

View from a point near the Carriage Concourse, north of the site for Music Stand, showing sites of Lake, Refectory and Lookout.

EIGHTH ANNUAL REPORT

OF THE

BOARD OF COMMISSIONERS

OF

PROSPECT PARK,

BROOKLYN.

JANUARY, 1868.

BROOKLYN:

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1868.

BOARD OF

COMMISSIONERS OF PROSPECT PARK.

JAMES S. T. STRANAHAN,	WALTER S. GRIFFITH,
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TEUNIS J. BERGEN,	
ABIEL A. LOW,	SEYMOUR L. HUSTED,
ABRAHAM B. BAYLIS,	THOMAS McELRATH,
STEPHEN HAYNES,	CORNELIUS J. SPRAGUE.

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WALTER S. GRIFFITH.
Secretary.

JOHN N. TAYLOR.
Comptroller and Counsel.

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Landscape Architects and Superintendents.

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Assistant Engineers in Charge.
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THOMAS McELRATH.	

REPORT OF THE COMMISSIONERS OF PROSPECT PARK.

*To the Honorable, the Mayor and Common Council of the
City of Brooklyn :*

The Commissioners of Prospect Park present this Report of their proceedings, for the year 1867, to the Honorable, the Mayor and Common Council of the City of Brooklyn; trusting, that the results of the operations which they are about to detail, will prove satisfactory to the Common Council, as well as to our citizens in general. With a full appreciation of the great responsibility of the trust committed to them, they are still cheered by the reflection, that while they are laboring to secure to their fellow citizens the advantages of a beautiful and healthful pleasure ground, which must soon prove as conspicuous for its moral, as for its material effects upon our city; they are, at the same time, strengthening that great bond of social sympathy, which should universally pervade a great commercial community, if we would have a sure guarantee of its permanence and success.

Their last Annual Report informed the Common Council of the intention of the Commissioners to apply to the Legislature, for authority to annex twelve blocks of ground, at the northwesterly angle of the Park, as being, in their judgment, indispensably necessary to the completion of the

plan in that direction. The reasons for this acquisition were then stated, and need not be here repeated; they are, in fact, sufficiently obvious from a mere glance at the Park Map.

But it may now be said, that the progress of construction on the western drive is entirely arrested, and cannot be resumed without encroaching, to a ruinous extent, upon the beautiful meadow south of it, which forms one of the most attractive features of the design. The Commissioners cannot believe that the people of Brooklyn will ever consent to so serious a mutilation of the plan, as is implied by such a course of procedure; and they therefore propose to suggest these considerations to the Legislature, at its coming session, trusting that their renewed application will meet with a more favorable response than has hitherto attended their efforts in this behalf. When this addition shall have been made to the park area, it will, in their judgment, be sufficiently extended on the western side of Flatbush Avenue, for all useful or ornamental purposes, and will contain over five hundred acres of land, or, if the Parade Ground is to be included in the estimate, as it is already in the general design, about five hundred and fifty acres, conveniently located, and easily maintained, and now rapidly approaching completion, under the plastic hand of the landscape Architect, employed by the Board.

No plan for the improvement of that portion of the Park lying east of the Avenue has yet been suggested, which is entirely satisfactory to the Board; but the subject has received, and will continue to receive their studious consideration. In all adaptations of land, to public use, they have kept steadily in view what they believed to be the requirements of a rapidly growing city, of greatly diversified tastes, pursuits and habits; while they have not been unmindful of the expense of maintaining a large pleasure ground, after

its completion, in that high degree of order and of neatness, of its best purposes. The laying out of this portion of the Park, divided as it is by a large public reservoir, and isolated from the rest of the Park by a broad thoroughfare, presents a serious difficulty in harmonizing these discordant features, with the general Park design, adverted to in a former report. But the Commissioners are now able to state that extensive plans of public improvement, bearing directly upon this section of the Park, and having for their object a system of more ample and convenient approaches thereto, are in progress, and will probably lead to an early and satisfactory solution of this problem.

No specific duty, in regard to making provision for suitable approaches to the Park, was included in the direct responsibilities of the Commission; but as it was quite evident, from the outset, that a necessity for some adequate discussion of the public requirements in this respect, would sooner or later arise, and as it seemed equally clear that no other representative body would take the initiative, in making the requisite suggestions, it was deemed best that the subject should receive the attention of the Board. In the arrangements made for professional aid, it was accordingly understood that test surveys having reference to this question of approaches, should be prepared, from time to time, in accordance with such suggestions as might be given by the Commissioners. In the appended report of our Landscape Architects will be found the latest results of this examination. So far as the project, which is therein outlined, has been submitted to the parties more immediately interested, in the south-eastern approach, it has been received with general approval; but the Commissioners do not propose to take any decided action in the matter until the public judgment upon its merits shall have been

sufficiently developed, to enable them to act with entire confidence therein.

In immediate connection with the subject of approaches to the Park, arises the question of laying out streets and avenues over that extensive tract of land which lies south-
erly from and beyond the limits of the Park, and which must, at no distant day, become the abode of a vast multitude of people. The importance of attending to this matter at this time, is the more obvious, from the fact that this tract will soon form a portion of our City, and hence the necessity of projecting its streets and avenues in such a manner as to connect them with our own, consistently with public convenience, and with due regard to the promotion of the public health.

It is of no less importance to our neighbors, that the mistakes and confusion should be avoided which are necessarily incident to the laying out of the suburbs of a large town by individuals, who do not usually act in concert, or with any comprehensive consideration of their common interests. When a plan shall have been prepared, with the advantages of a thorough study of all the topographical conditions of the district, and of its general relations to the City, on the one side, and to the adjoining country on the other, and with a due consideration of the various requirements which may be expected to arise, as its population increases; and such plan shall have been made a public record, owners of property will of course, conform their transfers of land and the erection of houses, to the line of streets and avenues there laid down, while the corporate authorities will be thereby guided in the opening, working and grading of streets and avenues, and the introduction of water and sewerage thereon. The Commissioners, cannot therefore, withhold the expression of their unqualified approval of the project of a law, which they are informed will engage the atten-

tion of the Legislature at its coming session, to provide for the laying out of streets, avenues and public places, throughout the County of Kings, outside of the City of Brooklyn.

Since the last Report of the Board, operations on the Park have steadily progressed. Commencing the year with a moderate force, it has been gradually increased as the season would permit. Proceedings to acquire title to about two hundred acres of land, which were authorized to be taken by the law of 1866, having been completed, the Commissioners entered upon the land and organized an additional force of laborers to operate thereon. An abstract of all the returns of the laboring force made to the Comptroller during the year 1867, will be found appended to this report, showing the whole force engaged, as well as its general distribution among the different departments of labor, at the expiration of every two weeks.

The extent of ground which has been under treatment, and on which more or less progress towards completion has been made, is a little over two hundred and fifty acres. For the drainage and water supply of this ground, over twelve miles of pipe have been laid, at depths varying from three to twenty-three feet. The improvement of fifty-seven acres of the surface, besides that assigned for roads, walks, and waters, has been fully completed. Nineteen thousand feet in length of carriage and bridle road have been advanced in construction, of which over six thousand feet have been finished.

The construction of over seventeen thousand feet in length of walk has been advanced, and about five thousand feet of it concluded. Excavation has been commenced for the Ponds over a surface of more than fifty acres, and the work is complete over about six acres. About twenty thousand cubic yards of masonry, twenty-four thousand feet of curb stone, and seventy-one thousand feet of Belgian Pavement

have been laid, and seven hundred thousand cubic yards of materials of all kinds moved during the last year.

These few statements will in some degree suggest the extent, and variety of the subjects which have occupied the attention of the Commissioners during the past year; but for a more detailed and exact explanation of these several operations, the Common Council is respectfully referred to the accompanying maps and reports of our employees. The prosecution of these extensive operations has necessarily required the purchase of a large and varied supply of material, the greater portion of which has already been made use of. But the rollers, derricks, trucks, and other tools and instruments of construction, and of engineering, are still on hand and in good condition for any work that may be required of them for years to come.

Large quantities of stable manure, night soil, lime, phosphates, and other fertilizers have been collected and composted with extensive beds of muck, found on the Park, and now form rich and valuable deposits from which constant drafts are made for planting trees and shrubs, and enriching the soil for turf.

Many fine trees, found upon the ground have been transplanted to more conspicuous positions, and more will follow. Over seventy-three thousand trees and shrubs have been set out upon the Plaza mounds and walks, and upon the finished slopes and meadows, and the Park Nurseries now contain an excellent stock of about fifty thousand carefully selected and greatly varied trees and plants.

An abstract of the financial statement of the Board, which is hereto also annexed, will show the expenditures of the commission, for the year, amounting to nine hundred and seventy-three thousand, nine hundred and three dollars, and sixty cents. The largest item, it will be observed, is for

actual labor bestowed upon the ground; while the materials of construction, tools and other instruments, necessary for the use of a large force, come next in importance. The trees, manures, water and drainage pipe, with the Belgian and other pavements, seem to be large items, but they are no part of the current expenses, and as soon as the stock shall have been completed, need not be repeated.

In the consideration of the expenditures of the year, it should not be forgotten, that the price of labor and material has been very largely increased within a short time; that a considerable portion of the outlay was for the tools and machinery, required to set large forces in motion, many of them of an expensive and permanent character; that long lines of drainage and water pipe were to be buried out of sight, to secure the removal of unwholesome moisture, and the proper distribution of water; and that large supplies of trees for the nurseries, of fertilizers for the ground, of brick, stone, lime, and cement, for the bridges and culverts, of iron and steel for the construction and repair of tools and machinery, of timber and hardware, of hydrants and of cast-ings, with an immense variety of other materials and supplies, must be kept in store for future, as well as for immediate use. The Commissioners believe that the large preliminary outlay which has been made, will prove to be good economy, and will admit of the continued employment of as large a force of men, as heretofore, capable of producing much larger results in the coming year, at a greatly diminished expense.

In October last, carriages were admitted to a portion of the main eastern drive, which had just then been finished, and visitors have thronged the grounds since that time. From the visitor's register, kept on the park, it appears that no less than 24,748 single horse carriages, 17,341 two horse vehicles, 9,766 equestrians, and 52,242 pedestrians,

have passed into the Park, within the period of a little over two months last past. So large a number of visitors at this early stage of our enterprise, the genuine pleasure manifested in the appearance of all, and the quiet and orderly behavior exhibited by the miscellaneous multitude who thronged the Park almost "from early dawn to dewy eve," show unmistakably, not only how welcome all such breathing spots are to our pent up population, but also their decidedly educational tendency, as well aesthetically as by the suggestion and inculcation of habits of good order and propriety among the people at large. Who, after this, can doubt the utility of our noble Park, or question the duty incumbent on society, of creating and maintaining such plans of public improvement, as minister to the amusement, the morals, and the health of the masses. Or who shall deny the policy of developing and extending all such opportunities of innocent and intellectual recreation, as the most effective rivals of the ale house and the gambling table.

As the boundaries of the Park were enlarged, and the number of persons employed upon it were increased, it became more difficult to preserve order, and to protect the tools and materials scattered over the grounds, many of which must necessarily be left out at night. Other Parks also, were put under the charge of the Commissioners, requiring protection, and the main Park was about to be thrown open to the public. For these reasons, police duty as it had formerly been discharged, by ordinary watchmen, was found to be inadequate to the requirements made and about to be made upon it. It became necessary therefore, to organize a new force of Park keepers, for the protection of property, and the preservation of order.

An efficient body of men has accordingly been selected and uniformed, and they are now being carefully drilled and instructed in their duties. They are reinforced by the gar-

deners, from time to time, as occasion may require; and the men who are engaged in the details of gardening during the morning, are required to serve, if necessary, as an auxiliary police in the afternoon and evening, when the grounds are thronged with visitors. In the discharge of duty, they are instructed to assist visitors, with such information, advice, and guidance, as may be required, to enable them to see and to use the Park, to the best advantage; to direct the course to be taken by carriages; to prevent the interruption of communication by crowds, in any part of the Park; and to guard visitors against such dangers as may occur, from blasts, runaways, pickpockets, going upon weak ice, or the like.

The rules and regulations established by the Board, and which are directed to be observed by all persons who shall visit the Park, will be found appended to this report. They have been carefully framed, with a view of imposing the least possible restraint upon personal liberty, which is consistent with the safety and freedom of others. It has often been a reproach to our country, that collections of works of art, and exhibitions for instruction and amusement, cannot be thrown open to the public without danger of injury. If any ground for such reproach really exists, the Commissioners think it can be removed only by greater liberality, in admitting the people freely, to such establishments. By thus teaching them that they are themselves the parties most deeply interested in their preservation, and that it must be the interest of the public, to protect that which is intended for the public advantage. If we seek to win the regard of others, we must show a regard for them ourselves: and if we seek to wean them from debasing pursuits and brutalizing pleasures, we can only hope to do so, by opening freely to them new sources of rational enjoyment.

There is also another consideration which has had its

influence upon the minds of the Commissioners, but which is not usually adverted to, in estimating the motives of action of the visitors at our American Parks and in the adjustment of the degree of restraint, which it is necessary to impose upon them. It is the remembrance of that self gratulatory and independent feeling of our tax-payers, that they hold their privileges as no chary favor or deputed permission, but as a legal right, purchased from their own resources, to be freely transmitted to their posterity, subject only, to the necessary and comparatively trifling expense of culture and supervision.

