, or strawberry bush; a fine shrub, much admired for the sweetness of its flowers and wood, commonly known as alspice tree. There are many of them in the vicinity of the dairy cottage.

Forsythia fortunii, forsythia suspensa, and forsythia veridissama. These three fine shrubs grow splendidly, their bright yellow blossoms being about the first to show in the Spring.

The spirea reevie, spirea crutagofolia and spirea prumfolia, are very showy shrubs, bearing a profusion of white flowers, that keep in bloom until June and July. The spirea nana, is a dwarf shrub, and commences to bloom when most others are done flowering.

All the "syringea" are sweet flowering shrubs, notably the old fashioned mock orange and philadelpues, althea frutex, or rose of sharon, are very beautiful, particularly the pheasant eye, a fine double flower with a dark centre, which grow finely on the park.

The amygdalus pumila, or dwarf flowering almond, andromeda mariana, amelanchier bortryafurm, amorpha, fruticosa, or indigo shrub, berberis atrapurpurea, or berbery purple and chimonthus virginica, or white fringe, all grow well and bear flowers in profusion.

The deutzia fortunii, are beautiful white flowering shrubs; and the deutzia gracilis, when potted, bears forcing in the

green house, flowering at about Easter for florists, who then have ready sale for them.

The deutzia scabra, and cremata flora plena, double flowering, are showy and durable.

Enonymus Americana, or American Burning Bush.—Those on the park are subject to mildew and parasites after they attain the age of ten or fifteen years, and the European variety is subject to winter kill, except when sheltered.

Hydrangea dutgiafolia, is one of the best and most showy specimens of this class; hydrangea hortensis, which is changeable; hydrangea quercifolia, oak leaved; and canedensis, are all very hardy.

The hydrangea paniculata, a Japan variety, is very choice.

The lingustrum Europoea privet, and Lingustrum californica, are especially adapted for screening unsightly places and are almost evergreen, free bloomers but not fragrant.

Mahonia Fascicularis, cluster flowering mahonia aguifolia, berbery holly leaved, and japonica, are pleasing evergreen shrubs, and may be found in the vicinity of the children's playground and concert grove garden.

Pavia macrostachya, or dwarf horse chestnut; choice specimens of which can be seen back of thatched cottage along Ninth avenue.

Pysus japonica, Japan quince, rubra and alba, grow on all parts of the park and are among the first to show their flowers in Spring before the leaves form.

Prunus sinensis, or plum double flowering.—A fine specimen of this tree is in the vicinity of Litchfield mansion. Robenia hispida, rose shrubly acacia, thrive well on the park.

Tamarix galica, or French tamarix, very choice and showy, growing near arbor at children's playground. Viburnum oxycocus, or cranberry tree; lantana and opules, snowball or guelder rose, grow on many parts of the park and are very showy and inviting.

Weigelia rosea, or Chinese wergelia; weigelia amabilis, twice blooming variegated, and hortemsis rubra, or red flowering, all well grown and thrifty, in vicinity of the play ground

Symphoria racemosa, snow berry, and glomerata or Indian currant, are especially adapted to covering slopes for the purpose of preventing washes, by their thick growth and fibrous roots covering the ground.

Herbaceous paconies fragrans, a deep crimson flower and very sweet; l'oriflamme, a cherry red flower; reine des roses, a deep rosy lilac; variegated plemissama, a rose pink and very sweet scented.

Opposite Litchfield mansion there is a fine bed of whittligii, bearing white ventre light yellow clusters, and very fragrant.

Also, worked lindens, European and double horse chestnuts, paulonia imperialis, poplus alla, robina viccosa, flowering acacia and many others.

These, with many other varieties of trees and flowering shrubs and plants to be found upon the park, afford ample means and opportunity to those interested in dendrological study. Permits for such purposes are given by the superintendent to those who apply personally. Such permits are issued by the authority and liberality of the Park Commissioners to teachers of botanical classes and other responsible persons who have a taste for such studies. There is no finer field in this State for study.

The different varieties of trees and shrubs contained in the park, from not having received proper attention in past years, have entirely overgrown a large portion of its area. This overgrowth has necessitated an immense amount of trimming, pruning and removing. This original planting of the plantations was about three times as much as it should have been, the intention being gradually to cut away the inferior trees and shrubs, allowing the fittest to remain. This, however, was entirely neglected. The result is that by such close proximity, arising from overstocking, the trees have not reached a normal state of development. Last Winter, around the large lake, 750 two horse loads of this overgrowth were removed. This trimming and pruning of the park has been of necessity continued almost incessantly for the past eighteen months. And yet any one unfamiliar with the previous condition of the park, would never know that any extended pruning has been done.

Recently this pruning had been done along a line extending from Third street entrance to the plaza entrance, round the east side of the park on Flatbush avenue, reaching nearly to the Willinck entrance, and thence extending inward to the meadows. In some localities quite a number of the injured and over-stocked trees have been removed. This whole section of the park has been much improved in appearance thereby, and the trees will henceforth be developed far better than they formerly were. This pruning and trimming of the park will be continued until the whole surface is carefully gone over. Nearly all of the trees in the area referred to are plantations. In the native woodland there are a number of trees constantly decaying and dying, which will necessarily have to be removed. Forests of every clime bear a striking resemblance to communities in this respect. The strongest and apparently the healthiest trees die, like the men they typify, without any seeming cause. It is a sad thing to find large dead trees standing among living trees. The duty to be performed in felling them is not a pleasant one.

This trimming and pruning out of the trees of the park has been made necessary, for three reasons.

1st, The health of the trees; 2d, for the sake of beautifying the park, and 3d, to prevent immorality. Few persons are aware of the enormous undergrowth that springs up out of the rich soil all about the park, and which, if unchecked in its growth, would speedily destroy its lines of beauty and turn its loveliness into rank deformity.

Respectfully submitted,

JOHN T. HAMILTON,

General Superintendent.

Chief Clerk's Statement of Appropriations and Expenditures, 1887.

APPROPRIATIONS.

Appropriations, city	$200,000 00
Money drawn for team service, not used, and returned to the Comptroller	627 50
Appropriations, county	74,750 00
Balances from 1886	2,474 07
Total	$277,851 57

EXPENDITURES.

Labor, police and salary pay rolls city and county	$167,387 64
Cranford & Valentine on account contract	20,509 45
R. Kanters & Sons on account contract	4,828 43
Harris & McGuire on account contract	721 00
Supplies	33,781 03
Expenditures for 1885 and 1886 paid out of 1887's appropriation	29,303 01
Balance to the credit of Ocean Parkway carried to 1888	204 75
Balance to the credit of the different county accounts, carried to 1888	21,116 26
Total	$277,851 57

PAYMASTER'S STATEMENT.

Pay Rolls from January 1, 1887, *to December* 31, 1887, *inclusive.*

Number Pay Roll.	Date, Month. 1887.	Amount.	Police Attend'ts, &c.		Laborers $1.50 per day.		Skilled Laborers, from $2 to $4.50 per day.		Hired Teams.	Total.
			No.	Amount.	No.	Amount.	No.	Amount.		
Sup'y, 412	January 15	$5,785 49	81	$2,490 91	108	$1,249 95	68	$2,044 63	.....	$5,785 49
Reg., 413	" 31	5,233 73	80	2,535 95	54	853 50	70	1,844 28	.....	5,233 73
" 414	February 28	7,562 87	80	3,265 80	44	1,254 60	63	3 042 47	.....	7 562 87
" 415	March 31	9 348 97	69	3.519 12	100	1 896 15	65	3,721 20	$212 50	9,348 97
Sup'y, 416	April 15	785 38	.....	.....	55	651 90	6	133 48	.....	785 38
Reg., 417	April 30	13,274 64	69	4,150 03	147	3,063 60	104	5,265 81	795 20	13,274 64
Sup'y, 418	May 13	393 00	.....	.....	.....	.....	11	393 00	.....	393 00
" 419	" 14	721 35	.....	.....	16	272 55	14	347 00	101 80	721 35
Reg., 420	" 31	19,742 33	76	4,665 75	192	5,162 85	150	8,261 73	1,652 00	19,742 33
Sup'y, 421	June 18	1,414 78	.....	.....	70	575 78	22	496 50	342 50	1,414 78
Reg., 422	" 30	17,198 52	76	4,598 53	102	3,088 52	164	8,514 97	996 50	17,198 52
Sup'y, 423	July 11	185 00	.....	.....	.....	.....	8	185 00	.....	185 00
Reg , 424	" 31	12,124 05	74	4,163 50	44	1 227 76	124	6,381 29	351 50	12.124 05
Sup'y, 425	August 6	132 74	10	74 99	3	24 75	2	33 00	.....	132 74
Reg., 426	" 31	8,345 23	54	2,943 27	43	965 88	92	4,355 08	81 00	8,345 23
" 427	Septem 30	7,589 90	54	2,794 97	73	2,013 69	46	2,712 24	69 00	7,589 90
" 428	October 31	7,829 87	55	2,886 13	74	2,362 63	49	2,547 36	33 75	7,829 87
Sup'y, 429	November 15	263 67	.....	.....	15	206 27	2	57 40	.....	263 67
Reg , 430	" 30	6 438 96	52	2,585 25	60	1,516 15	45	2,286 56	51 00	6,438 96
Sup'y, 431	December 20	3 875 01	52	1 569 51	55	736 14	49	1,560 36	9 00	3,875 01
Reg. 432	" 31	2,626 66	53	938 28	53	690 75	49	997 63	.....	2,626 66
		$ 130,872 15		$43,181 99		$27,813 42		$55,180 99	$4,695 75	$130,872 15

HENRY EASTON, Paymaster.

Salaries, 1887.

January	$1,254 15
February	1,254 15
March	1,254 15
April	1,220 81
May	1,220 81
June	1,039 57
July	698 11
August	724 99
September	724 99
October	724 99
November	724 99
December	724 99
Total salary pay rolls	$11,566 70

Recapitulation—Services.

Total amount paid 1887, laborers	$27,813 42
Total amount paid 1887, police	43,181 99
Total amount paid 1887, skilled laborers	55,180 99
Total amount paid 1887, hired teams	4,695 75
Tatal amount paid 1887, salaries	11,566 70
Grand total, 1887	$142,438 85

CHAS. F. MOORE,

Chief Clerk.

PROSPECT PARK, Dec. 31, 1887.

TO JOHN T. HAMILTON, *General Superintendent.*

Statement of Bills paid by Brooklyn Park Commission, 1887.

Of Whom Purchased.	Description.	Number of Vouchers.	Amount.
E. R. Shipman	Provender	21	$1,524 97
W. B. Dayton & Son	House furnishing	20	103 39
P. H. Quinn	Coal	14	1,899 00
C. W. Keenan	Painters' supplies, &c.	33	499 81
Haggerty & Co	Oil and naphtha	15	597 49
Metropolitan Gas Light Co	Gas	12	441 73
Patterson Bros	Hardware	1	180 35
Danl. McCarthy	Harness	11	396 60
E. H. Heard	Professional services	3	121 35
John Harrison	Provender, &c	27	1,298 07
A. A. Smith, Secretary	Office expenses	5	116 87
Union Steam Print	Printing	2	403 80
Emma G. Dunn	Repairing flags	3	50 00
Citizens' Electric Illuminating Co	Electric light	12	5,312 25
Nicholas Langler	Iron, &c	36	679 17
Abraham Krone	Clothing for police	4	467 00
Charles E. Teale & Co	Clothing for police	1	487 75
Newcombe & Co	Hats for police	3	94 25
Victor Nobis	Nose bags, &c.	2	34 50
Goodyear Rubber Co.	Rubber goods	6	197 89
George Poole's Sons	Paints, oils, &c	18	536 18
W. Porter's Sons	Lamp wick, &c	5	16 18
Jerome B. Wass	Incidental expenses	5	57 74
Henry Werner	Lumber and timber	15	1,157 44
John Morton & Sons	Brick, cement, &c	5	516 60
H. R. Worthington & Co	Machinery	5	80 38
J. M. Thorburn & Co.	Gardeners' supplies	9	449 80
Oakley & Son	Carriage hire	3	97 00
Disosway & Henderson	Hardware	30	570 42
Oakley & Smith	Horses	2	1,775 00
South Brooklyn Saw Mill Co	Lumber and timber	6	649 92
W. Wall's Sons	Bunting and flags	3	222 27
J. G. Pollard	Steel sledges	3	42 13
L. Conterno	Music Park concerts	16	2,395 00
Baetjer & Meyerstein	Cement	2	127 00
C. & R. Pollion	Timber	4	54 00
Beers & Resseguie	Lumber and timber	5	881 25
N. Y. & N. J. Telephone	Telephone service	2	207 30
Wm. Berri's Sons	Carpets, &c.	1	65 26
J. J. Schillenger	Patent pavement	2	667 39
John Davis	Roofing	2	487 00
Ronalds & Co	Plumbing material	7	222 18
H. Easton, Paymaster	Office expenses	5	170 83
H. D. Stiles	Incidental	3	16 00
J. S. Clark	Naphtha	3	86 68
Henry Hawkes	Plumbing	2	1,225 48
Watson & Pittinger	Lumber and timber	2	841 29
M. A. McNamara	Incidental expense	3	28 12
Robert Ayers	Services	2	183 34
Thos. S. Tice	Shields and clock	2	35 00

Statement of Bills paid by Brooklyn Park Commission, 1887.—Concluded.

Of Whom Purchased.	Description.	Number of Vouchers.	Amount.
W. H. Douglas	Drugs	5	$28 25
Henry J. Green	Meteorologists' inst.	3	42 13
Brooklyn Lead Pipe Co	Plumbing	2	27 00
Charles F Woodruff	Special services	2	285 75
J. J. Loomis	Lumber and timber	2	107 25
J. G. L. Boettcher	Machinery	2	43 50
F. W. Wurster	Machinery	2	10 95
J. M. Bulwinkle	Stationery	2	48 05
A. D. Telegraph Co.	Messengers	2	8 95
Nathan Lanes Sons	Stationery	33	396 38
L. Brandies & Sons	Plumbing material	1	24 16
Josiah Partridge	Office furniture	1	61 65
Nat. Disinfectant Co	Disinfectant	1	25 00
Doane Wellington Co	Lamps, &c.	2	35 20
Paul C. Coffin	Hardware	1	22 03
Patrick Conway.	Special services	1	208 86
C. E. Sanford	Registers for police	2	162 76
F. Roos & Son	Flower pots	1	105 00
George G. Martin	Printing	1	100 03
Department City Works	Meter	1	47 90
W. Schwartzwaelder & Co	Office furniture	1	223 70
Timothy J. Dyson	Special services	1	50 00
Wechsler & Abraham	Awning and mats	2	171 25
Burns and Johnson	Stone	1	92 00
Alfred Wilkey	Repairing carriages	1	207 00
George T. Lyons	Special services	1	104 00
Wilson & Co	Cement pipe	1	113 36
A. D. Pratt	Flowers and seeds	1	246 00
Howell & Saxtan	Iron work	2	236 88
A. Lazansky	Glass, &c.	2	49 70
Jos. F. Johnson	Special services	1	175 00
Chas. Miley	Cartage	1	4 50
C. H. Shipman	Measurements	1	98 00
W. C. Vosburgh Co	Lamps, &c.	1	10 22
Brooklyn Improvement Co.	Dockage	1	20 00
Coney Island F. G. & L. Co.	Gas	12	739 15
Prospect Park and Coney Island Railroad	Railroad tickets	8	300 00
Sundry, miscellaneous	Account	30	378 56
Supplies			$33,781 03

To John T. Hamilton,
General Superintendent.

CHARLES F. MOORE,
Chief Clerk.

Annual Report of Police Force, 1887.

1 Captain.
1 Station officer.
5 Sergeants.
40 Patrolmen.

Distributed as follows:

PROSPECT PARK—1 station officer, 4 sergeants, 29 patrolmen.
WASHINGTON PARK—1 sergeant, 4 patrolmen.
CITY PARK—2 patrolmen.
TOMPKINS PARK—1 patrolman.
CARROLL PARK—1 patrolman.
EASTERN PARKWAY—1 patrolman.
OCEAN PARKWAY—1 patrolman.
CONEY ISLAND—1 patrolman.
Total force—47.

ACCIDENTS.

Carriages and sleighs	89
Saddle horses	9
Bicycles and tricycles	8
Sprained ankle	2
Fell on plaza	3
Fell in the lake	7
Fell in the picnic ground	4
Fell from wagon	2
Taken sick in park	15

ARRESTS.

Intoxication	57
Disorderly conduct	12
Violation of public decency	2
Attempt to rescue prisoner	1
Malicious mischief	8
Violation of park ordinances	36
Larceny	2
Ball playing	1

Vagrancy	7
Assault	1
Indecent exposure	2
Lounging	7
Ejected from park	27
Carrying concealed weapons	1
Suspicious persons	1
Reckless driving	5
Lost children	45
Suicides	3

PARADES.

May 26th. Brooklyn Sunday School Union Anniversary.

May 29th. Decoration of Lincoln Monument.

September 3d. Parade and review 13th Regiment, Major Ackerman Commanding.

October 12th. Parade and review 2d Brigade, General McLeer Commanding.

Visitors.

Month.	Carriages.	Equestrians	Pedestrians	Sleighs.	Total.
January	28,686	1,068	130,169	40,256	200,179
February	112,324	835	106,021	.....	219,180
March	197,213	1,873	93,211	.....	292,297
April	287,512	4,316	235,108	.....	526,936
May	377,493	5,928	350,820	.....	734,241
June	423,876	4,812	323,517	.....	752,205
July	390,514	3,946	272,145	.....	666,605
August	351,498	3,471	314,053	.....	669,022
September	418,516	4,528	271,694	.....	694,738
October	401,918	3,912	189,265	.....	595,095
November	340,125	2,715	80,206	.....	423,046
December	239,283	3,081	52,630	6,021	301,015
Total	3,568,958	40,485	2,418,839	46,277	6,074,559

Total number of visitors	6,074,559
" " on Sundays	1,807,666
" " on concert days	547,548
Largest number on one day	135,806

With an appropriation of sixty thousand dollars for the year 1888, I would suggest that the total of the force be increased to seventy-three men, this number including both the permanent and temporary forces, and would apportion the appropriation as follows:

1 captain	$1,647.00
6 sergeants	6,588.00
46 men from January to May 1st	11,926.88
66 men from May 1st to November 1st	26,023.14
46 men from November 1st to January 1st, 1889	6,005.30
	52,190.32
1 watchman in store yard	766.50
1 tailor repairing police clothing	782.00
1 janitor in mansion	638.75
5 women in shelters	1,830.00
Clothing	2,500.00
Horses	1,000.00
	59,707.57

Between the months of May and November I would recommend the following assignment of the force:

Prospect Park—1 captain, 1 station officer, 4 sergeants, 51 policemen.

Washington and City Parks—1 sergeant, 8 policemen.

Tompkins Park—2 policemen.

Carroll Park—1 policeman.

Eastern Parkway—1 policeman.

Ocean Parkway—1 policeman.

Concourse, C. I., 1 policeman.

East side lands—1 policeman.

Seven mounted men are included in the above, making a total of 73 men.

M. A. McNAMARA,
Captain.

To JOHN T. HAMILTON,
General Superintendent.

METEOROLOGICAL OBSERVATORY

— OF THE —

Brooklyn Park Commission

PROSPECT PARK, BROOKLYN.

Latitude 40° 41′ North, Longitude 73° 57′ West from Greenwich.

Height of Instruments above the Sea, 220 feet.

FOR THE YEAR 1887.

JANUARY, 1887.