The Commissioners, would here direct the attention of the Common Council to some statistics connected with the cost of the Park and of its improvements, which they think, will, at this time be found both interesting and instructive. The land originally taken, cost the City on the 15th day of June, 1864, when the report of the Commissioners on valuation was confirmed by the Supreme Court,

The sum of \$1,357,606 27
 The first addition thereto on 4th Feb., 1866 158,558 41
 And the recent addition on 27th May, 1867 752,745 02
 Whole cost of land taken for the Park, \$2,268,909 70

The cost of improvement as appears from the financial statements appended to this, and to previous annual reports, is

\$1,169,604 70
 Making the entire cost of the Park to date, \$3,438,514 40
 exclusive of a small amount paid for interest.

Payment of the first of these acquisitions was met by an issue of City Bonds, bearing an interest of six per cent., and having ninety years to run. The residue of the amount was raised by sales of seven per cent. bonds, payable in forty-five years. None of these bonds have been disposed of by

the City at less than their par value, and some of the payable semi-annually, is raised by annual tax on the first twelve and the twentieth wards of the City. And for the payment of the entire debt, both principal and interest, the whole Park domain, with its improvements are specifically pledged.

A sinking fund is also provided by law, consisting partly of an annual tax on said wards, running on to the maturity of the bonds, and partly of an assessment for benefit on the property adjacent to the Park. This assessment has not yet been laid, but will doubtless realize a large sum of money, and will begin to be collected as soon as it shall have been properly apportioned by the Commissioners appointed for the purpose, by means of an annual tax, to be levied in installments for twenty years successively in the locality specially benefited.

This equitable adjustment of the Park Debt between those wards at whose instance the Park was projected, and the owners of property particularly benefited by the improvement, has not only proved wise and practical, but bids fair to realize the most sanguine expectations of its projectors. Soon after work commenced on the Park, the price of lots rose rapidly in the neighborhood; and recent sales continue to show an increasing value. The assessed value of real estate in the eighth ward, exclusive of the amount assessed for buildings has increased over thirty per cent. during the last year. While the increased value of the real estate of the eighth and ninth wards being the two wards immediately contiguous to the Park, has for the same time amounted to nearly two-thirds of the increased value of the entire City. A similar increase from the same cause, though not to the same extent, is perceptible in the twentieth ward, which comes next in respect to its contiguity

to the Park, and doubtless exists in several of the other wards, particularly in the tenth.

The records of the Board of City Assessors show that the assessed value of real estate in the year 1864, was

In the 8th Ward	\$ 4,913,274
" 9th Ward	7,966,471
" 20th Ward	7,069,650
Total in the three Wards	\$19,949,395

The same records for the year 1867, show the assessed value

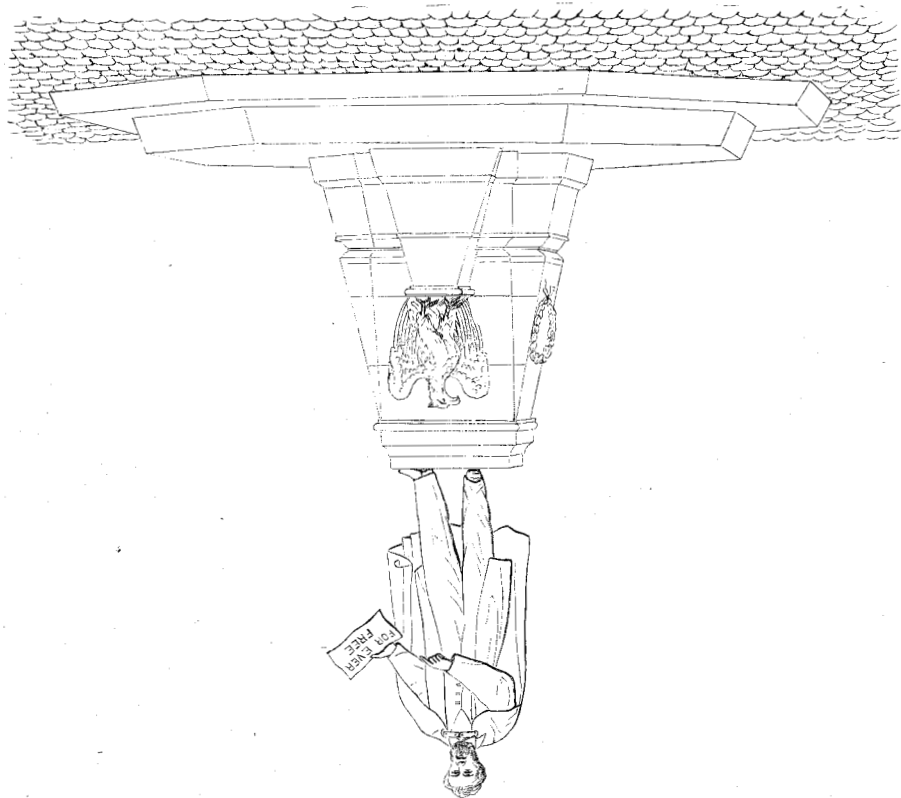
Of the 8th Ward to be	\$ 7,983,200
" 9th Ward	10,743,797
" 20th Ward	8,705,090
Total in the three Wards	\$27,432,087

Making an increased valuation in the three wards since active operations commenced on the Park of \$7,482,692.

The additional tax which was raised from this increased valuation for the year 1867, was \$280,692, while the annual interest on the whole Park debt as it now stands, is \$229,219, showing an increased annual revenue to the city from these three wards alone, over and above the annual interest of the Park debt of \$51,385.

Our citizens will draw their own inferences from these facts; but in view of the large improvement which has already taken place, and of the additional considerations, that these values must soon be greatly increased, by costly buildings about to be erected, and that other splendid improvements tending directly to the development of the many advantages of a residence in the vicinity of the Park, have been projected, and are now in progress, under the auspices of gentlemen of taste and wealth; the Commis-

LINCOLN MONUMENT.



sioners cannot doubt, that the City's increased revenue from the enhanced value given to its taxable property, from Park enterprise, will not only enable it to maintain the Park with ease, in a high degree of culture, but will insure the payment of the debt incurred, and to be incurred, for its construction, long before its maturity; and that, too, with a continually diminished burthen upon its tax-payers.

The Board has the pleasure to announce, that the War Fund Committee of Kings County, has presented the City with a Bronze Statue of the late President Lincoln, to be erected in the Park, as soon as a suitable place can be prepared for its reception. This beautiful work of art, designed and executed by our late townsman, H. K. Brown, the distinguished sculptor, is the result of a dollar subscription, set on foot among our citizens, by the patriotic Committee above mentioned, soon after the decease of the subject of its commemoration, and may therefore be truly called the People's Monument.

The Statue is nine feet high, and embodies the true ideal of the late President, the head and shoulders being modelled from a bust taken from life; a correct delineation of its other peculiarities having been secured, by the vivid recollection, which a personal intimacy with the deceased afforded to the artist. A cloak, such as Mr. Lincoln frequently wore, is thrown loosely over the shoulders, falling to the knees, giving dignity and elegance to the figure; the left hand holds an open scroll, on which is written the immortal Proclamation of Emancipation, the finger of the right hand pointing to the words "shall be forever free." It will be erected upon a pedestal of granite fifteen feet high, to be located on the public platform in the Plaza, near the fountain, and will be ornamented on two sides with the Eagle, one of them bearing the Coat of Arms of the City, and on the

other two sides, with wreaths to represent the Army and Navy; all in bronze with suitable inscriptions.

Our City may feel a just pride in the accomplishment of this beautiful tribute to the memory of Abraham Lincoln, for of all the multitudinous monuments and statues proposed to be erected to his memory at the time of his death, this is believed to be the first that has been executed.

The Legislature at its last session, at the request of the Common Council, placed four of the smaller Parks of Brooklyn under the charge of this Board; but the season had advanced so rapidly before the Commissioners found themselves in possession, that little more could be done than to devise a plan of improvement, which should render them more useful and creditable to the City, than they had heretofore been. Surveys were accordingly made, and topographical maps constructed, preparatory to the work of remodeling their designs; but as the law under which the Commissioners are acting did not seem to authorize such changes of plan as were desirable, they were compelled to postpone the further prosecution of the work, until a revision of the law could be procured. A detail from the Park force of Keepers was however assigned to them, which has succeeded in preserving quiet and good order thereon.

At Carrol Park no proper provision had been made for the escape of surface water, which consequently overflowed the walks at every storm. An inlet basin was therefore constructed, at the lowest point of the ground, and connected with the street sewer, which will hereafter form part of the more complete system of drainage which is required for this Park. The fence of this Park has been thoroughly repaired and painted, and its gas lamps renewed.

Some repairs have also been made in connection with the

City Park, but no sufficient examination has yet been given to the subject of its general plan of improvement. It is quite evident, however, that the study to be made in reference to its improvement, will require to be of a somewhat special character. Its near proximity to Washington Park, which, from its greater size and central position, must always offer a more attractive place of resort to the neighborhood, and to a great extent supersede the City Park as a pleasure ground, presents the question, whether it is desirable or proper to devote that amount of expense and labor to its improvement, which will be found necessary to render it suitable for the purposes of a public Park.

A variety of suggestions have been made to the Commissioners, respecting this property, among others, that if turned to good business account, it would greatly increase the value of the taxable property of the City, and that its central position, and its nearness to the water, render it a fit location for a general market. These suggestions are not without force, but the Commissioners are not at liberty to take any decided action thereon, and therefore respectfully submit them to the consideration of their fellow citizens, before making any recommendation in regard to the further improvement or final disposition of this portion of the lands entrusted to their care.

The peculiar location and unsatisfactory condition of Washington Park, demanded, and have received, a more particular consideration. A plan for its improvement has been prepared by our landscape Architects, which, with their report thereon, will be found appended to this report. The Commissioners think it will be perused with as much satisfaction by our citizens, generally, as it has been by the Board. The report will speak for itself; but the Commissioners take this opportunity of directing attention more particularly to a feature of the design, which was sug-

gested by a resolution of the Common Council, requesting that a suitable vault should be prepared, for the reception of the remains of the Prison Ship Martyrs, preliminary to the erection of a monument to their memory. They have, it will be seen, accordingly provided for the construction of a suitable vault, which shall furnish a permanent resting place for the remains of those martyrs to civil liberty, whose memories will ever be enshrined in the hearts of their countrymen; and they trust that the ultimate object of the resolution, will in due time be accomplished, by the erection of a monumental structure, which, while it pays just tribute to the honored dead, cannot fail to be creditable to our City, as well as ornamental to the beautiful Park in which it is proposed to be erected. The cherished remains, having then found their long sought asylum, will, under the protection of a grateful country, at length rest in peace.

Dated January 14th, 1868.

JAMES S. T. STRANAHAN,

PRESIDENT.

WALTER S. GRIFFITH,

SECRETARY.

JOHN N. TAYLOR,

COMPTROLLER.

AN ABSTRACT OF THE FINANCIAL STATEMENT OF THE COMMISSIONERS OF PROSPECT PARK, FOR THE YEAR 1867.

The total receipts on account of Prospect Park during the year 1867, were :		
Balance of Cash in Bank, 1st of January...	\$123,317 81	
From the Treasurer of the City.....	\$1,190,000 00	
" Rents of houses on the Park.....	6,002 92	
" Sales of old houses.....	650 00	
" Sales of wood, grass and old material.....	1,703 51	
" Interest on bank balances.....	6,431 64	
Total.....	\$1,238,105 88	
The total expenditures for the same time were :		
Paid Salaries, Comptroller, Superintendent, Landscape Architects and Engineers	24,958 28	
" Surveyors, Draftsmen and Assistants..	46,715 83	
" Laborers, Keepers, Mechanics, horses and carts.....	683,810 93	
" Materials of Construction, Tools and Instruments.....	141,317 93	
" Stationery, printing, drawing materials, &c.....	5,579 18	
" Fitting up offices, furniture, rent and repairs.....	3,131 37	
" Trees, plants and shrubs.....	12,838 37	
" Manure and other fertilizers.....	10,273 34	
" Water pipe and hydrants.....	12,764 36	
" Drainage pipe.....	16,752 52	
" Belgian and other pavements.....	15,761 49	
Balance to the credit of Prospect Park account, Dec. 31st, 1867.....	264,202 28	
		\$1,238,105 88

The total receipts on account of Washington,
Carrol, City, and City Hall Parks were:

From the Treasurer of the City.....	\$ 70,000 00
" Interest on bank balances.....	657 41
	<u>70,657 41</u>

The total expenditures on the same Parks
were:

For Washington Park.....	\$1,851 86
" Carrol Park.....	1,810 56
" City Park.....	558 44
" Balance to the credit of the said Parks	<u>66,436 55</u>
	4,220 86
	<u>\$70,657 41</u>

RECAPITULATION.