DAY.	BAROMETER.			THERMOMETERS.						HYGROMETER.		WIND.	RAIN AND SNOW.		
	REDUCED TO FREEZING.			MEAN.		MAXIMUM.		MINIMUM.		FORCE OF VAPOR.	RELATIVE HUMIDITY.	VELOCITY IN MILES.	DEPTH IN INCHES.		
	Mean.	Maximum	Minimum	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Mean.	Mean.	Total.	Duration.	Water.	Snow.
	*			*	*					*	*				
1	29.590	29.688	29.553	30.67	29.67	37.00	35.00	22.50	21.00	.156	88.	383	.....	.....	.....
2	29.909	30.113	29.745	14.33	12.33	29.00	14.00	12.00	10.00	.054	64.	602	.....	.....	.....
3	30.450	30.572	30.349	10.67	8.83	25.00	11.00	5.50	6.00	.044	64.	411	.....	.....	.....
4	30.544	30.575	30.483	17.33	16.00	23.00	20.00	8.00	9.00	.077	79.	132	.....	.....	.....
5	30.175	30.326	30.059	29.67	29.33	34.50	32.50	20.00	23.50	.159	96.	207	.....	.....	.....
6	30.018	30.089	29.957	28.83	26.33	34.00	27.50	27.00	24.50	.113	72.	342	.....	.....	.....
7	30.299	30.345	30.186	21.67	19.00	32.00	22.00	18.00	15.00	.074	62.	249	.....	.....	.....
8	30.388	30.405	30.373	10.33	8.33	20.00	11.00	6.00	6.00	.041	58.	294	.....	.....	.....
9	30.158	30.348	29.930	15.83	15.33	29.00	16.50	11.00	11.00	.082	91.	182	.....	.....	.....
10	29.679	29.779	29.602	20.67	18.67	25.00	21.00	16.50	15.00	.079	71.	336	.....	.....	.....
11	29.937	29.965	29.884	15.50	14.67	22.00	17.50	10.00	11.00	.074	86.	386	.....	.....	.....
12	29.717	29.795	29.665	29.33	28.67	35.00	33.50	19.00	20.50	.151	93.	212	.....	.....	.....
13	30.060	30.076	30.050	33.00	31.33	38.00	36.50	26.00	26.50	.154	83.	181	.....	.....	.....
14	29.630	29.699	29.548	34.50	34.50	40.00	36.50	32.00	33.00	.199	100.	206	.....	.....	.....
15	29.705	29.834	29.633	31.00	29.83	38.00	32.50	26.00	25.00	.152	87.	208	.....	.....	.....
16	29.695	29.973	29.953	29.50	28.17	34.00	31.00	24.00	23.00	.139	85.	209	.....	.....	.....
17	29.501	29.620	29.410	35.83	34.17	40.00	38.00	30.00	28.00	.179	85.	214	.....	.....	.....
18	29.838	30.081	29.648	17.17	13.67	32.50	21.00	7.50	4.00	.045	41.	446	.....	.....	.....
19	30.067	30.179	30.009	18.00	15.67	25.00	23.00	4.00	7.00	.070	66.	350	.....	.....	.....
20	29.870	30.032	29.756	31.67	29.17	36.00	32.00	21.00	23.50	.130	74.	160	.....	.....	.....
21	30.155	30.364	29.924	39.33	34.33	48.50	38.00	30.00	28.50	.141	59.	299	.....	.....	.....
22	30.314	30.420	30.193	32.67	31.50	47.50	36.50	26.00	26.00	.168	87.	90	.....	.....	.....
23	30.012	30.111	29.914	48.33	46.00	62.50	56.00	33.00	39.00	.291	85.	153	.....	.....	.....
24	29.591	29.727	29.460	41.00	39.00	53.00	49.00	33.50	31.00	.223	81.	407	.....	.....	.....
25	29.956	30.094	29.857	36.50	33.50	42.50	38.50	28.50	26.00	.156	72.	335	.....	.....	.....
26	29.923	30.132	29.815	32.00	30.00	46.00	38.00	20.00	18.00	.150	79.	280	.....	.....	.....
27	30.492	30.537	30.445	18.50	17.33	26.00	22.00	9.00	9.00	.086	82.	254	.....	.....	.....
28	30.281	30.455	30.129	40.50	38.83	48.00	43.00	23.50	31.00	.218	89.	258	.....	.....	.....
29	29.893	29.948	29.835	42.17	41.50	52.00	44.00	36.50	36.50	.254	94.	295	.....	.....	.....
30	29.802	29.879	29.757	37.67	37.33	40.00	38.50	34.00	35.00	.219	97.	101	.....	.....	.....
31	30.079	30.106	30.052	33.50	29.17	36.50	31.00	29.50	27.00	.111	58.	263	.....	.....	.....
													H. M.	INCHES.	INCHES.
Mean	29.998	30.575	29.410	28.31	26.52	62.50	56.00	20.95	20.95	.135	78.	8,455	102.20	3.75	6.75

* Readings at 7 A. M., 2 and 9 P. M. Fall of rain for the month, 3.75 inches. Fall of snow for the month, 6.75 inches.

FEBRUARY, 1887.

DAY.	BAROMETER. REDUCED TO FREEZING.			THERMOMETERS. MEAN.		MAXIMUM.		MINIMUM.		HYGROMETER. FORCE OF VAPOR.	HYGROMETER. RELATIVE HUMIDITY.	WIND. VELOCITY IN MILES.	RAIN AND SNOW. DEPTH IN INCHES.		
	Mean.	Maximum	Minimum	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Mean.	Mean.	Total	Duration.	Water.	Snow.
	*			*						*	*				
1	30.454	30 601	30.269	24 00	22 17	30.00	23.00	21.00	21.00	.099	76.	271	.....	.....	.....
2	30.468	30 551	30.399	22.00	22.00	25.00	24 00	18.00	20.00	.118	100.	368	.....	.. ....	.....
3	30.195	30 312	30.100	28.17	28.17	32.50	32.00	23.00	23.50	.155	100.	185	.....	.....	.....
4	30 524	30.704	30 372	27.00	23.67	37.50	26.00	22.00	20.00	.090	61.	306	.....	.....	.....
5	30.830	30.877	30 776	23.17	18.83	27.00	22.50	14.00	14.00	.092	85.	164	.....	.....	.....
6	30 364	30.536	30 250	32.83	32.50	37 00	35 50	22.50	27.50	.179	97.	146	.....	.....	.....
7	30.333	30.377	30.283	31 83	31.33	40.00	35.00	30.00	29.00	.171	95.	219	.....	.....	.....
8	30.076	30.286	29 885	34.50	34 50	39.00	38.00	28.50	32.00	.200	100.	150	.....	.....	.....
9	30.157	30.282	30 039	38.33	33.17	45.00	35.00	35 00	31.00	.124	54.	377	.....	.....	.....
10	30.074	30 299	29.837	38.17	35.50	45 00	38 50	30.00	29.50	173	76.	171	.....	... .	.....
11	29.365	29.530	29.186	54.67	49.00	63.50	56.00	49.00	40.00	.282	64.	405	... .	.....	.....
12	30.234	30.356	30.113	23 00	19.67	49.00	21 00	18 50	17 50	.067	56.	596	.....	.....	.....
13	30.664	30 753	30.582	18 33	15.67	26 50	18.50	13.00	11.50	.058	58.	411	.....	.....	.....
14	30.694	30 822	30.556	25.33	23.67	32.50	31.00	14.50	14.00	.113	78.	164	.....	.....	.....
15	30.052	30 178	29 944	41.00	40.67	43.50	41.00	32 50	40.00	.250	97.	244	.....	.....	.....
16	29.849	29.898	29.824	40.50	38.33	46.50	40.50	36 00	37.00	.202	82.	188	.....	.....	.....
17	30.000	30 084	29.943	39 50	34.33	45.00	36.50	34 50	33.00	.129	55.	220	.....	.....	.....
18	29.739	29 962	29.548	42.33	41.67	53.00	52.00	31.50	32.00	.267	93.	314	.....	.. ....	.....
19	29.865	29.991	29.763	45 33	40.00	53.00	43.00	40.00	39.00	.206	62.	280	.....	.....	.....
20	30.191	30.216	30.170	31.67	29.00	48.50	31.00	28.00	28.00	.130	74.	228	.....	.....	.....
21	30.576	30.427	30.311	31 33	30.17	35.50	32.00	27.00	26.50	.153	87.	140	.....	.....	.....
22	30 298	30.343	30.233	36.83	34 67	43.00	38 50	31 00	31.50	.172	80.	202	.....	.....	.....
23	30.417	30.429	30.316	33.00	29.83	40 00	32.50	29 00	27.00	.128	69.	231	.....	.....	.....
24	29.741	29.917	29.641	40 33	36.67	49.00	40.00	33.00	30.00	.175	69.	423	.....	.....	.....
25	30.363	30.450	30 264	23 83	20.50	39.00	22 50	19.00	17.00	.073	57.	495	.....	.....	.....
26	29.973	30 399	29.526	29.17	27 50	35 00	33.00	21.50	19.50	.146	86.	262	.....	.....	.....
27	29.547	29 688	29.468	30.00	26.33	39.50	29.00	23.50	21.00	.102	61.	597	.....	.....	.....
28	29.996	30 110	29.902	20 33	17.50	39.50	19.50	17.00	16.00	.063	59.	694	.....	.....	.....
													H, M.	INCHES.	INCHES.
Mean	30.173	30.302	30 053	32.37	29 71	40.69	33.11	26.51	26.00	.151	76.	8,451	146.20	5.20	8.75

* Readings at 7 A. M., 2 and 9 P. M Fall of rain for the month, 5.20 inches. Fall of snow for the month, 8.75 inches.

MARCH, 1887.

DAY.	BAROMETER.			THERMOMETERS.						HYGROMETER		WIND.	RAIN AND SNOW.		
	REDUCED TO FREEZING.			MEAN.		MAXIMUM.		MINIMUM		FORCE OF VAPOR.	RELATIVE HUMIDITY	VELOCITY IN MILES.	DEPTH IN INCHES.		
	Mean.	Maximum	Minimum	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Mean.	Mean.	Total.	Duration.	Water.	Snow.
	*			*						*	*				
1	30.072	30.101	30.052	22.33	22 00	26 50	23.00	19.00	21.00	.114	96.	101			
2	29.904	30 045	29.822	35 67	34 17	44.00	39.50	23.50	26.00	.181	87.	97			
3	30.228	30.319	30.112	32 17	29.17	44 50	32 00	30 00	27 00	.125	69.	256			
4	30.427	30.521	30.368	29.83	26 67	33.00	29.00	28.00	25 00	.109	66.	171			
5	30.659	30 736	30.533	24.67	23.17	36.00	29 00	19.00	19.00	.112	80.	244			
6	30.128	30.245	30.056	31.50	31 50	33.00	32.00	29.00	31.00	.276	100.	187			
7	30 039	30.052	30.015	33 83	33.83	39.00	36.50	30 00	32 00	.194	100.	55			
8	30.287	30.343	30.227	39.33	32.67	45.50	34.00	31 00	30.00	.104	47.	255			
9	30.206	30.324	30.063	36.50	33 50	43.00	37.00	30.00	27.50	.156	71.	154			
10	29 8 3	29.911	29.748	38.17	35 33	45.50	40 00	33 00	29.00	.174	75.	360			
11	29.927	29.940	29.901	27.00	24 00	37.00	28 00	21.00	21.50	.094	64.	636			
12	29.916	29.967	29.871	33.17	28 67	42.50	33.00	22 00	22 00	.105	57.	548			
13	29.838	29 958	29 739	37 83	34.33	46.00	39.00	31.00	29 00	.157	69.	235			
14	29.631	29.685	29.588	35.50	31.33	46.00	38 00	24.00	21 00	.130	59.	348			
15	29.612	29.649	29.581	22 67	19 50	31.00	24 00	14.00	13 50	.071	60.	680			
16	29.493	29 550	29.450	25.83	22 50	33.00	25 50	22 00	20 50	.081	59.	484			
17	29.401	29.422	29.380	29.50	25.83	37.00	30 00	23.00	23.00	.104	62.	461			
18	29.405	29.456	29 367	33.00	29 83	41.00	34 00	23.00	24.50	.128	68.	481			
19	29 636	29.728	29.581	37.50	32 50	44.00	36.50	32 00	30.00	.124	56.	461			
20	29 932	29.996	29.884	39 50	34 50	45.00	36.00	33.00	31 50	.136	57.	277			
21	29.928	30.003	29.834	40 33	36 50	48.00	39 00	34.00	33.50	.166	67.	164			
22	29.311	29.438	29.191	35.17	33.50	45 50	35.50	32.00	30.00	.172	84.	535			
23	29.691	29.793	29 616	30.33	24.83	39.00	25.50	27 00	24.00	.070	43.	631			
24	29.770	29 895	29.612	38.00	34.00	46.00	37 00	25.00	28 00	.148	52.	250			
25	29.762	29 924	29.571	40 67	33.33	45.00	36.50	35 00	30 00	.097	39.	401			
26	30.192	30.302	30.112	32.50	27.00	39.00	30 50	29 00	25 00	.083	46.	290			
27	30 321	30.440	30.177	30.33	27.83	35.00	32.00	23.00	20.50	.125	71.	238			
28	29.580	29 665	29.531	41.50	39 33	49.50	45 00	31.50	29.00	.223	81	285			
29	29.677	29.842	29.559	25.50	21.17	38 00	23.00	21.00	19 00	.064	46.	695			
30	30.100	30.156	30.068	28.50	23.33	35 00	27 00	17.00	18 00	068	44.	581			
31	30.267	30 302	30.232	31 83	28 83	37.00	32.00	24.00	24.50	.123	68.	180			
													H. M.	INCHES.	INCHES
Mean	29.908	29.991	29.833	32 91	29.53	40.30	32.87	26 32	25.34	.129	66.	10,741	73.40	3.69	1.50

Readings at 7 A. M., 2 and 9 P. M. Fall of rain for the month, 3.69 inches. Fall of snow for the month, 1.53 inches.

APRIL, 1887.

DAY.	BAROMETER. REDUCED TO FREEZING.			THERMOMETERS. MEAN.		MAXIMUM.		MINIMUM.		HYGROMETER. FORCE OF VAPOR.	HYGROMETER. RELATIVE HUMIDITY.	WIND. VELOCITY IN MILES.	RAIN AND SNOW. DEPTH IN INCHES.		
	Mean.	Maximum	Minimum	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Mean.	Mean.	Total.	Duration.	Water.	Snow.
	*			*						*	*				
1	30.079	30 129	30.022	31.50	30.83	36.00	32.00	27 00	27.00	.164	93.	330	.....	.....	.....
2	29.730	29 808	29 650	34.50	31 17	40 00	33.00	29.00	30.00	.135	71.	458	.....	.....	.....
3	29.982	29.996	29.972	46 00	39.83	58.00	44.50	34 00	33 00	.168	33.	333	.....	.....	.....
4	29 764	29.908	29.664	53.33	48 00	66 00	53 50	39 00	41.00	.266	66	189	.....	.....	.....
5	29 895	30.016	29.827	38.67	33 83	59 00	39.00	29.50	28.00	.134	58.	426	.....	.....	.....
6	30.240	30.293	30.206	34.67	29.17	39.00	31.00	24 00	25.00	.095	51.	516	.....	.....	.....
7	30.446	30.485	30.424	41.67	35 17	49 00	37.50	32.00	33.00	.259	47.	203	.....	.....	.....
8	30.596	30.652	30.534	40.17	35 67	47.50	40.00	32 00	31.00	155	62.	184	.....	.....	.....
9	30.370	30.489	30 296	52 50	45.33	63 00	51.00	37 00	37.00	.216	54.	256	.....	.....	.....
10	30.046	30.076	30.019	66.00	55 17	79.00	60.50	48.00	46.00	.303	46.	246	.....	.....	.....
11	30.014	30.079	29.942	66.83	55 67	79.00	63.00	56 50	51 00	.303	48.	279	.....	.....	.....
12	30.289	30 296	30.282	47.50	41.17	68.00	44 00	43 00	38.50	.176	55.	219	.....	.....	.....
13	30 341	30.351	30.327	41.56	36.50	45.00	37.00	40.00	35 50	.150	57.	155	.....	.....	.....
14	30.256	30.320	30.211	45.53	38 00	50.00	41.00	34.50	33.50	.133	44.	126	.....	.....	.....
15	29.982	30.092	29.854	44.33	39.67	50.00	42.00	42.00	35.00	.185	63.	116	.....	.....	.....
16	29.631	29.707	29.565	46 17	43.33	56.00	47.50	38.00	39 50	.244	80.	256	.....	.....	.....
17	29.872	29.885	29.846	44.00	37 50	50.00	39.00	36 00	35 00	.136	49.	347	.....	.....	.....
18	29.684	29.880	29.552	32 50	31.17	52 00	32.00	29.00	30.00	.157	86	256	.....	.....	.....
19	29.888	30 004	29.762	38.00	34.17	45.00	36.50	28.00	31 00	.147	67.	242	.....	.....	.....
20	30.089	30.136	30.063	45 50	39.17	54 00	43.50	34.00	35 00	.157	53.	174	.....	.....	.....
21	30.115	30.134	30.102	52 67	44.50	63.00	48.00	39.00	42.50	.286	48	148	.....	.....	.....
22	30.125	30.192	30.069	54.83	47 17	66.50	52.00	45 00	44.50	.224	52.	227	.....	.....	.....
23	29.806	29.920	29.719	48.17	48.17	55.00	49.00	45.00	46.50	.336	100.	208	.....	.....	.....
24	29.874	29.913	29.849	53.83	46.50	63.00	50.00	47.50	44.50	.220	53	262	.....	.....	.....
25	29.962	30.059	29.844	48.33	43.67	55.00	45.00	43 00	42 00	.223	67.	177	.....	.....	.....
26	29.866	29.953	29.787	49.00	45.00	59.00	49.50	40.00	40.00	.246	72.	244	.....	.....	.....
27	29.918	29.973	29 882	54.50	48.83	64.00	53.50	45.00	44.00	.272	65.	167	.....	.....	.....
28	29.589	29.862	29 304	49.33	49.00	59.00	50.00	47.00	48.00	.344	98.	193	.....	.....	.....
29	29.216	29.248	29.187	54.00	47.83	60.00	51.50	46.00	41.00	.254	60.	357	.....	.....	.....
30	29.530	29.680	29.370	50.67	43.67	57.00	44.50	42.00	42.50	.190	52.	562	.....	.....	.....
													H. M.	INCHES.	INCHES.
Mean	29.973	30.041	29.911	46.87	42.35	56.60	44.70	39 07	37.70	.210	62	7,856	120.25	3.12	4.00

* Readings at 7 A. M., 2 and 9 P. M. Fall of rain for the month, 3.12 inches. Fall of snow for the month, 4 inches.

MAY, 1887.

DAY.	BAROMETER.			THERMOMETERS.						HYGROMETER.		WIND.	RAIN AND SNOW.		
	REDUCED TO FREEZING.			MEAN.		MAXIMUM.		MINIMUM.		FORCE OF VAPOR.	RELATIVE HUMIDITY.	VELOCITY IN MILES.	DEPTH IN INCHES.		
	Mean.	Maximum	Minimum	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Mean.	Mean.	Total.	Duration.	Water.	Snow.
	*			*						*	*				
1	29.979	30.023	29.954	59.33	49.33	69.50	53.00	46.00	43.00	.324	45.	258	.....	.....	.....
2	30.235	30.274	30.203	60.33	53.83	68.00	56.50	53.00	49.00	.330	63.	180	.....	.....	.....
3	30.232	30.283	30.182	54.83	53.50	61.00	56.00	49.00	50.50	.379	92.	160	.....	.....	.....
4	30.048	30.126	30.203	68 33	61.00	79.50	68.00	51.00	55.00	.447	72.	74	.....	.....	.....
5	30.040	30.064	30.016	60.00	51.33	72.00	54.00	55.00	49.00	.265	53.	169	.....	.....	.....
6	30.107	30.147	30.081	56.17	52.17	62.00	54 00	50.00	50.50	.336	75.	237	.....	.....	.....
7	30.196	30.204	30.183	53.33	55.00	59.00	59.00	48.00	50.00	.432	98.	220	.....	.....	.....
8	30.167	30.186	30.147	54.83	54.67	62.00	56.50	49.00	51.50	.356	99.	173	.....	.....	.....
9	30.174	30.189	30.160	60.67	59.00	72.00	65.00	54.00	55.00	.480	92.	117	.....	.....	.....
10	30.221	30.276	30.153	58.00	55.67	69.50	61.00	46.00	52.00	.416	87.	130	.....	.....	.....
11	30.052	30.093	30.023	72.17	61.50	82.00	62 00	56.00	60.50	.402	54.	151	.....	.....	.....
12	29.991	30.056	29.949	69.67	54.17	79.00	56.50	43.00	52.00	.358	41.	220	.....	.....	.....
13	30.046	30.110	30.011	60 00	48.00	69.00	50.00	51.00	46.00	.178	37.	221	.....	.....	.....
14	30.285	30.303	30.270	58.50	50.17	68.00	53.00	48.00	46 50	.253	53.	127	.....	.....	.....
15	30.247	30.292	30.210	60.50	52.67	69.00	54.00	50.00	51 00	.294	61.	137	.....	.....	.....
16	30.115	30.176	30.066	59.67	51.83	68.00	55.00	47.00	47.50	.283	57.	104	.....	.....	.....
17	29.931	29.986	29.893	62 00	54.83	71.50	57.00	52.00	53.50	.334	62.	104	.....	.....	.....
18	29.847	29.866	29.828	60.67	57.17	69.50	60.00	54.00	55.50	.420	81.	108	.....	.....	.....
19	29.979	30.203	29.962	67.83	60.67	79.00	63.00	54.00	59.00	.436	67.	113	.....	.....	.....
20	30.087	30.097	30.076	73.33	64.50	85.50	70.00	63.00	60.50	.491	61.	140	.....	.....	.....
21	30.144	30.150	30.139	73.17	66.83	85.00	72.50	64.00	61.00	.577	71.	173	.....	.....	.....
22	30.162	30.192	30.119	63.33	61.00	73.50	67.00	56.00	56.00	.512	88.	135	.....	.....	.....
23	30 031	30.119	29.953	68.33	64.00	77.00	66.50	60.00	62.50	.534	78.	196	.....	.....	.....
24	29.841	29.912	29.771	65 33	64.17	74.50	67.00	61.50	62.00	.583	94.	235	.....	.....	.....
25	29 680	29.704	29.662	70.50	66 50	79 50	71.00	61.00	63.50	.597	81.	165	.....	.....	.....
26	29.606	29.628	29.591	68.17	63.67	79.00	67.50	64.00	60.00	.528	76.	159	.....	.....	.....
27	29.618	29.634	29.608	66.33	60.33	73 50	64.00	56.00	56.00	.447	69.	169	.....	.....	.....
28	29.716	29.760	29.650	55.83	54.83	64.00	56.00	53.00	53.00	.421	94.	133	.....	.....	.....
29	29.864	29.899	29.824	56.83	54 50	63.00	56.50	49.50	51 00	.365	86.	119	.....	.....	.....
30	30.071	30.136	30.002	60 67	58.17	68.00	61.00	54.00	56 00	.462	86.	147	.....	.....	.....
31	30.211	30.240	30.184	56.17	54.33	63.00	55.50	52.00	52.00	.362	88.	258	.....	.....	.....
													H. M.	INCHES.	
Mean	30.030	30.075	30.002	62.47	57.07	71.45	60.25	53.37	53.88	.406	73.	5,032	17.40	.74	.....