Balance of Cash on 1st January, 1867.....	\$ 123,317 81
Received on account of Prospect Park.....	1,114,788 07
" " " other City Parks..	<u>70,657 41</u>
	1,308,763 29
Expended on account of Prospect Park....	\$973,903 60
" " " other City Parks.	<u>4,220 86</u>
	978,124 46
Balance of Cash, 31st Dec., 1867.....	<u>330,638 83</u>
	\$1,308,763 29

JOHN N. TAYLOR,

Comptroller.

PARK ORDINANCE

No. 2.

An Ordinance for the better Government of the Public Parks, now under the control of the Commissioners of Prospect Park. Passed August 1st, 1867.

The Commissioners of Prospect Park, in the City of Brooklyn, by virtue of the authority conferred upon them by the Act of the Legislature under which they were appointed, and the several acts amendatory thereof do order and direct as follows :

1. The Superintendents, under the direction of the Executive Committee of the Board, are hereby authorized and directed to assign to police service so many and such men as shall, from time to time, be found necessary for the proper management and good government of the several Parks now under charge of the said Commissioners.

2. The station houses of the said force, wherever they shall be located, may be used as places of temporary detention for persons who may be arrested upon either of the said Parks.

3. A suitable badge and uniform shall be provided for each person so to be employed or appointed, and shall be displayed by him at all times when engaged in the discharge of police duty.

4. Whenever any person so employed or appointed, shall display his badge upon either of the said Parks, in the discharge of his duty, he shall, for all purposes of maintaining order and enforcing the rules, regulations, and ordinances of the Park Commissioners, be invested with all the powers and authority conferred upon members of the police force of the Metropolitan Police District, by an act entitled "An act to establish a Metropolitan Police District and to provide for the management thereof, passed April 15th, 1857," and the several acts amendatory thereof.

RULES AND REGULATIONS

FOR THE GOVERNMENT OF THE PUBLIC PARKS OF BROOKLYN.

The Commissioners of Prospect Park, in the City of Brooklyn, do make and publish the following Rules and Regulations to be observed by all persons who visit the Public Parks in said city:

1. The Parks will be open to the public daily, except when special occasion may require either of them to be closed, and will continue open from sunrise to 10 o'clock in the evening during the months of June, July, August, and September, and from sunrise to 9 o'clock in the evening during the other months of the year. The City Hall Park will remain open at all times.

2. No person, unless he is employed by the Board of Commissioners, will be permitted to enter or remain in or upon any of the Parks except when they are open, as above provided. Nor shall any person enter or leave any of said Parks except by the usual gateways, nor climb upon, or in any manner cut, injure, or deface any tree, shrub, plant, grass, or turf, or any fence or other erection thereon.

3. No person shall make use of any loud, threatening, abusive, or indecent language; nor throw stones or other missiles; nor play upon any musical instrument; nor post any bill, notice, or other device upon any tree or structure; nor do any obscene or indecent act whatever upon or within any of said Parks.

4. No cattle, horses, goats, swine, or poultry of any description will be allowed within said Parks; nor any dog, unless led by a suitable chain or cord not exceeding six feet in length; nor shall any person expose anything for sale thereon, unless by special permission from the Commissioners.

5. No person shall fire or discharge any gun, pistol, squib, torpedo rocket, or other fireworks whatever in or upon any of said Parks; nor shall any military or target company or any civic or other procession march or parade thereon, unless by special permission from said Commissioners.

6. The above Rules and Regulations apply to all Parks under the control of the Commissioners, and extend to the sidewalks adjacent to said Parks.

7. The drives of Prospect Park will be open to the use of the public, solely for pleasure riding or driving. Animals to be used upon them, must be well broken, and constantly held in such control, that they may be easily and quickly turned or stopped. They will not be allowed to move at a rate of speed, which shall cause danger or reasonable anxiety to others; nor

under any circumstances at more than eight miles an hour. The park keepers will be held responsible, for such regulation of the speed of animals passing under their observation, as the general safety and convenience of those using the drives may require. And when in the judgment of a keeper, any animal is moving too rapidly, and the keeper shall intimate this by a gesture, it shall be the duty of the rider or driver of such animal, immediately to moderate its speed. And no animal or vehicle, will at any time be allowed to stand upon the rides or drives, to the inconvenience of travel thereon.

8. No horse or vehicle of any description, will be allowed upon any part of said Park, except upon the rides, drives, concourses, or other places appropriated for horses and carriages; nor will any vehicle, drawn by any animal, be allowed upon any foot-walk or ride in said Park.

9. No hackney coach, carriage, or other vehicle for hire, shall stand anywhere within said Park, for the purpose of taking up passengers other than those which shall have been carried by it to said Park; nor shall any person upon said Park solicit or invite passengers.

10. No omnibus or express-wagon, either with or without passengers, nor any cart, dray, wagon, or other vehicle carrying goods, merchandise, manure or other articles, or which shall be ordinarily used for such purposes, shall be allowed upon any part of said Park, except upon such roads as may be specially provided for the purpose.

11. No person shall bathe, or take fish, or send or throw any animal or thing, in or upon any of the waters of said Park, or in any manner disturb or annoy any water-fowl, singing or other bird, deer, or other animal pertaining to said Park; nor shall any boat or vessel be placed upon said waters, except by special permission from the said Commissioners. And no skating or sledding will be allowed thereon, unless the officer in charge shall consider the ice to be in a suitable condition for that purpose.

12. For any violation of these rules and regulations, the offender will be liable to be summarily ejected from the premises, and to such punishment as the law directs.

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OF

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REPORT OF THE LANDSCAPE ARCHITECTS AND SUPERINTENDENTS.

*To the President of the Board of Commissioners of
Prospect Park, Brooklyn:*

SIR:—In our Annual Report of last year, we described the organization which had been made under instructions from your Board for carrying out the design of the Park upon the ground. This organization remains to the present time essentially unchanged.

In June last, Mr. J. P. Davis having resigned the position, Mr. C. C. Martin was appointed to the office of Engineer in Charge.

DEVELOPMENT OF THE DESIGN.

During the year it has been found practicable to carry forward the design for the Park without intermission, although at many points the works, which it would have been most desirable to press to completion, have been suspended in consequence of the uncertainties in regard to boundary lines that still continue to embarrass operations.

So much of the land required for the Park as lies to the south of that upon which work was last year commenced, came into the actual possession of the Commissioners during the month of June last, and active operations were at once extended over a large part of the new territory. A portion of the road system in this section of the ground has been developed, the carriage concourse proposed in our original design to be constructed on Briar Hill has been subgraded and the ground in the vicinity of this concourse has been partially shaped. It was found practicable in execution to enlarge the area of this feature of the design, and the dimensions have been somewhat increased, it being evident that the position was one that would offer special attractions to visitors in carriages.

On the east side of the Park, north of the deer-paddock, the design as it stood last year has been so far modified in execution as to admit of the introduction of a series of arrangements adapted especially to meet the wants of children. The plan as approved, and now well advanced in execution, contemplates suitable accommodations for running sports and

for playing various games, it also includes croquet grounds, a pond for the sailing of toy boats, and a maze.

In other respects but little variation has been made in the outline of the design from our first study.

CONSTRUCTION.

You will find appended a full account of the progress of the methods used, and of the means and materials employed, which has been prepared by Mr. Martin and his principal aids, Mr. Bogart and Mr. Culyer. Two arch-ways have been partially constructed during the year, and work has been commenced upon several other architectural features, our studies for which have been approved by the Board. The development in detail of this department of the work is under the more immediate charge of Mr. E. C. Miller, who has fulfilled the duties of Assistant Architect since the beginning of July last.

PUBLIC USE OF THE PARK.

It was found necessary in the spring to close the country roads by which the public had previously crossed the Park territory, but on the 20th of October, a portion of the drive at the east side was so far completed that, by making temporary connections with old roads, a thoroughfare for carriages across the Park was again opened. At the same time regulations for the conduct of visitors and for the management of the work with reference to the convenience of the public were promulgated, and a beginning was made in the organization of a permanent body of Park-keepers, conjointly with a body of gardeners, according to a plan which had some time before been adopted by the Board. Although the short piece of good road opened at this time was accessible with difficulty, and the grounds through which it passed were in quite unfinished condition it was immediately resorted to by visitors in large numbers. Besides those in carriages, many came on horse-back, and although no walks had been opened, many more on foot. A tabular statement of the number of each class prepared from the returns of the gate-keepers is given by Mr. Culyer. The fact is noted that a considerable portion of the visitors evidently did not come merely from motives of curiosity, but after their first visit, repeatedly returned. During all the remainder of the season, indeed, not a few resorted to the Park as a daily habit, of whom some came from the more distant parts of the town. Considering the extreme inconvenience with which the Park is at present reached and the very limited attractions which as yet it offers this circumstance is a gratifying indication of the value which it will hereafter possess.

THE PARK WAY—APPROACHES AND CONNECTIONS.

The unsatisfactory character of the approaches to the Park has been recognized by your Board, from the outset of its undertaking, as calculated to seriously detract from the value of the service which it would otherwise be able to render the city, and it has accordingly been an incidental part of our duty to devise means of improvement. To do so it has been necessary that we should extend our field of study beyond the territory under your jurisdiction. Our first suggestion led, through the subsequent action of your Board, to the special appropriation of the ground necessary for the formation of the Plaza, and to the establishment of several circular spaces by which amplitude, symmetry, and dignity of character was sought to be secured on the street side of each of the Park gates. Through the promptness of the necessary legislative action, and of the subsequent proceedings in regard to the Plaza, a very great advantage was gained at a comparatively small cost for the necessary land, much of the adjoining ground having since been sold in the open market at rates indicating an advance of several hundred per cent. upon the prices paid by the city.

In our Preliminary Report, accompanying the first study of the plan of the Park, without making any definite recommendations, we suggested the leading features of a general scheme of routes of approach to and extension from the Park, through the suburbs, in which the sanitary and domestic requirements of that portion of the people of the city living at the greatest distance from the Park should be especially provided for. In our Annual Report of last year portions of this project were somewhat more distinctly outlined, and the economical advantages were pointed out of preparing and adopting plans for the purpose well in advance of the public demand, which it was intended to anticipate, and while land properly situated might yet be selected in the suburbs of such moderate value that no private interests of much importance would be found to stand in antagonism in this respect to those of the public.

RELATIONS OF THE PARK TO THE STREET ARRANGEMENTS OF THE CITY.

Your Board having brought these suggestions before the public they have during the last year attracted considerable attention. One of the minor recommendations has been already taken up by a body of citizens and an organized effort to carry it out is understood to be in progress. Under your instructions a topographical survey has also been made of a section of the ground to which the larger scheme applies, being that lying immediately east of the Park and extending from it to the city line, and a study has been prepared, also under your instruc-

tions and which is herewith presented, for a revision of a part of the present city map of this ground with a view to the introduction of the suggested improvement.

The period seems to have arrived, therefore, for a full and comprehensive inquiry as to the manner in which the scheme would, if carried out, affect the substantial and permanent interests of the citizens of Brooklyn and of the metropolis at large.

The project in its full conception is a large one, and it is at once conceded that it does not follow but anticipates the demand of the public; that it assumes an extension of the city of Brooklyn and a degree of wealth, taste, and refinement, to be likely to exist among its citizens which has not hitherto been definitely had in view, and that it is even based upon the presumption that the present street system, not only of Brooklyn but of other large towns, has serious defects for which, sooner or later, if these towns should continue to advance in wealth, remedies must be devised, the cost of which will be extravagantly increased by a long delay in the determination of their outlines.

ELEMENTS OF ORDINARY STREET ARRANGEMENTS.

What is here referred to under the designation of our present street system, is essentially comprised in the two series of thoroughfares extending in straight lines to as great a distance within a town as is found practicable, one series crossing the other at right angles, or as nearly so as can be conveniently arranged. Each of the thoroughfares of this system consists of a way in the center, which is paved with reference solely to sustaining the transportation upon wheels of the heaviest merchandise, of a gutter on each side of this wheel-way, having occasional communication with underground channels for carrying off water, and a curb which restricts the passage of wheels from a raised way for the travel of persons on foot, the surface of which, to avoid their sinking in the mud, is commonly covered with flags or brick.

This is the system which is almost universally kept in view, not only in the enlargement of our older towns, but in the setting out of new; such, for instance, as are just being projected along the line of the Pacific Railroad. If modifications are admitted, it is because they are enforced by some special local conditions which are deemed, by those responsible for the arrangement, to be unfortunate. The reason for this is probably found chiefly in the fact, that it is a plan which is readily put on paper, easily comprehended, and easily staked out; it makes the office of an Engineer or Surveyor at the outset almost a sine-cure, as far as the exercise of professional ability is concerned, and facilitates the operations of land speculators.

Its apparent simplicity on paper is often fallacious, and leads either to unnecessary taxation or to great permanent inconvenience. It is obviously incomplete, and wholly unsuited to the loading and unloading of goods which require storage, but, where it can be well carried out, offers very great advantages for the transportation of merchandise between distant points. It is also well adapted to equalize the advantages of different parts of a town, and thus avoid obstructions to improvement which mercenary jealousies might otherwise interpose.

In our judgment, advantages such as these have hitherto been pursued far too exclusively, but, as the presumption is always strong against any considerable innovation upon arrangements which have been long associated with the general conditions of prosperity and progress of all civilized communities, we desire, before giving reasons for this conviction, first, to remove any reasonable prejudice against the introduction of the entirely new elements into the street plan of Brooklyn, which we shall have to propose, by showing under what conditions of society and with reference to what very crude public requirements, compared with those which now exist, our present street arrangements have been devised.

WHY ORDINARY ARRANGEMENTS ARE INADEQUATE TO PUBLIC REQUIREMENTS.

At present, large towns grow up because of the facilities they offer mankind for a voluntary exchange of service, in the form of merchandise; but nearly all the older European towns of importance, from which we have received the fashion of our present street arrangements, were formed either to strengthen or to resist a purpose involving the destruction of life and the plunder of merchandise. They were thus planned originally for objects wholly different from those now reckoned important by the towns which occupy the same sites, and an examination of the slow, struggling process by which they have been adapted to the present requirements of their people, may help us to account for some of the evils under which even here, in our large American towns, we are now suffering.

HISTORICAL DEVELOPMENT OF EXISTING STREET ARRANGEMENTS, FIRST STAGE.

They were at the outset, in most cases, entrenched camps, in which a few huts were first built, with no thought of permanence, and still less with thought for the common convenience of their future citizens. The wealth of their founders consisted chiefly in cattle, and in the servants

who were employed in herding and guarding these cattle, and the trails carelessly formed among the scattered huts within the entrenchments often became permanent foot-ways which, in some cases, were subsequently improved in essentially the same manner as the sidewalks of our streets now are, by the laying upon them of a series of flat stones, so that walkers need not sink in the mud. If the ground was hilly, and the grades of the paths steep, stairs were sometimes made by laying thicker slabs of stone across them. Convenience of communication on foot was, of course, the sole object of such improvements.

If, in these early times, any highways were more regularly laid out, it was simply with reference to defence. For example, although two nearly straight and comparatively broad-ways were early formed in Paris, so that reinforcements could be rapidly transferred from one gate to another when either should be suddenly attacked, no other passages were left among the houses which would admit of the introduction of wheeled traffic; nor in all the improvements which afterwards occurred, as the city advanced in population and wealth, were any of the original pathways widened and graded sufficiently for this purpose until long after America had been discovered, and the invention of printing and of fire-arms had introduced a new era of social progress.

The labor required for the construction of permanent town walls, and the advantage of being able to keep every part of them closely manned during an attack, made it desirable that they should not be unnecessarily extended. To admit of a separate domiciliation of families within them, therefore, the greatest practicable compactness in the arrangement of dwelling-houses soon became imperative. As families increased, the demand for additional house-room was first met by encroachment upon the passages which had been left between the original structures, and by adding upper stories, and extending these outward so as to overhang the street. Before this process had reached an extreme point, however, the town would begin to outgrow its walls, and habitations in the suburbs would occur, of two classes: first, those formed by poor herdsmen and others who, when no enemy was known to be near at hand, could safely sleep in a temporary shelter, calculating to take their chance in the town when danger came; and, second, those formed by princes, and other men of wealth and power, who could afford to build strongholds for the protection of their families and personal retainers, but who, in times of war, yet needed to be in close vicinity to the larger fighting forces of the town. Neither the castle nor the hovel being placed with any reference to the enlargement of the town, or to public convenience in any way, streets were formed through the suburbs, as they became denser, in much the same way as they had been in the original settlement; then, as the walls were ex-

tended, the military consideration again operated to enforce the idea of compactness in every possible way.

The government of these towns also, however its forms varied, was always essentially a military despotism of the most direct and stringent character, under which the life, property, health and comfort of the great body of their people were matters, at best, of very subordinate consideration.

Thus the policy, the custom and the fashion was established in the roots of our present form of society of regarding the wants of a town, and planning to meet them, as if its population were a garrison, to be housed in a barrack, with only such halls and passages in it, from door to door, as would be necessary to turn it in, to sleep and feed, and turn it out, to get its rations.

It naturally fell out that when at length the general advance of society, in other respects, made it no longer necessary that a man should build a castle, and control, as personal property, the services of a numerous body of fighting men, in order to live with some degree of safety in a house of his own, apart from others, all the principal towns declined for a time in wealth and population, because of the number of opulent citizens who abandoned their old residences, and moved, with servants and tenants, to make new settlements in the country.

The excessive suppression of personal independence and individual inclinations which had before been required in town-life caused a strong reactionary ambition to possess each prosperous citizen to relieve himself as much as possible from dependence upon and duties to society in general, and it became his aim to separate himself from all the human race except such part as would treat him with deference. To secure greater seclusion and at the same time opportunity for the only forms of out-door recreation, which the rich, after the days of jousts and tournaments, were accustomed to engage in, all those who could command favor at Court, sought grants of land abounding in the larger game, and planted their houses in the midst of enclosures called parks, which not only kept neighbors at a distance, but served as nurseries for objects of the chase.

The habits of the wealthy, under these circumstances, though often gross and arrogant, and sometimes recklessly extravagant, were far from luxurious, according to modern notions, and as, in order to realize as fully as possible the dream of independence, every country gentleman had his private chaplain, surgeon, farrier, tailor, weaver and spinner, raised his own wool, malt, barley and breadstuffs, killed his own beef, mutton and venison, and brewed his own ale, he was able to despise commerce and to avoid towns. The little finery his household

coveyed was accordingly brought to his door on pack-mules by traveling merchants. The vocation of a merchant, in its large, modern sense, was hardly known, and the trade of even the most considerable towns was, in all respects, very restricted. Thus the old foot-way streets still served all necessary requirements tolerably well.

As the advance of civilization continued, however, this disinclination to the exchange of service, of course, gave way; demands became more varied, and men of all classes were forced to take their place in the general organization of society in communities. In process of time the enlargement of popular freedom, the spread of knowledge by books, the abatement of religious persecutions, the voyages of circumnavigators, and finally the opening of America, India and the gold coast of Africa to European commerce, so fed the mercantile inclinations, that an entirely new class of towns, centres of manufacturing and of trade, grew upon the sites of the old ones. To these the wealthy and powerful were drawn, no longer for protection, but for the enjoyment of the luxuries which they found in them, while the more enterprising of the lower classes crowded into them to "seek their fortune."

SECOND STAGE OF STREET ARRANGEMENTS.

Wagons gradually took the place of pack-trains in the distribution of goods through the country, and, as one man could manage a heavy load, when it was once stowed, as well as a light one, the wagons were made very large and strong, and required the employment of many horses.

In comparatively few town-streets could two of these wheeled merchantmen, with the enormous hamper they carried on each side, pass each other. The seats and hucksteries of slight wood-work with which the streets had been lined were swept away; but, as the population rapidly increased, while the house accommodation was so limited that its density, in the city of London, for instance, was probably three times as great as at present, any attempt to further widen the streets for the convenience of the wagoners had to encounter the strongest resistance from the house-holders.

Thus, without any material enlargement, the character of the streets was much changed. They frequently became quite unfit to walk in, the more so because they were used as the common place of deposit for all manner of rubbish and filth thrown out of the houses which was not systematically removed from them.

Although London then occupied not a fiftieth part of the ground which it does now, and green fields remained which had been carefully preserved for the practice of archery within a comparatively short dis-

tance of its central parts, to which the inhabitants much resorted for fresh air on summer evenings; although the river still ran clear, and there was much pleasure-boating upon it, the greater part of the inhabitants were so much confined in dark, ill-ventilated and noisome quarters, that they were literally decimated by disease as often as once in every two years, while at intervals fearful epidemics raged, at which times the mortality was much greater. During one of these, four thousand deaths occurred in a single night, and many streets were completely depopulated. All who could by any means do so, fled from the town, so that in a short time its population was reduced more than fifty per cent. It had not yet filled up after this calamity, when a fire occurred which raged unchecked during four days, and destroyed the houses and places of business of two hundred thousand of the citizens. Its progress was at length stayed by the widening of the streets across which it would have advanced if the buildings which lined them had not been removed by the military.

Five-sixths of the area occupied by the old city was still covered with smoking embers when the most distinguished architect of the age seized the opportunity to urge a project for laying out the street system of a new town upon the same site. The most novel feature of this plan was the introduction of certain main channel streets, ninety feet wide, in which several wagons could be driven abreast upon straight courses from one end of the city to the other. It was also proposed that there should be a series of parallel and intersecting streets sixty feet wide, with intermediate lanes of thirty feet. The enormous advantages of such a system of streets over any others then in use in the large towns of Europe were readily demonstrated; it obtained the approval of the king himself, and would have been adopted but for the incredible shortsightedness of the merchants and real estate owners. These obstinately refused to give themselves any concern about the sacrifice of general inconvenience or the future advantages to their city, which it was shown that a disregard of Wren's suggestions would involve, but proceeded at once, as fast as possible, without any concert of action, to build anew, each man for himself, upon the ruins of his old warehouse. There can be little question, that had the property-owners, at this time, been wise enough to act as a body in reference to their common interests, and to have allowed Wren to devise and carry out a complete street system, intelligently adapted to the requirements which he would have been certain to anticipate; as well as those which were already pressing, it would have relieved the city of London of an incalculable expenditure which has since been required to mend its street arrangements; would have greatly lessened the weight of taxation, which soon afterwards rose to be higher than in any other town of the kingdom,

and would have saved millions of people from the misery of poverty and disease.

Although in a very few years after the rebuilding of the city, its commerce advanced so much as to greatly aggravate the inconveniences under which street communication had been previously carried on, the difficulties were allowed to grow greater and greater for fully a century more before anything was done calculated to essentially alleviate them. They seem to have been fully realized and to have been constantly deplored, nor were efforts of a certain kind wanting to remedy them: the direction of these efforts, however, shows how strongly a traditional standard of street convenience yet confused the judgment even of the most advanced. A town being still thought of as a collection of buildings all placed as closely as possible to one centre was also regarded as a place of necessarily inconvenient confinement, and therefore, of crowding, hustling and turbulence. An enlargement of the population of a town could only aggravate all the special troubles and dangers to which those living in it were subject, add to the number of its idle, thriftless, criminal and dangerous classes, and invite disease, disorder and treasonable tumults. As, therefore, to amplify the street arrangements or otherwise enlarge the public accommodations for trade or residence, would be to increase its attractions, the true policy was generally assumed to be in the other direction. In London, not only its own Corporation followed this policy, but Parliam-

Once, for instance, a proclamation was issued, to forbid under heavy penalties the erection of any houses, except such as should be suitable for the residence of the gentry, within three miles of the town; another followed which interdicted householders from enlarging the accommodations for strangers within the town; another enjoined all persons who had houses in the country to quit the town within three weeks, while constant efforts were made to ship off those who had none to Ireland, Virginia, or Jamaica.

In spite of all, new houses were built on the sides of the old country roads, the suburban villages grew larger and larger till at length they were all one town with London and the population became twice as great and the commerce much more than twice as great as at the time of the great fire. Even when at last plans of real improvement began to be entertained it was no thought of resisting the increase of disease, pauperism and crime, by other means than fencing it out, that produced the change, but mainly the intolerable hindrance to commerce of the old-fashioned arrangements. Though some refused to see it and still protested against the plans of improvement as wholly unnecessary, hazardous, reckless, and extravagant, and denounced those who urged them, as

unprincipled speculators or visionary enthusiasts, the merchants generally could no longer avoid the conviction that their prosperity was seriously checked by the inadequacy of the thoroughfares of the town for the duty required of them. Parliament was therefore induced in the latter part of the last century, to authorize a series of measures which gradually brought about in the course of fifty years, larger and more important changes than had occurred before during many centuries.

As the definite aim of these changes was to get rid of certain inconveniences which had previously been classed among the necessary evils of large towns and as the measure with reference to which the purpose of their design was limited is thus clearly established it is evident that before we can realize the degree in which they were likely to approach the ultimatum of civilized requirement we need to know more exactly what the inconveniences in question amounted to.

It appears then that the imperfect pavements, never having been adequately revised since the days of hand-barrow and pack-horse transportation, were constantly being misplaced and the ground worn into deep ruts by the crushing weight of the wheels; the shops and offal matters thrown out of the houses were combined with the dung of the horses and the mud to make a tenacious puddle through which the people on foot had to drag their way in constant apprehension of being run down or crushed against the wall. In the principal streets strong posts were planted at intervals behind which active men were accustomed to dodge for safety as the wagons came upon them. Coaches had been introduced in the time of Elizabeth, but though simple, strong and rudely hung vehicles, they were considered to be very dangerous in the streets and their use within the town was for some time forbidden. Sedan chairs for all ordinary purposes superseded them and for a long time had been in common use by all except the poorer classes upon every occasion of going into the streets. When George the Third went in the state coach to open Parliament, the streets through which he passed were previously prepared by laying flaggots in the ruts to make the motion easier. There was little or no sewerage or covered drainage, and heavy storms formed gullies of the ruts and often flooded the cellars destroying a great deal of merchandise.

This was the condition in which after several hundred years, the town had been left by the transformation of the passages, first occurring between the huts of the entrenched camp of a tribe of barbarians, from the serviceable foot ways of the early middle ages to the unserviceable wagon ways of the generation but one before the last.