* Readings at 7 A. M., 2 and 9 P. M. Fall of rain for the month, .74 inches

JUNE, 1887.

DAY.	BAROMETER.			THERMOMETERS.						HYGROMETER.		WIND.	RAIN AND SNOW.		
	REDUCED TO FREEZING.			MEAN.		MAXIMUM		MINIMUM.		FORCE OF VAPOR.	RELATIVE HUMIDITY.	VELOCITY IN MILES.	DEPTH IN INCHES.		
	Mean.	Maximum	Minimum	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Mean.	Mean.	Total.	Duration.	Water.	Snow.
	*			*						*	*				
1	30.025	30.032	30.013	66.33	65.33	70.00	67.00	50.00	62.00	.613	95.	293	.....	.....	.....
2	29.877	29.966	29.807	64.83	63.67	72.00	66.00	50.00	62.00	.575	94.	156	.....	.....	.....
3	29.765	29.773	29.757	67 50	60.83	74.50	61.00	59.00	60.50	.442	67.	282	.....	.....	.....
4	29.931	30.062	29.844	66.33	60.67	78.50	65.50	58.00	56.50	.454	72.	242	.....	.....	.....
5	30.213	30.246	30.170	58.33	53 83	64.00	55 50	55.00	53.00	.369	74.	137	.....	.....	.....
6	30.201	30.239	30.146	60.50	56.17	68 50	59.50	54.00	52.00	.415	76.	86	.....	.....	.....
7	30 071	30.096	30.032	62 67	60.83	68.00	63.00	57.00	59.00	.528	90.	73	.....	.....	.....
8	29.866	29.934	29 786	66.17	64.33	73.50	66.00	60.00	61.00	.580	90.	102	.....	.....	.....
9	29.693	29.732	29 650	73.50	69.83	85.00	74.00	64.00	66.00	.680	84.	148	.....	.....	.....
10	30.008	30.125	29.877	63.00	59 50	69.00	61.00	56.00	57.00	.461	81.	230	.....	.....	.....
11	30.259	30.305	30.227	64.00	59.50	68.00	62.00	51.00	55.50	.449	76.	221	.....	.....	.....
12	29.947	30.003	29.878	64.00	58.50	73.00	62.50	52.00	56 00	.418	70.	127	.....	.....	.....
13	29.753	29.828	29.687	74.33	64.50	83.00	69.50	53.00	59.00	.491	60.	133	.....	.....	.....
14	29.844	29.941	29.746	67.67	64.50	77.00	69.00	58.00	56.00	.572	84.	218	.....	.....	.....
15	29.958	29.988	29.911	61.17	57.50	68.00	60.00	53.00	55.00	.448	80.	136	.....	.....	.....
16	29.723	29.929	29.568	70.67	66.00	81.00	71.00	55.00	56.00	.592	78.	177	.....	.....	.....
17	29.484	29.522	29.450	76.50	71.50	89.00	74.00	68.00	69.00	.702	79.	178	.....	.....	.....
18	29.479	29.483	29.455	67.33	63.00	72.00	66.00	62.00	60.00	.520	78	145	.....	.....	.....
19	29.670	29.433	29.433	68 00	65.35	77.50	68.50	66.00	63.00	.575	83.	131	.....	.....	.....
20	29 677	29.705	29.629	71 12	69.00	84.00	77.00	63.00	60.00	.710	88.	133	.....	.....	.....
21	29.467	29.713	29 598	71.10	69.50	79 00	74.00	65.50	67.00	.097	88.	157	.....	.....	.....
22	29.467	29.571	29.387	71.50	70 25	81 50	75 00	67.00	68.00	.623	88.	155	.....	.....	.....
23	29.485	29.581	29.335	66.66	64.00	68.00	65 00	65.00	63.00	.555	85.	145	.....	.....	.....
24	29.629	29.647	29 607	69.75	68.00	78 00	75.00	68.00	64.00	.609	88.	109	.....	.....	.....
25	29.866	29.973	29 678	67.50	64.00	72.00	66.00	63.00	62.00	.553	79.	130	.....	.....	.....
26	29.971	29 924	29.968	66.50	65.00	70.00	68.00	62.50	63.00	.602	93.	128	.....	.....	.....
27	30.058	30.070	30.035	68.50	65.00	73.00	68.00	69.00	63.00	.568	78.	121	.....	.....	.....
28	30.030	30.041	30.002	77.00	70 00	79.00	74.00	63.00	68 00	.668	78	137	.....	.....	.....
29	29.985	30.001	29 952	79.00	73.00	84.00	79 00	63.00	69 00	.753	84.	200	.....	.....	.....
30	29.960	30.026	29.903	80.66	76.00	88.00	82.00	70.00	72.00	.811	77.	174	.....	.....	.....
													H. M.	INCHES.	
Mean	29.795	29.892	29.456	68.37	64.64	72.26	68 13	60.00	61.42	.568	81.	4,767	101.55	5.34	.....

* Readings at 7 A. M., 2 and 9 P. M. Fall of rain for the month, 5.34 inches.

JULY, 1887.

DAY.	BAROMETER.			THERMOMETERS.						HYGROMETER.		WIND.	RAIN AND SNOW.		
	REDUCED TO FREEZING.			MEAN.		MAXIMUM.		MINIMUM.		FORCE OF VAPOR.	RELATIVE HUMIDITY.	VELOCITY IN MILES.	DEPTH IN INCHES.		
	Mean.	Maximum	Minimum	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Mean.	Mean.	Total.	Duration.	Water	Snow.
	*			*						*	*				
1	29 876	29.899	29.843	80 00	77.00	88 00	83 00	70.00	72.00	.854	82.	180			
2	29 823	29.852	29.799	80.00	76.00	88 00	82 00	69 00	73.00	.875	83.	173			
3	29 859	29.876	29 845	78 00	75.00	86 50	82.00	74 00	71 00	.816	84.	170			
4	29 847	29 937	29 686	76 00	74.00	83 00	80.00	71.00	70.00	.813	91.	206			
5	29 830	29.879	29 744	73 00	71.00	77.00	74 00	69 00	68 00	.753	90.	229			
6	29.453	29.746	28 874	72.00	70 00	76.00	72.00	70 00	68.00	.678	85.	143			
7	29.682	29 754	29.607	77 00	75 00	84.00	81.00	70 50	70.00	.814	84.	151			
8	29.617	29 634	29.588	80.00	74 00	88.00	82.00	70.00	70 00	.716	71.	135			
9	29 526	29.549	29.482	77 00	73.00	81.00	79.00	70.00	71.00	.733	78.	142			
10	29.463	29.466	29.404	74 00	68.00	80 00	72.00	67.00	62 00	.595	69.	276			
11	29 608	29.679	29 502	72 00	64.00	78.00	66.00	66 00	62.00	.479	58.	368			
12	29.734	29.737	29 729	75.00	67.25	86 00	71.00	66.00	64.00	.578	64.	166			
13	29 711	29.731	29 674	80.75	71.25	91 50	72.00	71.00	70 00	.598	55.	169			
14	29.783	29 819	29 729	79 50	66.88	86 00	70 00	73.50	62.50	.473	46.	213			
15	29.525	29.853	28 934	73.13	63.50	83.00	68.00	68.00	60.00	.431	52.	130			
16	29 665	29.711	29 632	77.50	71.50	92.50	78 00	66 00	67.00	.697	69.	122			
17	29 639	29.713	29.582	79.00	74.50	93.00	75.00	66.00	74.00	.770	77.	171			
18	29.608	29 650	29.577	78.00	72 50	85.50	76.00	70.00	70.00	.702	71.	192			
19	29 826	29 866	29 762	70 00	66.50	78 00	68 00	66 00	66.00	.588	79.	142			
20	30 055	30 382	29.885	68.75	65.75	78.00	70.00	67.00	64.00	.587	80.	144			
21	29.784	29.837	29.710	71.50	68.62	75 00	70 50	66.50	67 00	.636	83.	156			
22	29.617	29.626	29.605	74.50	73 50	80 00	75 00	71.00	72 50	.717	82.	175			
23	29.733	29.837	29.617	74 25	72.75	92.00	75.00	72.00	71.00	.797	92.	166			
24	29.901	29.920	29.865	72.75	72.75	79.00	74.00	71 00	72 00	.811	100.	112			
25	29.852	29.873	29.817	75.75	74.25	83.00	77.00	73 00	72.00	.781	91.	153			
26	29.765	29.777	29.754	77.50	74.38	85.00	77.00	71.00	73 00	.796	86.	80			
27	29.772	29.831	29.727	75.75	73.75	85.00	77.00	72.00	72.50	.790	86.	100			
28	29 714	29.724	29.701	75.27	72.60	84 00	73 00	71.50	72.50	.753	85.	102			
29	29.752	29.791	29.717	76.75	74.50	86 50	78 00	73 00	72.00	.809	85.	126			
30	29.806	29 847	29.739	78.25	74.50	86.00	79.00	71.00	71.50	.835	84.	121			
31	29.706	29.740	29.674	77.75	75.25	89.00	77.00	75.00	72.00	.819	83.	170			
													H. M.	INCHES.	
Mean	29.727	29.733	29.639	75.83	69 48	83.79	75.27	69.90	69.11	.714	78.	5083	87.20	7.47	

* Readings at 7 A. M., 2 and 9 P. M. Fall of rain for the month, 7.47 inches.