To remedy its evils, in the construction of new streets, and the reconstruction of old, the original passage for people on foot was restored, but it was now split through the middle and set back with the house fronts on each side so as to admit of the introduction of a special roadway for horses and wheels, at a lower level. A curb was placed to guard the foot way from the wheels; gutters were used to collect the liquid and floating filth, and sewers were constructed which enabled the streams thus formed to be taken out of the streets before they became so large as to flood the sidewalks. At the same time an effort was made to so straighten and connect some of the streets that goods could be taken from one quarter of the town to another by direct courses, and without the necessity of doubling the horse-power at certain points in order to overcome the natural elevations of the ground.

Thus, just one hundred years after Wren's suggestions were rejected by the merchants, their grandsons began to make lame efforts to secure some small measure of the convenience which his plan had offered them.

A few of the latter improvements had been adopted in other towns at a somewhat earlier period than in London. In the plans of St. Petersburg and of Philadelphia, for instance, directness and unusual amplitude of road-way had been studied, and some of the free cities of Germany had, at an earlier date, possessed moderately broad and well-paved streets, but the exceptions do not affect the conclusion which we desire to enforce.

To fully understand the reason of this long neglect to make any wise preparation for the enlargement of population which it would seem must surely have been anticipated, we need to consider that while a rapid advance was all the time occurring from the state of things when a town was intended to be governed with little direct regard for the interests of any but a very few of its occupants, at the same time direct responsibility for the care of its interests was being diffused and held for shorter intervals, and was, consequently, less and less felt, as a motive to ingenuity and energy, by any one of the several individuals who partook in it. The theory and form of town government changed more slowly than the character and modes of life of those who were called upon to administer it, but an adherence to the antiquated forms was only calculated to make a personal duty, with reference to the actual new conditions of the people, less easily realized and less effectively operative. What is everybody's business is nobody's, and although of late years experts, with professional training in special

branches, are not unfrequently engaged by municipal bodies to study particular requirements of the people, and invent means to satisfy them, still, as a general rule, improvements have come in most cities, when they have come at all, chiefly through the influence of individual energy, interested in behalf of special mercantile or speculative enterprises, by which the supineness of the elected and paid representatives of the common interests of the citizens has been overcome.

ERRONEOUS VIEW OF THE NECESSARY DISADVANTAGES OF

TOWN LIFE.

What is of more consequence, however, not merely that we may avoid injustice to our ancestors, but that we may realize the changes which have occurred in the standard of requirement, with reference to which the merits of a street system are now to be judged, is the fact that when these improvements were devised, it was still pardonable to take for granted that the larger the population of a town should be allowed to become, the greater would be the inconvenience and danger to which all who ventured to live in it would necessarily be subject, the more they would be exposed to epidemic diseases, the feebler, more sickly, and shorter their lives would be; the greater would be the danger of sweeping conflagrations; the larger the proportion of mendicants and criminals, and the more formidable, desperate and dangerous the mobs.

EVILS OF TOWN-LIFE HAVE DIMINISHED AS TOWNS HAVE

GROWN LARGER.

We now know that these assumptions were entirely fallacious, for, as a matter of fact, towns have gone on increasing, until there are many in Europe which are several times larger than the largest of the Middle Ages, and in the largest the amount of disease is not more than half as great as it formerly was; the chance of living to old age is much more than twice as great; epidemics are less frequent, less malignant and more controllable; sweeping fires are less common, less devastating and are much sooner got under; ruffians are much better held in check; mobs are less frequently formed, are less dangerous, and, when they arise, are suppressed more quickly and with less bloodshed; there is a smaller proportion of the population given over to vice and crime and a vastly larger proportion of well-educated, orderly, industrious and well-to-do citizens. These things are true, in the main, not of one town alone, but of every considerable town, from Turkey on the one side to China on the other, and the larger each town has grown, the greater, on an average, has been the gain. Even in Mahomedan Cairo, chiefly through

the action of French engineers, the length of life of each inhabitant has, on an average, been doubled. The question, then, very naturally occurs: What are the causes and conditions of this amelioration? and Can it be expected to continue?

REASON FOR ANTICIPATING AN ACCELERATED ENLARGEMENT OF METROPOLITAN TOWNS.

If the enormous advance in the population of great towns which has been characteristic of our period of civilization, is due mainly to the increase of facilities for communication, transportation and exchange throughout the world, as there is every reason to believe that it is, we can but anticipate, in the immediate future, a still more rapid movement in the same direction.

We are now extending railroads over this continent at the rate of more than fifteen hundred miles a year, and before our next President takes his seat, we shall have applied an amount of labor which is represented by the enormous sum of two thousand millions of dollars, to this work, most of it preparatory, and more than half of it directed to the opening up of new lands to profitable cultivation. The productive capacity of the country thus laid open, and the demand upon commerce of its people, has scarcely yet begun to be manifested. We have but half made our first road to the Pacific, and we have only within a year begun to extend our steam navigation to Japan and China, where the demands upon civilized commerce of a frugal and industrious population, much larger than that of all Christendom, yet remain to be developed. We are ourselves but just awake to the value of the electric telegraph in lessening the risks of trade on a large scale, and giving it order and system. Thus, we seem to be just preparing to enter upon a new chapter of commercial and social progress, in which a comprehension of the advantages that arise from combination and co-operation will be the rule among merchants, and not, as heretofore, the exception.

CONDITIONS UNDER WHICH THE EVILS OF LARGE TOWNS HAVE DIMINISHED.

The rapid enlargement of great towns which has hitherto occurred, must then be regarded as merely a premonition of the vastly greater enlargement that is to come. We see, therefore, how imperative, with reference to the interests of our race, is this question, whether as the enlargement of towns goes on the law of improvement is such that we may reasonably hope that life in them will continue to grow better, more orderly, more healthy? One thing seems to be certain, that the gain hitherto can be justly ascribed in very small

part to direct action on the part of those responsible for the good management of the common interests of their several populations. Neither humanity nor the progress of invention and discovery, nor the advancement of science has had much to do with it. It can not even, in any great degree, be ascribed to the direct action of the law of supply and demand.

Shall we say, then, that it has depended on causes wholly beyond the exercise of human judgment, and that we may leave the future to take care of itself, as our fathers did? We are by no means justified in adopting such a conclusion, for, if we can not yet trace wholly to their causes, all the advantages we possess over our predecessors, we are able to reach the conviction, beyond all reasonable doubt, that at least, the larger share of the immunity from the visits of the plague and other forms of pestilence, and from sweeping fires, and the larger part of the improved general health and increased length of life which civilized towns have lately enjoyed is due to the abandonment of the old-fashioned compact way of building towns, and the gradual adoption of a custom of laying them out with much larger spaces open to the sun-light and fresh air; a custom the introduction of which was due to no intelligent anticipation of such results.

Evidence of this is found in the fact that the differing proportions between the dying and the living, the sick and the well, which are found to exist between towns where most of the people still live on narrow streets, and those in which the later fashions have been generally adopted; and between parts of the same town which are most crowded and those which are more open, are to this day nearly as great as between modern and ancient towns. For instance, in Liverpool, the constant influx of new-comers of a very poor and ignorant class from the other side of the Irish Channel, and the consequent demand for house-room, and the resulting value of the poor, old buildings which line the narrow streets, has, till recently, caused the progress of improvement to be much slower than in the much larger town of London, so that, while the average population of Liverpool is about 140,000 to the square mile, that of London is but 50,000; the average age at death in Liverpool is seventeen, and that in London, twenty-six. In the city of Brooklyn the number of deaths for each thousand of population that occurred this last year in the closer built parts, was twice as large as in those where the streets are wider and there are many gardens. Comparisons of this kind have been made in such number, and the data for them have been drawn from such a large variety of localities in which the conditions of health in all other respects have been different, that no man charged, however temporarily and under whatever limitations, with municipal responsibilities, can be pardoned for ignoring

the fact that the most serious drawback to the prosperity of town communities has always been dependent on conditions (quite unnecessary to exist in the present day) which have led to stagnation of air and excessive deprivation of sunlight.

Again, the fact that with every respiration of every living a quantity is formed of a certain gas, which, if not dissipated, renders the air of any locality at first debilitating, after a time sickening, and at last deadly; and the fact that this gas is rapidly absorbed, and the atmosphere relieved of it by the action of leaves of trees, grass and herbs, was quite unknown to those who established the models which have been more or less distinctly followed in the present street arrangements of our great towns. It is most of all important, however, that we should remember that they were not as yet awake to the fact that large towns are a necessary result of an extensive intercourse between people possessing one class of the resources of wealth and prosperity and those possessing other classes, and that with each increase of the field of commerce certain large towns must grow larger, and consequently, that it is the duty of each generation living in these towns to give some consideration, in its plans, to the requirements of a larger body of people than it has itself to deal with directly.

CHANGE IN THE HABITS OF CITIZENS AFFECTING THE STRUCTURAL

REQUIREMENTS OF TOWNS.

If, again, we consider the changes in the structure of towns which have occurred through the private action of individual citizens we shall find that they indicate the rise of a strong tide of requirements, the drift of which will either have to be fairly recognized in the public work of the present generation or it will, at no distant day, surely compel a revision of what is now done that will involve a large sacrifice of property.

SEPARATION OF BUSINESS AND DOMESTIC LIFE.

In the last century comparatively few towns-people occupied dwellings distinctly separate from their place of business. A large majority of the citizens of Paris, London and of New York do so to-day, and the tendency to divisions of the town corresponding to this change of habits must rapidly increase with their further enlargement, because of the greater distance which will exist between their different parts. The reason is obvious: a business man, during his working-hours, has no occasion for domestic luxuries, but needs to have access to certain of his co-workers in the shortest practicable time, and with the smallest practicable expenditure of effort. He wants to be near a bank, for instance,

or near the Corn Exchange, or near the Stock Exchange, or to shipping, or to a certain class of shops or manufactories. On the other hand, when not engaged in business, he has no occasion to be near his working place, but demands arrangements of a wholly different character. Families require to settle in certain localities in sufficient numbers to support those establishments which minister to their social and other wants, and yet are not willing to accept the conditions of town-life which were formerly deemed imperative, and which, in the business quarters, are yet, perhaps, in some degree, imperative, but demand as much of the luxuries of free air, space and abundant vegetation as, without loss of town-privileges, they can be enabled to secure.

Those parts of a town which are to any considerable extent occupied by the great agencies of commerce, or which, for any reason, are especially fitted for their occupation, are therefore sure to be more and more exclusively given up to them, and, although we can not anticipate all the subdivisions of a rapidly increasing town with confidence, we may safely assume that the general division of all the parts of every considerable town under the two great classifications of commercial and domestic, which began in the great European towns in the last century, will not only continue, but will become more and more distinct.

It can hardly be thought probable that street arrangements perfectly well adapted in all respects to the purposes to be served in one of these divisions are the very best in every particular that it would be possible to devise for those of the other.

RECREATIVE REQUIREMENTS AND DISTANCE OF SUBURBS.

Another change in the habits of towns-people which also grows out of the greatly enlarged area already occupied by large towns, results from the fact that, owing to the great distances of the suburbs from the central parts, the great body of the inhabitants cannot so easily as formerly stroll out into the country in search of fresh air, quietness, and recreation. At the same time there is no doubt that the more intense intellectual activity, which prevails equally in the library, the work shop, and the counting-room, makes tranquilizing recreation more essential to continued health and strength than until lately it generally has been. Civilized men while they are gaining ground against certain acute forms of disease are growing more and more subject to other and more insidious enemies to their health and happiness and against these the remedy and preventive can not be found in medicine or in athletic recreations but only in sunlight and such forms of gentle exercise as are calculated to equalize the circulation and relieve the brain.

Still another important change or class of changes in the habits of the people of towns may be referred to the much greater elaboration which has recently occurred in the division of labor and the consequent more perfect adaptation to the various purposes of life of many instruments in general use. A more striking illustration of this will not readily be found than is afforded by the light, elegant, easy carriages which have lately been seen in such numbers in your Park. When our present fashions of streets was introduced sedan chairs were yet, as we have shown, in general use for taking the air or making visits to neighbors. The few wheeled vehicles employed by the wealthy were exceedingly heavy and clumsy and adapted only to slow travel on rough roads, a speed of five miles an hour by what was called the "flying coach," being a matter for boasting. Now we have multitudinous styles of vehicles in each of which a large number of different hands has been in generously directed to provide in all their several parts for the comfort-pleasure, and health with which they may be used. For the sake of elegance, as well as comfort and ease of draft, they are made extremely light and are supplied with pliant springs. They are consequently quite unfit to be used in streets adapted to the heavy wagons employed in commercial traffic, and can only be fully enjoyed in roads expressly prepared for them. In parks such roads are provided in connection with other arrangements for the health of the people.

INADEQUATE DOMESTIC ACCESS TO SUBURBS AND PARKS.

The parks are no more accessible than the suburbs, however, from those quarters of the town occupied domestically, except by means of streets formed in precisely the same manner as those which pass through the quarters devoted to the heaviest commercial traffic. During the periods of transit, therefore, from house to house and between the houses and the Park there is little pleasure to be had in driving. Riding also, through the ordinary streets, is often not only far from pleasant, but, unless it is very slowly and carefully done, is hazardous to life and limb. Consequently much less enjoyment of the Park is possible to those who live at a distance than to those who live near it and its value to the population at large is correspondingly restricted. The difficulties of reaching the Park on foot for those who might enjoy and be benefited by the walk, are at the season of the year when it would otherwise be most attractive, even greater, for they must follow the heated flags and bear the reflected as well as the direct rays of the sun.

But we cannot expect, even if this objection were overcome, that all the inhabitants of a large town would go so far as the Park every day, or so often as it is desirable that they should take an agreeable stroll in the fresh air. On the other hand we cannot say that the transportation of merchandise should be altogether interdicted in the domestic quarters of a town, as it is in a park, and as it now is through certain streets of London and Paris during most hours of the day. On the contrary it is evidently desirable that every dwelling house should be accessible by means of suitable paved streets to heavy wheeled vehicles.

NEW ARRANGEMENTS DEMANDED BY EXISTING REQUIREMENTS.

It will be observed that each of the changes which we have examined points clearly towards the conclusion that the present street arrangements of every large town will at no very distant day require, not to be set aside, but to be supplemented, by a series of ways designed with express reference to the pleasure with which they may be used for walking, riding, and the driving of carriages; for rest, recreation, refreshment, and social intercourse, and that these ways must be so arranged that they will be conveniently accessible from every dwelling house and allow its occupants to pass from it to distant parts of the town, as, for instance, when they want to go to a park, without the necessity of travelling for any considerable distance through streets no more convenient for the purpose than our streets of the better class now are.

We may refuse to make timely provisions for such purposes in our suburbs, and we may by our refusal add prodigiously to the difficulty and the cost of their final introduction but it is no more probable, if great towns continue to grow greater, that such requirements as we have pointed out will not eventually be provided for than it was two hundred years ago that the obvious defects of the then existing street arrangements would continue to be permanently endured rather than that property should be destroyed which existed in the buildings by their sides.

THE POSITION OF BROOKLYN.

If we now take the case of Brooklyn we shall find that all the reasons for an advance upon the standards of the street arrangements of the last century which apply to great towns in general, are applicable to her special situation with particular emphasis.

With reference to general commerce, Brooklyn must be considered as a division merely of the port of New York. The city of New York is, in regard to building space, in the condition of a walled town. Brooklyn is New York outside the walls.

The length of suitable shore for shipping purposes which the city of New York possesses is limited. Many operations of commerce cannot be carried on in the northern parts of the island. It may be reckoned upon as certain that the centre of the commercial arrangements of the port will be in the lower part of New York island.

It may be also reckoned upon as certain that everywhere, within a limited distance back from its shores, all the ground will be required for commercial purposes. The amount of land enclosed by this commercial border remaining to be devoted to purposes of habitation will then be comparatively small and will be at a considerable distance north of the commercial centre, probably not nearer on an average than the upper part of the Central Park which is more than seven miles from the present Custom House. On each side of it, north, south, east, and west, will be warehouses and manufacturing and trading establishments, and, at a little greater distance, wharves and shipping.

The habitable part of New York island will then necessarily be built up with great compactness and will in every part be intersected with streets offering direct communication for the transportation of merchandise between one part of its commercial quarter and another.

If now, again, we look on the Long Island side of the port we find a line of shore ten miles in length which is also adapted to the requirements of shipping. It may be assumed that the land along this shore will be wanted, as well as that along the shore of New York island and for an equal distance back from the water, for mercantile and manufacturing purposes. Supposing that the district thus occupied shall, after a time, reach as far back as the corresponding district on New York island; in the rear of it, (and still at a distance from the commercial centre of the port, not half as great on an average as the Central Park), we find a stretch of ground generally elevated, the higher parts being at an average distance of more than a mile from any point to which merchandise can be brought by water. East of this elevation the ground slopes to the shore, not of a harbor or navigable river, but of the ocean itself. A shore in the highest degree attractive to those seeking recreation or health but offering no advantages for shipping, manufacturing or mercantile purposes. At present this slope is occupied chiefly by country seats, and the habitations of gardeners and farmers, and only through the most perverse neglect of the landowners of their own interests is it likely to be built upon for other purposes.

THE OPPORTUNITY OF BROOKLYN.

Here, then, there is ample room for an extension of the habitation part of the metropolis upon a plan fully adapted to the most intelligent re-

MAP

The means by which it may be made a more suitable and attractive has been in the comparatively small town we have known.

It would be a perfectly simple problem to cause this land to be given up in a few years almost exclusively to shanties, stables, breweries, distilleries, and swine-yards, and eventually to make the greater part of it a district corresponding, in the larger metropolis which is hereafter to exist on the shores of New York harbor, to that which the Five Points

HOW THE OPPORTUNITY MAY BE MISSED AND HOW AVAILLED OF.

Upon the manner in which there are good grounds for confidence that the elevated district which has been indicated will be occupied in the future, depends the valuation which can justly and sagaciously be now placed upon it, and upon this valuation mainly depends the financial prosperity of the city of Brooklyn.

be needed to meet local requirements. In furnishing sites for shops and public buildings which will in any case such commercial traffic as must pass through their neighborhoods and nevertheless adapted to serve an important purpose in concentrating without intelligent regard to the alleged purpose in view. They are tion and consequently for shops and factories but, except in mere width, signed however, as to offer every advantage to commercial transportation of being especially adapted to residences; they were so devoted or two streets were laid out through it some years ago with an avowed factories, ship yards, or the warehouses and offices of merchants. One would have been formed if it were desired to invite to it nothing but venience, health, and pleasure of residents upon this land than such as mission no other arrangements as yet exist with reference to the commercial alone go for but little, and except in the part controlled by your Commission of the population of towns it is generally found that natural advantages It does not follow, however, that it will be so occupied. In the drift

within convenient access of the waters of New York harbor. tion of those whom the business of the world requires should reside set apart and guarded by nature as a place for the tranquil habitation and will be easily provided for in a few special channels. Thus it seems the sea, the commercial traffic through it is always likely to be light island soon will be; and, its immediate back country being bounded by closed on all sides by commerce as the habitable part of New York the sea breezes and lies in full view of the ocean; it can never be en- is better formed with reference to sanitary considerations; it is open to merical centre as the habitation district of New York island, the ground which has been referred to lies not more than half as far from the requirements of modern town life. A large part of the elevated land

place of domestic residence than it is possible that any other point of the metropolis ever will be, are equally within command.

INFLUENCE OF THE PARK ON THE VALUE OF PROPERTY.

The effect of what has already been done, under the direction of your Commission, has been to more than quadruple the value of a certain portion of this land, and we have thus an expression of the most simple character, in regard to the commercial estimate which, at this period in the history of towns, is placed upon the circumstance of convenient access from a residence to a public pleasure-ground, and upon the sanitary and social advantages of a habitation thus situated. The advance in value, in this case, is quite marked at a distance of a mile, and this local advantage has certainly not been attended by any falling back in the value of other land in Brooklyn.

If we analyze the conditions of this change in value, we shall find that it is not altogether, or even in any large degree, dependent upon mere vicinity to the sylvan and rural attractions of the Park, but in very large part, in the first place, upon the degree in which these attractions can be approached with security from the common annoyances of the streets, and with pleasure in the approach itself. If, for instance, the greater part of the Park were long and narrow in form, other things being equal, the demand for building sites, fronting on this portion of it, would not, probably, be appreciably less than for those fronting on the broader parts. Secondly, the advance in value will be found to be largely dependent on the advantages of having near a residence, a place where, without reference to the sylvan attractions found in a large park, driving, riding, and walking can be conveniently pursued in association with pleasant people, and without the liability of encountering the unpleasant sights and sounds which must generally accompany those who seek rest, recreation or pleasure in the common streets.

There are other things to be valued in a Park besides these, but these are the main positive advantages which would make the value of a residence, if upon the Park, much greater than if at a distance from it.

HOW THE ADVANTAGES OF VICINITY TO A PARK MAY BE EXTENDED.

So far, then, as it is practicable, without an enlargement of the Park in its full breadth and compass, to extend its attractions in these especial respects, so far is it also practicable to enlarge the district within which land will have a correspondingly increased attraction for domestic residences. The further the process can be carried, the more will Brooklyn, as a whole, become desirable as a place of residence, the higher will be

the valuation of land, on an average, within the city, and the lighter will be the financial burden of the Corporation.

EXAMPLE OF A FOURTH STAGE OF STREET ARRANGEMENTS.

We come, then, to the question of the means by which such an extension can be accomplished. Although no perfect example can be referred to, there have been in Europe a few works by which a similar end, to a certain extent, has been reached. Of these, the most notable is the Avenue of the Empress, in Paris, which connects a palace and a pleasure-ground within the town, with a large park situated far out in the suburbs. This avenue, with its planted border, occupies so much ground (it is 429 feet in width) that it may be considered to constitute rather an intermediate pleasure-ground than a part of the general street system. It is lined with a series of detached villa residences, and building-lots facing upon it are much more valuable than those facing upon the Park.

The celebrated Linden Avenue, at Berlin, leads likewise from a palace and palace grounds, to a great rural park on the opposite side of the town, through the very midst of which it passes. The finest private residences and hotels of the town, as well as many public buildings, such as Art Galleries and Museums, front upon it, and it is equally convenient for all the ordinary purposes of a street with any other. It nevertheless differs essentially from an ordinary business street, in that the process which we have described, by which wagon-ways were introduced into the old streets, has been carried one step further, the wagon-way having itself been divided as the foot-way formerly was, and a space of ground having been introduced, within which there is a shaded walk or mall, and a bridle-road, with strips of turf and trees.

THE PARKWAY.—A FIFTH STAGE.

The "Parkway" plan which we now propose advances still another step, the mall being again divided into two parts to make room for a central road-way, prepared with express reference to pleasure-riding and driving, the ordinary paved traffic road-ways, with their flagged sidewalks remaining still on the outside of the public mall for pedestrians, as in the Berlin example. The plan in this way provides for each of the several requirements which we have thus far examined, giving access for the purposes of ordinary traffic to all the houses that front upon it, offering a special road for driving and riding without turning commercial vehicles from the right of way, and furnishing ample public walks, with room for seats, and with borders of turf in which trees may

grow of the most stately character. It would contain six rows of trees, and the space from house to house being two hundred and sixty feet, would constitute a perfect barrier to the progress of fire.

PRACTICABLE FUTURE EXTENSIONS OF THE PARKWAY.

With modifications to adapt it to variations of the topography and the connecting street arrangements, the plan should eventually be extended from the Park, in one direction, to Fort Hamilton, where ground for a small Marine Promenade should be secured, overlooking the Narrows and the Bay; and in the other to Ravenswood, where it should be connected by a bridge with one of the broad streets leading on the New York side to the Central Park. A branch should extend from it to the ocean beach at Coney Island, and other branches might lead out from it to any points at which it should appear that large dwelling quarters were likely to be formed, at such a distance from the main stem that access to it from them would otherwise be inconvenient.

There are scarcely any houses at present standing on the general line indicated and it would pass nearly parallel to, and be everywhere within from fifteen to thirty minutes walk of the wharves of the East River. The distance between its extreme points would be about ten miles and the average distance of residences upon it from Wall Street would be about half the distance to the Central Park. Spacious and healthful accommodations for a population of 500,000 could be made within ten minutes walk of this Parkway.

PLAN OF THE PARKWAY NEIGHBORHOOD.

Our plan, it will be observed, covers more ground than is necessarily required to be taken for the purposes which have been indicated. The object of this is that in addition to providing for an enlargement of the Park advantages, throughout its whole extent, the Parkway may also constitute the centre of a continuous neighborhood of residences of a more than usually open, elegant, and healthy character. It is believed that such a neighborhood would not merely be more attractive, to the prosperous class generally, of the metropolis, than any which can be elsewhere formed within a much greater distance from the commercial centre, but that it will especially meet the requirements of an element in the community that is constantly growing larger and that is influenced by associations and natural tastes that unquestionably deserve to be fostered and encouraged. A typical case, for the sake of illustrating the class in view may be thus presented. A country boy receives a common school education, exhibits ability and at a comparatively

early age finds himself engaged in business in a provincial town; as his experience and capacity increase he seeks enlarged opportunities for the exercise of his powers and being of superior calibre ultimately finds himself drawn by an irresistible magnetic force to the commercial cities; here he succeeds in becoming wealthy by close attention to his speciality and the sharp country boy becomes the keen city man. Trees and grass are, however, wrought into the very texture and fibre of his constitution and without being aware of it he feels day by day that his life needs a suggestion of the old country flavor to make it palatable as well as profitable. This is one aspect of the natural phenomena with which we are now attempting to deal; no broad question of country life in comparison with city life is involved; it is confessedly a question of delicate adjustment, but we feel confident that whenever and wherever, in the vicinity of New York, this delicate adjustment is best attended to, and the real needs of these city-bred country boys are most judiciously considered, there they will certainly throng. We do not of course mean to argue that the tastes to which we have referred are limited solely to citizens whose early life has been passed in the country, but only that the existence of the special social element thus typified gives one of the many assurances that such a scheme as the proposed Parkway neighborhood would be successful, if judiciously carried out within the lines suggested, before the demand is more or less perfectly met in some other locality.