AUGUST, 1887.

DAY.	BAROMETER.			THERMOMETERS.						HYGROMETER.		WIND.	RAIN AND SNOW.		
	REDUCED TO FREEZING.			MEAN.		MAXIMUM.		MINIMUM.		FORCE OF VAPOR.	RELATIVE HUMIDITY.	VELOCITY IN MILES.	DEPTH IN INCHES.		
	Mean.	Maximum	Minimum	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Mean.	Mean.	Total.	Duration.	Water.	Snow.
	*			*						*	*				
1	29.686	29 733	29.649	79.00	76.00	88.00	79.00	72.00	73.00	.837	85.	71	.....	.....	.....
2	29 608	29.727	29.423	77.00	75.00	86.00	78.00	71.00	71.00	.821	90.	70	.....	.....	.....
3	29.804	29.857	29.757	79.00	72.00	82.00	75.00	67.00	70.00	.687	71.	122	.....	.....	.....
4	29.801	29.900	29 649	74.00	69.00	81.00	73.00	68.00	66.00	.649	78.	65	.....	.....	.....
5	29 353	29.659	28.902	76.00	72.00	80.00	75.00	67.00	70.00	.746	83.	112	.....	.....	.....
6	29.491	29.579	29.324	77.00	76.00	88.00	76.00	72.00	75.00	.874	95.	92	.....	.....	.....
7	29.722	29 845	29.607	69.00	60.00	76 00	61.00	65.00	59.00	.401	55.	174	.....	.....	.....
8	29.972	29 985	29.959	68.00	61.00	75.00	66.00	59.00	57.00	.470	79.	83	.....	.....	.....
9	29.939	29.985	29.892	70.00	64.00	77.00	70.00	62.00	61.00	.526	58.	68	.....	.....	.....
10	29.808	29.870	29.760	73.00	68.00	77.00	72.00	62.00	63 00	618	75.	118	.....	.....	.....
11	29.674	29 722	29 622	73.00	71.00	80.00	76 00	69.00	68.00	.724	88.	158	.....	.....	.....
12	29.627	29.663	29.599	77.00	68.00	85.00	72.00	68.00	62.00	.570	61.	105	.....	.....	.....
13	29.804	29.817	29.792	69.00	68.00	75 00	71.00	62.00	67.00	.685	96.	115	.....	.....	.....
14	29.788	29 830	29.742	71.00	70.00	77.00	75.00	62 00	67.00	.737	96.	89	.....	.....	.....
15	29.652	29.708	29.598	68.00	63 00	75.00	65.00	66.00	63.00	.532	78.	106	.....	.....	.....
16	29.555	29.578	29.543	72.00	66.00	78.00	68.00	65.00	65.00	.622	85.	75	.....	.....	.....
17	29.690	29.727	29.665	72.00	68.00	80 00	69.00	68.00	63.00	.587	73.	99	.....	.....	.....
18	29.495	29 564	29.447	76.00	72.00	84.00	75.00	70.00	69.00	.724	79.	233	.....	.....	.....
19	29 659	29 682	29.642	77.00	69.00	85 00	71 00	66.00	67.00	.597	65.	173	.....	.....	.....
20	29 639	29.607	29 625	69.00	66.00	78.00	70.00	67.00	63.00	.590	82.	128	.....	.....	.....
21	29.762	29.759	29.758	71.00	64.00	79.00	67.00	61.00	59.00	.499	67.	97	.....	.....	.....
22	29 558	29.675	29 465	74.00	71.00	85.00	76.00	65.00	67.00	.719	85.	170	.....	.....	.....
23	29 525	29.514	29 514	74.00	71.00	82.00	75.00	67.00	68.00	.712	83.	159	.....	.....	.....
24	29.531	29.545	29 512	69.00	68.00	75.00	69.00	67.00	67.00	.676	96.	135	.....	.....	.....
25	29.612	29.633	29.598	66.00	59.00	70.00	61.00	61.00	59.00	.423	66.	196	.....	.....	.....
26	29.723	29.761	29 696	64.00	57.00	69.00	59.00	56.00	55.00	.378	64.	186	.....	.....	.....
27	29.774	29.791	29.758	65.00	58 00	71.00	61.00	54.00	53.00	.382	62.	91	.....	.....	.....
28	29.759	29.758	29.754	64.00	61.00	69.00	63.00	57.00	56.00	.461	78.	116	.....	.....	.....
29	29.556	29.881	28.928	65.00	57.00	72.00	59.00	58.00	54.00	.361	59.	135	.....	.....	.....
30	29.920	29.953	29 891	64.00	58.00	70.00	59.00	59.00	57 00	.384	63.	87	.....	.....	.....
31	29.991	30.005	29 978	66.00	58.00	69.00	60.00	54.00	55.00	.379	60.	112	.....	.....	.....
Mean	29.693	29.773	29.873	71.23	66.35	78.00	69.54	64.06	63.51	.606	76.	3,740	H. M. 37.45	INCHES. 3.63	.....

* Readings at 7 A. M., 2 and 9 P. M. Fall of rain for the month, 3.63 inches.

SEPTEMBER, 1887.

DAY.	BAROMETER. REDUCED TO FREEZING.			THERMOMETERS. MEAN.		MAXIMUM.		MINIMUM.		HYGROMETER. FORCE OF VAPOR.	HYGROMETER. RELATIVE HUMIDITY.	WIND. VELOCITY IN MILES.	RAIN AND SNOW. DEPTH IN INCHES.		
	Mean.	Maximum	Minimum	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Mean.	Mean.	Total.	Duration.	Water.	Snow.
1	29.904	29 959	29.848	66.00	57.00	75 00	64 00	59.00	58.00	.461	73.	75	.....	.....	.....
2	29 688	29.771	29.633	65.00	63.00	73 00	65.00	60 00	61.00	.523	74.	166	.....	.....	.....
3	29.749	29.830	29.691	66.00	58.00	71.00	60.00	61.00	56.00	.383	59.	168	.....	.....	.....
4	29.943	29.981	29 894	66.00	56 00	73 00	57.00	56.00	52.00	.300	49.	120	.....	.....	.....
5	29 934	29 979	29.875	67.00	63.00	78.00	67.00	59.00	58.00	.511	78.	64	.....	.....	.....
6	29.734	29.831	29.638	70 00	65.00	78.00	67.00	61.00	61.00	.508	74.	183	.....	.....	.....
7	29.407	29.505	29.355	73.00	73.00	83.70	79.00	66.00	67.00	.830	100.	258	.....	.....	.....
8	29.651	29 725	29.578	64 00	57.00	73.00	59.00	60.00	56.00	.387	67.	194	.....	.....	.....
9	29.800	29.817	29.775	64.00	59 00	73.00	62.00	54.00	53.00	.427	71.	116	.....	.....	.....
10	29.847	29.933	29.781	68.00	62.00	75.00	64.00	61.00	60.00	.466	67.	174	.....	.....	.....
11	30.035	30.074	29.981	59.00	55.00	68.00	57.00	54.00	51 00	.376	82.	185	.....	.....	.....
12	29.869	29 954	29.814	60.00	59.00	64.00	61.00	57.00	58.00	.502	98.	213	.....	.....	.....
13	29.802	29 817	29.791	63.00	61 00	66.00	63.00	58.00	58.00	.516	97.	81	.....	.....	.....
14	29.799	29.817	29.789	65.00	64.00	75.00	69.00	64.00	55.00	.514	95.	51	.....	.....	.....
15	29.839	29.847	29.831	70.00	62 00	77.00	64.00	64.00	59.00	.439	60.	60	.....	.....	.....
16	29.666	30.037	29.914	67.00	61.00	70.00	63.00	54 00	59.00	.487	82.	175	.....	.....	.....
17	30.172	30.287	30 105	59.00	52 00	66.00	56.00	57.00	50 00	.311	63.	122	.....	.....	.....
18	30 136	30.146	30.107	59.00	54.00	65.00	57.00	50 00	49.00	.345	69.	108	.....	.....	.....
19	29.998	30.072	29.943	66.00	61.00	75.00	65.00	55.00	56.00	.465	78.	140	.....	.....	.....
20	30.048	30.063	30.034	62.00	55 00	69.00	56 00	59.00	53.00	.331	60.	102	.....	.....	.....
21	29.878	29.992	29.760	64 00	59.00	73.60	63.00	55.00	55.00	.457	77.	188	.....	.....	.....
22	29.583	29.593	29 565	64.00	60.00	68.00	64 00	62 00	57.00	.453	74.	181	.....	.....	.....
23	29.624	29.712	29.538	58.00	57.00	66.00	61.00	50.00	46.00	.341	67	145	.....	.....	.....
24	29.502	29.819	28 907	53 00	47.00	54.00	46.00	44.00	41.00	.163	42.	229	.....	.....	.....
25	29.797	29.802	29.769	52.00	45 00	57.00	41.00	41.00	41.00	.218	59.	137	.....	.....	.....
26	29.799	29 800	29.779	53 00	47.00	60.00	49.00	44.00	44.00	.245	62.	135	.....	.....	.....
27	29 859	29.865	29.847	55.00	49.00	63 00	53.00	45.00	44.00	.285	67.	88	.....	.....	.....
28	29.900	29.885	29.885	57.00	56 00	62.00	59.00	54.00	53.00	.443	94.	98	.....	.....	.....
29	29.801	29.802	29.786	63.00	63.00	67.00	65.00	57.00	60.00	.566	98.	63	.....	.....	.....
30	29.783	29.795	29.776	62.00	60.00	64.00	61.00	60.00	60.00	.517	94.	122	.....	.....	.....
													H. M.	INCHES.	.....
Mean	29.818	29.884	29.766	62.70	58.00	69.36	60 56	56.03	54.37	.426	81.	4141	48.50	1.49	.....

* Readings at 7 A. M., 2 and 9 P. M. Fall of rain for the month, 1.49 inches.

OCTOBER, 1887.