It is clear that the house lots facing on the proposed Parkway would be desirable, and we assume that the most profitable arrangement would be to make them, say 100 feet wide, and of the full depth between two streets, convenient sites for stables being thus provided. The usual effect of such a plan of operations would be an occupation of the rear street by houses of inferior class, and it is with a view of avoiding any such unsatisfactory result that the design is extended over four blocks of ground. If the two outermost streets are widened to 100 feet and sidewalks shaded by double rows of trees introduced in connection with them, the house lots on these streets will be but little inferior to those immediately facing the Parkway, for they also will be of unusual depth and will be supplied with stable lots that can be entered from the street already mentioned, which should be made suitable for its special purpose, and with the idea that it is only to be occupied by such buildings as may be required in connection with the large lots which are intended to be arranged throughout back to back, with the stable street between them.

Thus, so far as this arrangement should be extended, there would be a series of lots adapted to be occupied by detached villas each in the midst of a small private garden. This arrangement would offer the

largest advantages possible to be secured in a town residence, and there is no good reason why they should not be of a permanent character. With the modern advantages for locomotion which would be available, the departure from the old-fashioned compactness of towns might be carried to this extent, in that part of them devoted to residences, without any serious inconvenience. The unwholesome fashion of packing dwelling-houses closely in blocks grew, as we have shown, out of the defensive requirements of old towns; it may possibly be necessary to continue it under certain circumstances, as for the reasons already indicated, on the island of New York, but where there is no necessary boundary, either natural or artificial, to the space which is to be occupied by buildings, as is the case with Brooklyn, it is, to say the least, unwise to persist in arrangements which will permanently prevent any indulgence of this kind.

Those who availed themselves of the opportunity here proposed to be offered would not benefit themselves alone, but the whole community. The Romans seem to have been wiser than we have been in this particular. Rich people were offered every facility for surrounding their houses with open garden spaces, and the larger part of the Eternal City was composed of what we should now term detached villas, while in no part was it permitted that a new house, even though intended for the residence of slaves, should be built within five feet of walls previously erected.

How far it might be desirable for property-owners to extend the plan in the peculiar form suggested, is, of course, an open question, depending on the anticipated demand for lots of the size indicated, but it will be readily seen that as the proposed subdivisions are not of the ordinary contracted character, a comparatively small number of residents will suffice to fill up a considerable stretch of ground laid out in this way, and it is also evident that if, within a reasonable time, it should become certain that a specific number of blocks would be carried out on this plan, the lots included within the boundaries determined on would not require to be improved in regular succession, but would be selected with reference to slight, fancied advantages anywhere along the line, every purchaser feeling satisfied that the main question of good neighborhood had been settled on a satisfactory basis at the outset.

ADVANTAGES OF THE PARKWAY LIKELY TO BE SECURED TO

BROOKLYN EXCLUSIVELY.

Having so fully described, in its principal aspects, the question of the desirability of developing, in Brooklyn, a plan of public improvement of the general character indicated, it may be proper for us to enquire whether the broad streets which are proposed to be opened on New

York island under the name of Boulevards during the next few years, are calculated to interfere with the probable success of such a scheme. While the Central Park was in its earlier stages of progress, a Commission was appointed to prepare a plan for laying out the upper end of New York island, and some years later this responsibility was transferred to the Central Park Commission, whose plan is published in their last annual report.

The same document contains an elaborate discussion of the subject by Mr. A. H. Green, on the part of the Board, and as our professional relations with the Commissioners have not been extended over this department of their work, and we are not aware of their intention in regard to this improvement, except so far as it is set forth in the plan and public statement above mentioned, we make, for the purposes of this Report, the subjoined quotation, which sets forth clearly the limitations that are to be recognized in New York as controlling the designs of the Commissioners :

"We occasionally, in some country city, see a wide street ornamented with umbrageous trees, having spaces of green interposed in its area, the portion used for travel being very limited. This arrangement is only possible where thronging population and crowding commerce are not at liberty to overlay and smother the laws that are made to secure the legitimate use of the public streets. "It would seem inexpedient, at any rate, until some better permanent administration of our streets is secured, to attempt these fanciful arrangements to any great extent in a commercial city, under our form of government."

It is clear, therefore, that the Central Park Commissioners have no intention of carrying out, in New York, any such scheme as the "Park-way," and consequently, if, as we believe, the requirements that such a plan is designed to meet are already felt to exist in this community, Brooklyn can soon be made to offer some special advantages as a place of residence to that portion of our more wealthy and influential citizens, whose temperament, taste or education leads them to seek for a certain amount of rural satisfaction in connection with their city homes.

Although the plots of ground appropriated to the Brooklyn and Central Parks are entirely different in shape, while their landscape opportunities and general possibilities of design are equally dissimilar, a generic family resemblance will yet be found between the two pleasure-grounds, simply because they are both called into existence to meet the same class of wants, in the same class of people, at the same Metropolitan centre.

The Brooklyn Parkway, on the other hand, will, if executed, be a practical development of the ideas set forth in this Report, which seem

to be particularly applicable to the city of Brooklyn, and which, as we have shown, are considered by those in authority to be unsuitable for such family resemblance to the New York Boulevards as exists between the two parks, and its attractions will, for a time, at any rate, be of a special and somewhat individual character.

In pursuing the general question of approaches to the Park, in accordance with your instructions, we have thus been led to the examination of some other scarcely less important topics, and although the consideration of such problems as those we have adverted to can only come before your Commission in an indirect and incidental way, we have thought it best to lay the results of our study thus fully before you, because during the investigations and consultations of the past year it has become more and more evident that the early adoption of some such scheme as the "Parkway" would have the effect of adding very greatly to the advantages which your Commission is endeavoring to secure to the citizens of Brooklyn in the construction of the Park.

Respectfully,

OLMSTED, VAUX & CO.,

Landscape Architects and Superintendents.

BROOKLYN, January 1st, 1868.

MAP

REPORT OF C. C. MARTIN,

ENGINEER IN CHARGE.

PARK COMMISSION, CITY OF BROOKLYN,
ENGINEER'S OFFICE, *January 1st, 1868.* }

MESSRS. OLMSTED, Vaux & Co.,

Landscape Architects and Superintendents.

GENTLEMEN:—In the following report will be found a general description of the work executed on the Park during the year 1867. Previous to the date of my appointment as Engineer in Charge in May last, the position was held by Mr. J. P. Davis with whom, before assuming its duties, I had such opportunity for consultation, as was necessary to enable me to comprehend the nature and extent of the work that had been carried on in the early part of the year.

PLAZA.

During the season the Plaza mounds have been completed, planted and enclosed with a temporary fence, nearly all of the curb has been set around the interior of the Plaza, and the grading has been done and a portion of the pavement laid.

ROADS.

During the season two distinct kinds of roads have been constructed, viz: the Telford road and the rubble road. The preparation of the road bed, the drainage and the surfacing are the same for both. The road bed is prepared by bringing it to a sub-grade, twenty-seven inches below the finished grade. This is carefully shaped to correspond with the finished road and thoroughly rolled.

Upon this road bed is placed a layer of the coarse sand found on the Park, twelve inches in thickness, which is properly formed and rolled. Upon this is laid with care a course of Telford blocks, seven inches in depth; next is a layer of four inches of McAdam stone, and this is followed by three inches of Roa Hook gravel.

The rubble road differs from the Telford mainly in the substitution of sound rubble stone in the place of the Telford blocks.

As water and frost are the great destroyers of roads, one of the first requisites in the construction of a good road is to provide ample and effective drainage, both of the surface and the sub-structure.

To secure the proper sub-drainage, tiles are laid on the line of each gutter at a depth of three feet and six inches below the surface and are connected directly with the silt basins.

To ensure the speedy removal of surface water, a crown of from six to nine inches, depending upon its width, is given to the roadway. The gutters were constructed two feet in width, three inches in depth and made of the very best quality of paving brick laid on edge and well bedded in cement mortar.

At suitable intervals along the gutters, silt basins were placed, having grated inlets through which the surface water enters and thence passes into the general drainage system.

The Telford blocks were obtained from the boulders which abound on the Park and furnish a very superior material.

The blocks are somewhat regular in form, being from four to seven inches in width, from five to nine inches in length, and about seven inches in depth. They are generally broken slightly, wedge-shaped, and are laid with the broadest base downward.

Wedge-shaped cavities are thus formed in the upper surfaces; these are filled with spalls which are well rammed, forming a close and comparatively smooth surface to receive the McAdam stone.

Suitable McAdam stone is found in great abundance on the Park. The stones were broken by a Blake's patent stone breaker, which readily breaks to any required size, from forty to sixty cubic yards per day.

The broken stone in falling from the machine, passes over screens which remove the dust and finely broken stone, leaving the balance quite clean and of uniform size. The size generally used is from one and a half to two and a half inches in the largest diameter.

The gravel used for the final surfacing of the road is obtained from Roa Hook on the Hudson River, and is of a very superior quality, being of uniform hardness and free from dirt.

The sand and gravel for the sub-structure of the roads, gutters, &c., is obtained in great quantities on the Park.

ARCHWAYS.

But two archways have been commenced this season. One near the main entrance, and the other in the east wood.

In making the excavation for the foundation of the first mentioned structure, a tenacious clay saturated with water was found, which was entirely unsuited for a stable foundation.

The excavation was carried below the line of permanent saturation, and foundation piles driven from eight to sixteen feet before reaching a firm substratum. The piles were sawed off about fifteen inches above the bottom of the excavation and the spaces between, and for one foot outside of them, was filled with cement concrete and well rammed. Longitudinal timbers twelve inches square were placed on the tops of the piles and were secured to them by iron bolts seven-eighths of an inch square, and seventeen inches long. Upon these, at right angles to them, were placed other timbers of the same size, which were notched down so as to interlock with those first laid. These timbers were all completely imbedded in cement concrete. Upon these timbers, planks six inches thick were laid so as to leave alternate spaces equal in width to the plank. These spaces were filled with concrete.

The timber work is all placed at such depth as to ensure its durability; being below the line of permanent saturation.

Upon this sub-structure the large stones of the foundation masonry were laid. The balance of the foundation to within one foot of the grade of the walk is constructed with large blocks of gneiss rock laid in cement.

The face stones above the walk to the springing line of the arch are of Hudson River "mountain graywacke." Work was suspended at this point for the season.

The archway in the east wood is designed to carry a carriage and bridge road over a walk.

The facings are of Ohio and Belleville sand stone alternating, and the interior arch is of common hard brick. This is to be lined with panel work in wood.

In excavating for the foundation of this archway a coarse compact gravel was found, and the excavation was carried only three feet below the grade of the walk. A layer of concrete one foot in thickness was laid, and upon this the masonry commenced. The masonry of this structure was completed late in the season. The wood work is not yet complete.

To render this archway impervious to moisture, great care was taken to fill all the joints well with mortar, then a coating of cement mortar was smoothly and evenly laid over the entire outside of the arch and walls. When this had become hard, two coats of asphalt were applied; next to this on the vertical walls, a layer of clay puddle one foot in thickness was placed. This extended upon the inclined backing of the arch and was reduced in thickness to a thin edge at the top. Outside of the

layer of clay was carried up a dry rubble stone wall, about one foot thick, and outside of this, the earth filling.

At the base of this rubble wall, which extends one foot below the grade of the walk, there was laid a tile drain connecting with silt basins at either end of the bridge.

The last layer of asphalt on the crown of the arch overlaps the thin edge of the puddle wall, and thus carries all water which reaches it outside of the puddle, and directly into the dry wall, whence it finds its way into the drain without coming in contact with the masonry.

CULVERT ARCH.

In addition to the above masonry a culvert arch has been constructed in connection with the deer paddock pool, and is located between it and the Battle Pass pool. The foundation is of cement concrete one foot in thickness. The interior work is constructed of gneiss rock and is coursed rubble masonry. The facing is of Ohio and Belleville sand stone.

WALKS.

For gravel walks the sub-grade was fixed at twelve inches below the finished grade; the surface at sub-grade was made to conform accurately to the finished cross-section and grade of the walk and thoroughly rolled. Upon this sub-grade seven inches of rubble stone were laid, upon this, two and a half inches of coarse park gravel, and this was followed by one and a half inches of finer park gravel. The depth of stone and gravel at this stage of the construction was ten and one-half inches. The remaining one and a half inches has been, on the walks already constructed, formed of screenings from the McAdam stone. A large portion of the walks finished this season have been surfaced to a depth of three inches with tar concrete; the sub-structure being the same as for gravel walks.

Two kinds of concrete have been used, one known as the Burlew Patent, in which boiled pine tar is used, and the other the Scrimshaw Patent, in which raw coal tar is used. The concrete is prepared by mixing these tars with gravel or fine broken stone, coal ashes, &c. In laying this material any required form is readily given to the walks and gutters.

Drain tiles of two inches internal diameter were laid under all walks requiring it, at a depth of three feet six inches, and were connected with the walk silt-basins.

Also, along the centre line of the walks and generally in the same trench with the tile, were laid glazed vitrified pipe which form a part of the general drainage system of the Park.

At proper intervals under the walk gutters, silt-basins were located to receive the surface drainage and conduct it through branch pipes into the general drainage system.

POOLS.

Two pools have been completed each with a depth of three feet of water.