DAY.	BAROMETER.			THERMOMETERS.						HYGROMETER.		WIND.	RAIN AND SNOW.		
	REDUCED TO FREEZING.			MEAN.		MAXIMUM.		MINIMUM.		FORCE OF VAPOR.	RELATIVE HUMIDITY.	VELOCITY IN MILES.	DEPTH IN INCHES.		
	Mean.	Maximum	Minimum	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Mean.	Mean.	Total.	Duration.	Water.	Snow.
	*			*						*	*				
1	29.666	29.712	29.639	61.00	60.00	64.00	62.00	59.00	59.00	.520	98.	155	.....	.....	.....
2	29.616	29.616	29.604	63.33	60.33	68.00	64.00	58.00	58.00	.343	82.	72	.....	.....	.....
3	29.791	29.572	29.394	61.00	57.66	69.00	63.00	55.00	55.00	.437	81.	87	.....	.....	.....
4	29.332	29.356	29.286	60.66	52.66	69.00	56.00	54.00	50.00	.297	56.	181	.....	.....	.....
5	29.459	29.534	29.400	55.33	50.66	60.00	54.00	50.00	48.00	.309	71.	138	.....	.....	.....
6	29.718	29.762	29.672	58.00	53.33	65.00	59.00	49.00	49.00	.350	72.	139	.....	.....	.....
7	29.826	29.819	29.835	66.33	59.00	76.00	63.00	54.00	53.00	.407	64.	178	.....	.....	.....
8	29.811	29.746	29.746	65.00	58.66	73.00	62.00	57.00	54.00	.413	67.	64	.....	.....	.....
9	29.676	29.701	29.653	70.33	62.33	75.00	66.00	62.00	59.00	.458	63.	65	.....	.....	.....
10	29.915	29.616	29.538	68.00	64.66	77.00	68.00	62.00	61.00	.568	83.	67	.....	.....	.....
11	29.547	29.594	29.511	56.33	48.66	69.00	52.00	49.00	46.00	.244	58.	210	.....	.....	.....
12	29.756	29.824	29.690	46.66	43.66	53.00	49.00	41.00	41.00	.248	77.	210	.....	.....	.....
13	29.737	29.790	29.706	55.66	48.33	62.00	51.00	43.00	44.00	.244	56.	195	.....	.....	.....
14	29.799	29.866	29.767	49.33	44.33	60.00	52.00	45.00	39.00	.233	63.	206	.....	.....	.....
15	30.113	30.172	30.022	45.30	40.66	50.00	46.00	37.00	35.00	.196	64.	151	.....	.....	.....
16	30.121	30.202	30.066	50.33	49.66	58.00	51.00	40.00	48.00	.304	74.	129	.....	.....	.....
17	29.945	30.012	29.868	56.00	53.33	64.00	59.00	48.00	47.00	.378	83.	114	.....	.....	.....
18	29.736	29.780	29.709	60.00	56.66	69.00	60.00	54.00	54.00	.407	80.	111	.....	.....	.....
19	29.713	29.762	29.667	51.66	48.66	58.00	49.00	49.00	48.00	.304	79.	133	.....	.....	.....
20	29.715	29.797	29.595	51.33	49.66	57.00	53.00	45.00	45.00	.337	89.	103	.....	.....	.....
21	29.363	29.487	29.294	51.66	48.33	59.00	51.00	45.00	45.00	.296	79.	266	.....	.....	.....
22	29.770	29.880	29.644	42.33	36.66	50.00	38.00	38.00	36.00	.144	53.	308	.....	.....	.....
23	29.951	30.004	29.832	47.00	42.33	53.00	48.00	57.00	36.00	.214	63.	158	.....	.....	.....
24	29.769	29.849	29.703	55.66	49.00	64.00	53.00	49.00	42.00	.265	58.	313	.....	.....	.....
25	30.072	29.942	30.112	44.33	41.33	50.00	43.00	42.00	40.00	.221	76.	145	.....	.....	.....
26	30.205	30.209	30.191	42.00	38.66	48.00	45.00	35.00	31.00	.198	72.	168	.....	.....	.....
27	30.137	30.241	30.117	46.00	44.66	52.00	48.00	44.00	42.00	.261	76.	161	.....	.....	.....
28	29.972	30.040	29.912	49.33	47.66	50.00	49.00	45.00	46.00	.301	86.	104	.....	.....	.....
29	29.750	29.837	29.697	52.00	47.33	58.00	50.00	47.00	45.00	.266	69.	68	.....	.....	.....
30	29.786	29.842	29.937	40.33	37.00	53.00	40.00	34.00	32.00	.179	70.	242	.....	.....	.....
31	29.681	29.778	29.591	43.00	38.66	29.00	49.00	50.00	28.00	.205	72.	247	.....	.....	.....
													H. M.	INCHES.	.....
Mean	29.466	29.817	29.722	53.71	49.53	60.06	53.22	48.29	45.67	.308	72.	4,888	36.50	2.34	.....

Readings at 7 A. M., 2 and 9 P. M. Fall of rain for the month, 2.34 inches.

NOVEMBER, 1887.

DAY.	BAROMETER. REDUCED TO FREEZING.			THERMOMETERS. MEAN.		MAXIMUM.		MINIMUM.		HYGROMETER. FORCE OF VAPOR.	HYGROMETER. RELATIVE HUMIDITY.	WIND. VELOCITY IN MILES.	RAIN AND SNOW. DEPTH IN INCHES.		
	Mean.	Maximum	Minimum	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Mean.	Mean.	Total.	Duration.	Water.	Snow.
	*			*						*	*				
1	29.800	29.865	29.734	38.00	35.66	47.00	39.00	35.00	32.00	.346	.79	367	.....	.....	.....
2	29.791	29.853	29.731	48.33	39.00	53.00	46.00	34.00	31.00	.169	.54	158	.....	.....	.....
3	29.748	29.754	29.735	51.66	47.33	60.00	57.00	42.00	39.00	.263	.69	135	.....	.....	.....
4	29.534	29.613	29.414	52.33	46.33	65.00	41.00	43.00	41.00	.243	.63	213	.....	.....	.....
5	29.887	29.887	29.798	40.00	37.33	49.00	38.00	36.00	36.00	.189	.84	326	.....	.....	.....
6	29.969	30.003	29.942	44.33	38.66	52.00	44.00	34.00	31.00	.169	.53	184	.....	.....	.....
7	29.803	29.885	29.739	50.66	45.33	58.00	49.00	41.00	40.00	.236	.64	245	.....	.....	.....
8	29.800	29.900	29.726	50.00	51.33	60.00	57.00	45.00	41.00	.252	.85	203	.....	.....	.....
9	30.009	30.044	29.982	36.33	32.66	48.00	37.00	37.00	27.00	.107	.50	168	.....	.....	.....
10	29.923	29.895	29.375	44.66	43.00	51.50	50.00	38.00	38.00	.261	.89	130	.....	.....	.....
11	29.270	29.309	29.203	38.00	35.00	45.00	37.00	33.00	34.00	.165	.72	385	.....	.....	.....
12	29.491	29.607	29.304	36.33	32.66	42.00	36.00	32.00	32.00	.154	.66	416	.....	.....	.....
13	29.762	29.804	29.714	41.00	40.33	47.00	46.00	36.00	37.34	.210	.77	234	.....	.....	.....
14	29.747	29.816	29.646	43.33	41.33	48.00	46.00	35.00	42.00	.231	.81	87	.....	.....	.....
15	29.309	29.408	29.252	46.33	44.33	49.00	46.00	44.00	39.00	.266	.85	146	.....	.....	.....
16	29.447	29.508	29.371	44.33	39.33	48.00	40.00	41.00	38.00	.176	.61	389	.....	.....	.....
17	24.489	29.626	29.388	47.33	41.00	54.00	44.60	41.00	33.00	.184	.60	212	.....	.....	.....
18	29.842	29.872	29.983	40.33	34.00	47.00	36.00	36.00	32.00	.114	.46	225	.....	.....	.....
19	29.401	29.696	29.183	40.00	37.66	49.00	41.00	36.00	27.00	.198	.79	136	.....	.....	.....
20	29.354	29.504	29.235	41.00	34.00	44.00	41.00	29.00	26.00	.159	.67	230	.....	.....	.....
21	29.727	29.826	29.640	36.66	30.33	39.00	34.00	25.00	29.44	.129	.68	200	.....	.....	.....
22	30.002	30.058	29.939	36.66	33.66	42.00	29.00	30.00	35.00	.157	.72	131	.....	.....	.....
23	29.987	30.018	29.970	42.66	38.66	47.00	41.00	35.00	39.00	.184	.66	60	.....	.....	.....
24	30.083	30.103	30.056	43.00	40.33	46.00	41.00	41.00	44.00	.216	.78	155	.....	.....	.....
25	30.029	30.053	30.002	46.66	46.00	49.00	48.00	42.00	44.00	.302	.95	118	.....	.....	.....
26	30.063	30.080	30.045	51.00	50.33	60.00	55.00	43.00	48.00	.344	.89	49	.....	.....	.....
27	29.997	30.042	29.964	54.33	56.00	61.00	56.00	46.00	29.00	.404	.94	85	.....	.....	.....
28	29.990	30.130	29.866	44.33	42.00	59.00	54.00	22.00	23.00	.257	.79	255	.....	.....	.....
29	30.312	30.371	30.217	29.33	27.33	37.00	32.00	23.00	24.00	.132	.80	263	.....	.....	.....
30	30.444	30.430	30.389	27.00	26.00	32.00	31.00	22.00	22.00	.131	.87	200	.....	.....	.....
													H. M.	INCHES.	
Mean	29.800	29.865	29.721	42.76	39.56	49.62	46.40	35.90	34.77	.211	.73	6,105	32.05	1.73	.....

*Readings at 7 A. M., 2 and 9 P. M. Fall of rain for the month, 1.73 inches.

DECEMBER 1887.

DAY.	BAROMETER. REDUCED TO FREEZING.			THERMOMETERS. MEAN.		MAXIMUM.		MINIMUM.		HYGROMETER. FORCE OF VAPOR.	HYGROMETER. RELATIVE HUMIDITY.	WIND. VELOCITY IN MILES.	RAIN AND SNOW. DEPTH IN SNOW.		
	Mean.	Maximum	Minimum	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Mean.	Mean.	Total.	Duration.	Water.	Snow.
	*			*						*	*				
1	30.629	30.651	30.607	19 33	18 00	25.00	23.00	10.00	11.00	.086	86.	285	.....	.....	.....
2	30.392	30.505	30.294	29 33	27.66	34.00	32.00	19.00	20 00	.135	80.	186	.....	.....	.....
3	30.111	30.202	29.984	41 00	39.33	46.00	37.00	22.00	37.00	.220	85.	51	.....	.....	.....
4	30.112	30.131	29.988	42 00	40 00	45.00	44.00	36.00	36.00	.223	83.	114	.....	.....	.....
5	29.861	29.931	29 816	45.00	41.33	50.00	47.00	37.00	33 00	.218	70.	230	.....	.....	.....
6	30.021	30.044	29.994	37.00	32.33	44 00	28.00	30.00	28 00	.117	49.	206	.....	.....	.....
7	29.992	30 034	29 946	40 33	36.00	44.00	40 00	32.00	30 00	.127	63.	72	.....	.....	.....
8	29.952	30.043	29.906	43.00	40.00	48.00	44.00	40 00	37.00	.220	75.	108	.....	.....	.....
9	30.215	30.234	30.198	38 00	35.33	44 00	39.00	32.00	31 00	.178	76.	162	.....	.....	.....
10	29.930	30 078	29.795	47.00	44 66	53.00	52.00	57 00	39.00	.320	97.	237	.....	.....	.....
11	29.673	29.723	29.588	52.33	52 33	56 00	55.00	49.00	50 00	.394	100.	100	.....	.....	.....
12	30.028	30.611	29.664	45 66	41.66	53 00	46.00	40.00	36.00	.216	68.	177	.....	.....	.....
13	29.981	30.031	29 933	37.66	34 33	44.00	37.00	34.00	31 00	.144	62.	212	.....	.....	.....
14	30 014	30 030	29 968	40 00	37.33	46 00	40.00	34.00	33.00	.190	77.	64	.....	.....	.....
15	29.625	29.821	29.456	39.66	38 66	44 00	40.00	37 00	37.00	.222	91.	108	.....	.....	.....
16	29.626	29.667	29.571	33.66	30.33	40.00	31.00	30 00	30.00	.131	69.	428	.....	.....	.....
17	29.359	29 567	29 110	32.66	30.66	34.00	32.00	28.00	30.00	.147	79.	204	.....	.....	.....
18	29.135	29.262	29 025	34.33	32.66	37.00	34.00	29.00	32.00	.164	83.	353	.....	.....	.....
19	29.705	29.866	29.522	35.00	34.33	38.00	37.00	30.00	32.00	.190	93.	356	.....	.....	.....
20	29.871	29.886	29.739	33.66	31.66	37.00	33.00	28.00	29.00	.153	80.	60	.....	.....	.....
21	29.628	29.724	29 560	38.66	36.00	43.00	39.00	34.00	34.00	.178	76.	263	.....	.....	.....
22	29.675	29.703	29 630	27.66	25.66	39.00	27.00	22.00	24.00	.116	77.	283	.....	.....	.....
23	29 756	29.784	29.745	27.66	24.66	33.00	29.00	20.00	20.00	.100	64.	150	.....	.....	.....
24	29.597	29.689	29 524	30.00	29.00	33.00	30 00	25.00	26.00	.143	85.	253	.....	.....	.....
25	29.548	29.597	29 470	29.00	27.00	34.00	25.00	24.00	24.00	.120	74.	150	.....	.....	.....
26	29.699	29.746	29.662	28.33	27.66	34.00	29.00	24.00	25.00	.144	92.	147	.....	.....	.....
27	29.889	29.956	29.784	31.00	33.00	34.00	29.00	27.00	27.00	.127	79.	126	.....	.....	.....
28	29.448	29.748	29 169	41.00	40.33	49.00	49.00	28.00	30.00	.253	93.	586	.....	.....	.....
29	29.723	29.868	29.612	22.00	19.33	39.00	30.00	14.00	12.00	.080	58.	624	.....	.....	.....
30	30.076	30.153	29 996	19.33	17.00	27.00	21.00	16.00	14.00	.068	64.	327	.....	.....	.....
31	29.493	30.070	29.198	25.66	23.33	28.00	32.00	12.00	13.00	.103	70.	184	.....	.....	.....
													H. M.	.....	INCHES.
Mean	29.831	29.946	29.692	35.06	32.96	41.00	36.00	29.00	29.00	.190	75.	6,806	2.95	.....	9.00

* Readings at 7 A. M., 2 and 9 P. M. Fall of rain during the month 2.95 inches. Fall of snow during the month, 9 inches.

RECAPITULATION FOR 1887.

1887.	BAROMETER.			THERMOMETERS.						HYGROMETER.		WIND.
	REDUCED TO FREEZING.			MEAN.		MAXIMUM.		MINIMUM.		FORCE OF VAPOR.	RELATIVE HUMIDITY.	VELOCITY IN MILES.
	Mean.	Maximum	Minimum	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Mean.	Mean.	Total.
January	29.998	30.575	29.410	28.31	26.52	62.50	56.00	20.95	20.95	.135	78.	8.455
February	30.173	30 302	30.053	32.37	29.71	40.69	33 11	26 51	26.00	.151	76.	8.451
March	29.908	29.991	29.833	32.91	29.53	40.30	32 87	26.32	25.34	.129	66.	10.741
April	29.973	30 041	29.911	46.87	42 35	56.60	44.70	39.70	37.70	.210	62.	7.856
May	30 030	30.075	30.002	62.47	57.07	71.45	60.25	53 37	53.88	.406	73.	5.032
June	29.795	29.892	29.456	68.37	64.64	72.26	68.13	60.00	61.42	.568	81.	4.767
July	29 727	29.733	29.639	75.83	69.48	83.79	75.27	69.90	69.11	.714	78.	5.083
August	29.693	29 773	29.873	71.23	66.35	78.00	69.54	64.06	63 51	.606	76.	3.740
September	29.818	29.884	29.766	62.70	58.00	69.36	60.56	56.03	54.37	.426	81.	4.141
October	29.466	29.817	29.722	53.71	49.53	60.06	53 22	48.29	45.67	.308	72.	4.888
November	29.800	29.865	29.721	42.76	39.56	49.62	46 40	35 90	34.77	.211	73.	6.105
December	29.831	29.946	29.692	35.06	32.96	41.00	36.00	29 00	29.00	.190	75.	6.806
Mean	29.851	29.991	29.756	51.05	47.14	60 47	53 00	44.12	43 48	.338	.74	76.065

Fall of rain during the year, 3 feet 5.45 inches. Fall of snow during the year, 2 feet 6 inches.
During a severe storm on May 26, the flag pole on the Litchfield mansion was struck by lightning and splintered.

PLAN OF
PROSPECT PARK
BROOKLYN, N.Y.
1888.

PARK STATISTICS.

PROSPECT PARK BOUNDARIES INCLUDE 526 1-6 ACRES.
QUAKER CEMETERY CONTAINS ..... 10 "

PROSPECT PARK CONTAINS,

IN WATER COURSES	15	ACRES.
IN AREA OF LAKE	62	"
IN WOODLAND	110	"
IN MEADOW	70	"
IN PLANTATION	259 1-6	"
IN DRIVES	5 3-4	MILES.
IN BRIDLE ROADS	3 1-10	"
IN WALKS FINISHED	10 3-4	"
IN WALKS UNFINISHED	1 5-6	"

OCEAN PARKWAY,
(PARK TO OCEAN) 5 1-2 MILES LONG, BY 210 FEET WIDE.
EASTERN PARKWAY,
(PARK TO SACKET STREET) 2 1-2 MILES LONG, 210 FEET WIDE
CONEY ISLAND CONCOURSE,
2750 FEET LONG BY 100 FEET WIDE.

AREA OF OTHER PARKS.

CONEY ISLAND CONCOURSE	70	ACRES.
PARADE GROUND	30	"
FORT GREENE	30	"
TOMPKINS PARK	7 3-4	"
CITY PARK	7 1-2	"
CARROLL PARK	1 4-5	"
CITY HALL PARK	1 1-2	"
SMALL ENCLOSURES	ABOUT 4	"
TOTAL	162 1-2	ACRES.

—INDEX TO MAP—

1. LINCOLN STATUE.
2. FOUNTAIN.
3. PLAZA SHELTER.
4. THATCHED "
5. ENDALE ARCH.
6. SHELTER AND ROAD STEPS.
7. PLAY GROUND ARBOR.
8. " " POOL.
9. BATTLE PASS.
10. BATTLE PASS REDOUT.
11. CULVERT ARCH.
12. WILLINK ENTRANCE.
13. EAST WOOD ARCH.
14. BINNEN BRIDGE.
15. LULLWOOD BRIDGE.
16. CLEFT RIDGE SPAN.
    a. URINALS.
    b. RUSTIC SHELTERS.
17. CAMERA OBSCURA.
18. GARDEN SHELTER & PAVILION.
19. CONCERT GROVE.
20. BOAT LANDING.
21. IRVING STATUE.
22. FORD BRIDGE.
23. PROMENADE DRIVE SHELTER.
24. FRANKLIN AVENUE SHELTER.
25. PARADE GROUND LODGE.
26. " " LOCKERS.
27. PARK RESERVOIR.
28. WELL.
29. TERRACE BRIDGE.
30. FALLKILL "
31. ESDALE BRIDGE.
32. AMBERGILL "
33. NETHERMEAD ARCHES.
34. BINNENWATER "
35. LULLWATER "
36. DAIRY COTTAGE.
37. " STABLE.
38. PAYNE STATUE.
39. MEADOW PORT ARCH.
40. BOAT HOUSE.
41. MUSIC PAGODA.
42. " GROVE.
43. " " BRIDGE.
44. SULLIVAN HEIGHTS.
45. VALLEY GROVE BRIDGE.
46. ARCHERY GROUNDS SHELTER.
47. PARK OFFICES.
48. BELL TOWER.
49. CARPENTER SHOP.
50. PARK STABLES.
51. CONSERVATORIES
52. WILLINK ENTRANCE SHELTER.
53. DRINKING URN.
54. CARROUSSEL.
55. LILY POND "
56. BINNEN WATER POOL
57. PEDESTRIAN CONCOURSE
58. PICNIC GROUND SHELTER.

Scale of Feet.
100 0 200 400 600 800 1000 2000

PARADE GROUND
PLAZA
RESERVOIR
CHILDRENS PLAY GROUND
DEER PADDOCK
CARRIAGE CONCOURSE
OCEAN AVENUE
LATBUSH AVENUE
EASTERN PARKWAY
IRVING PLACE
CROPSEY AVENUE
CLARKSON AVENUE
FRANKLIN AVENUE
SIXTEENTH STREET
FOURTEENTH ST.
THIRTEENTH ST.
TWELFTH ST.
ELEVENTH ST.
TENTH ST.
NINTH ST.
EIGHTH ST.
SEVENTH ST.
SIXTH ST.
FIFTH ST.
FOURTH ST.
THIRD ST.
SECOND ST.
FIRST ST.
GARFIELD PL.
MONTGOMERY ST.
CARROLL ST.
PRESIDENT ST.
UNION ST.
ARCHERY GROUNDS
QUAKER CEMETERY
BREEZE HILL
THE VETERANS' DRIVE
CONEY ISLAND AVENUE
OCEAN PARKWAY

PHOTO-GRAVURE CO. N.Y.