The Play-ground pool is situated in a natural depression, and is approached by winding walks with rustic steps.

The Battle Pass pool lies at the foot of a steep declivity and is shaded by natural forest trees.

The soil has been removed from the greater part of the site of the proposed lake and reserved for future use, and several thousand yards of excavation have been made.

The northern part of the lake has been nearly completed and about five acres prepared temporarily for a skating pond.

The supply of water for the pools and lake is at present obtained from the Park drainage, and the Nassau Water Department.

AGRICULTURAL DRAINAGE.

For all clayey or retentive soils a thorough system of tile drainage has been adopted, and as far as the grounds have been finished, has been carried out.

The sizes of tile have been carefully adapted to the work required of them.

The quantity of water that will reach these drains, has been computed with an assumed maximum rainfall of two inches in an hour, and under the supposition that one half of that amount will reach the drains within twenty-four hours.

Steps have been taken to inaugurate a series of observations upon the rainfall in connection with this system of tile drainage, from which it is expected that valuable information will be obtained in regard to the proportion of rainfall which reaches the tile in a given time.

None but round pipe tile have been laid, and closely fitting collars have been used throughout for the smaller diameter, and even upon the three inch mains whenever they could be obtained.

The systems were arranged with mains, secondary mains and laterals. The mains were generally three inches in diameter, the secondary mains two inches, and the laterals one and a half inches. Generally the mains followed the principal depressions in the surface, the secondary mains, the minor depressions, and the laterals, were laid out at intervals varying from twenty-five to forty-five feet, depending upon the character of the soil, and were nearly at right angles to the secondaries.

WATER SUPPLY.

The water supply for the Park water pipe system is at present obtained from the Nassau Water Department. A sixteen inch main of this system connects with a twenty inch main of the city distribution at a point near Prospect Hill reservoir.

This main has branches of various diameters, diverging to different parts of the Park.

Hydrants are placed at convenient points along the drives for obtaining water for sprinkling the roads, walks, and for other purposes. The patent cement pipe, manufactured by the Patent Water and Gas Pipe Company, of Jersey City, has been adopted.

It affords me great pleasure to acknowledge the very efficient assistance I have received from Mr. John Bogart and Mr. John Y. Culyer in their respective departments.

The rapid and uninterrupted progress of the work this season has been facilitated alike by the promptness with which all necessary supplies and material have been furnished by Mr. Culyer, and by the intelligent energy displayed by Mr. Bogart, aided by his efficient corps of assistants, in laying out the work to be executed.

A degree of interest in the work and a harmony of action has been exhibited throughout the whole Park organization which has been especially beneficial to the work and gratifying to myself.

In the labor department, Mr. John Maguire, the General Foreman, has manifested an ability and energy fully equal to the arduous duties of his responsible position, and has performed them in a highly creditable and satisfactory manner.

C. C. MARTIN,

Engineer in Charge.

REPORT OF JOHN BOGART,

ASSISTANT ENGINEER IN CHARGE.

PARK COMMISSION, CITY OF BROOKLYN,
ENGINEER'S OFFICE, January 1st, 1868. }

C. C. MARTIN, ESQ.,

Engineer in Charge.

Sir:—I submit herewith a report of the progress of construction and the amount of work done upon the Park during the past year.

THE TOPOGRAPHICAL SURVEY.

This survey has been extended over the whole area of the Park west of Flatbush Avenue, and is now in progress upon the ground east of that avenue. The topographical maps have been completed for the area surveyed, being 468 acres. The most elevated point upon the Park is at the summit of Lookout Hill, and has a height of 185 $\frac{5}{16}$ feet above mean high water. The lowest point is at the junction of Franklin Avenue and the Coney Island Road, and is 53 $\frac{7}{16}$ feet above mean high water. This shows the extreme difference of elevation of surface within the Park to be 131 $\frac{9}{16}$ feet.

DEVELOPMENT OF THE PLAN.

Very careful study has been, and is constantly, given to the problem of developing the adopted design in a way which will produce the artistic effect required by the most economical arrangement and distribution of material. The grades and lines of the drives, bridle-roads and walks, the surfaces and inclinations of the slopes, meadows and concourses, the heights of the fillings and the depths of the excavations have been determined in accordance with this principle. Of course, this study is made in advance of the operations of the construction force. Working maps and profiles are prepared and estimates of quantities made, and every means practicable, under the peculiar conditions of landscape work, are taken to give to the work on the Park the benefit of the rules and experience of engineering science.

Tabular statements of the work already done, accompanying this report, will, to a certain extent, suggest the breadth and variety of the subjects necessarily occupying the constant attention of the Engineers;

and these subjects will, on examination, be found to be of an extent and diversity seldom combined in one undertaking.

PROGRESS OF CONSTRUCTION.

During the year the whole area of the Plaza has been brought to the established sub-grade, and nearly one-half has been paved with stone block pavement. The Plaza walks have been constructed, but are not yet paved. Trees have been set out along the line of the interior walks. The mounds have been finished, seeded and planted.

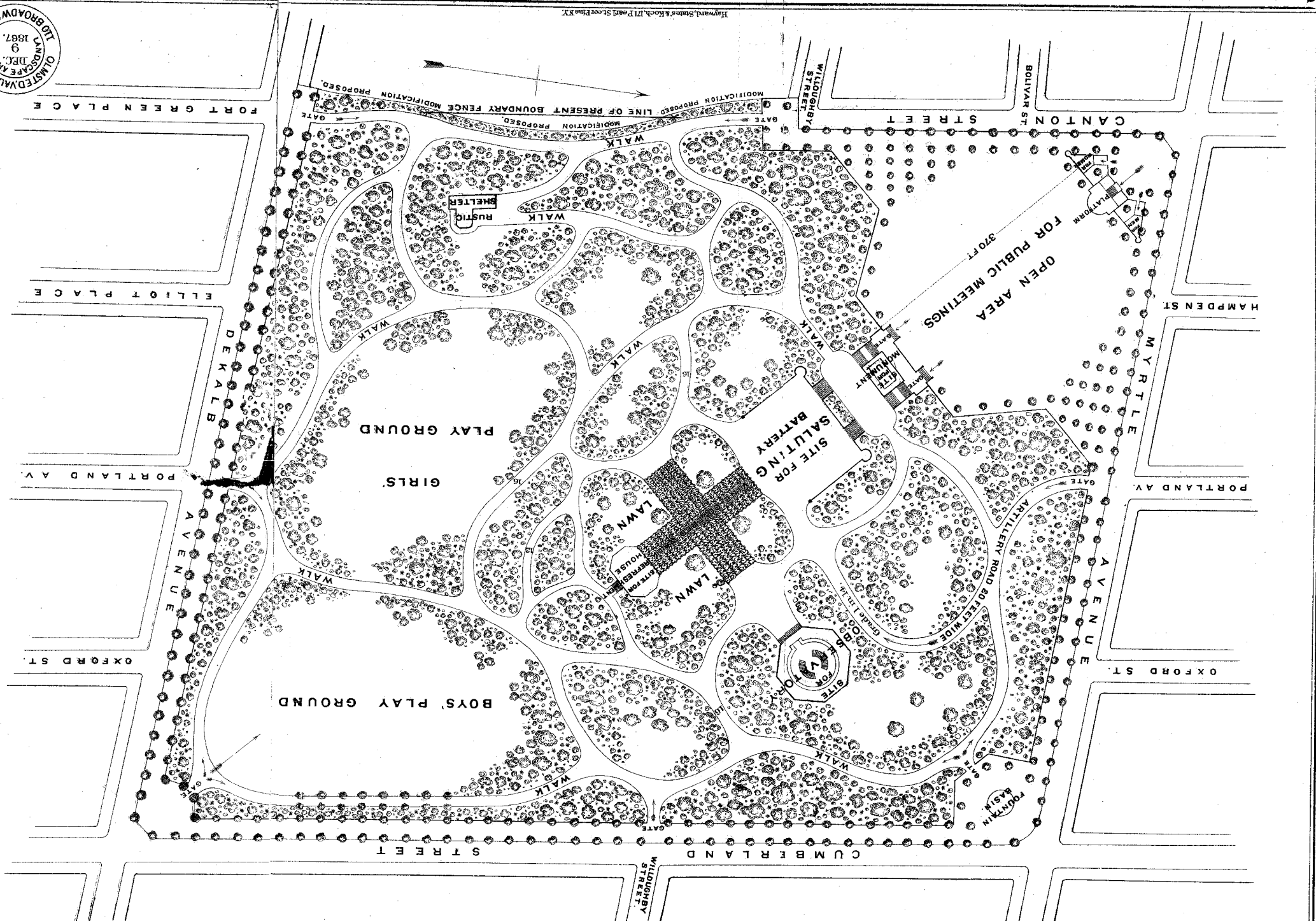
The exterior slopes of the Park have been formed along Flatbush Avenue, from the Plaza to the end of the Deer-Paddock, and along Ninth Avenue, from the Plaza to the vicinity of First Street—in all, a length of about 4,200 feet.

The north open ground has been completed and seeded as far as the line of First Street, and the ground has been worked considerably farther into the Park, but is not yet finished.

The ground in the woodland, in the vicinity of the East Wood Lanes, has been worked over and seeded. About $1\frac{1}{4}$ miles of the Eastern branch of the main Circuit Drive have been paved. The finished drive commences near the main entrance, and, passing between the North-open and the Childrens' Play Grounds, continues through the Battle Pass, and along the Deer Paddock. Branching at the East Wood Lanes, it extends, on the left, to the upper arm of the Lake, now prepared for skating, and on the right to a temporary junction with the Coney Island Road.

The lines and grades have been established, and considerable work done upon the Brier Hill extension of this drive, through and beyond the Carriage Concourse, to the point where it will cross the proposed bridge over the arm of the Lake. Some work has also been done upon this drive beyond the location of the bridge. The Brier Hill Concourse, as enlarged, has been finished, and is ready for paving. The drive connecting the main circuit with Flatbush Avenue at the Wilkink Entrance, has been graded, but has not yet received the road metal.

A portion of the lower Carriage Concourse, and the whole of the great Pedestrian Concourse have been graded, the material obtained from the lake excavations being used for this purpose. These graded surfaces have been made serviceable as places of deposit for stone, top soil, and other material, hereafter to be used in that vicinity. The grading of the eastern Bridle Road has been extended through the woodland and ravine, to the point where, with the stream and



footpath, it is to pass under the central drive, and thence to where it meets the eastern drive opposite the Willink Entrance. None of the

A number of the walks in the Childrens' District have been finished, as has also most of the walk which leads to this district from the main entrance. The walk along the east side of the North-open has been finished for a length of 1,350 feet, and the line has been extended, and is ready for paving as far as the ravine. The walk has been graded from the Childrens' District, along the Deer Paddock, and through the archway under the drive to the Lake; also the walk connecting the Willink Gate with that last mentioned.

The soil has been stripped from a large portion of the lake district and piled for future use. The arm of the Lake lying on the west side of Brier Hill has been excavated and puddled, and an area of about five acres has been made ready for skating this season. Considerable excavation has been made for the main lake at points where the force could be worked to the best advantage. It is proposed to establish the summer level of water in the lake at an elevation of 63 feet above mean high water, and to make the depth in summer, seven feet. The pools in the Childrens' District, and near Battle Pass, have been finished, and considerable work has been done for the Deer Paddock stream.

Two archways have been commenced. That for the passage of the main eastern walk under the circuit Drive, near the main entrance, has been carried up to the level of the springing line of the arch. The masonry of the archway under the drive, near the present Skating Lake, has been completed, and the drive graded over the arch. A culvert arch, with one facade of rock-faced masonry, has been built at the outlet into the Deer Paddock of the stream from the small pool near Battle Pass.

Excavations have been made, and foundation stone delivered, so that masonry can be commenced early in the coming spring for two other archways.

11 $\frac{1}{2}$ miles of vitrified pipes and tiles for drainage of roads and walks, for collecting surface water, and for the agricultural tile drainage of meadow-lands, have been laid, with proper inlets and basins. The details of this work are shown by the Drainage Map and Tabular statement accompanying this report.

7,121 lineal feet of wrought iron and cement pipe, for the water distribution, have been laid by contract. The location of the pipes, hydrants, and stop-cocks, and the details of this work, are shown by the tabular statement and the accompanying Water Distribution Map.

Drives finished, 125 feet wide.	500	linear feet.
46	875	"
40	2,550	"
30	1,500	"
23	600	"
Total length of drive finished.	6,025	"
or, 1 1-7 miles.		"

Drives in progress 150 feet wide.	1,300 lineal feet.
60	250
50	250
46	700
40	3,200
35	1,360
23	1,225
Total.....	8,285

or, 1 3-5 miles.

[illegible]

Walks finished	16	feet wide	3,400	lineal feet.
"	12	"	725	"
"	10	"	550	"
"	9	"	200	"
Total			4,875	"

MASONRY.

Amount of brick masonry.....	743	cubic yards.
" " concrete for do.....	52	" "
" " stone masonry.....	1,122	" "
" " concrete for do.....	256	" "
" " stone dressed for Bridges.....	144	" "
" " " " Steps.....	770	lin. feet.
" " curb-stone dressed.....	9448	" "
" " " laid.....	23,825	" "
" " Belgian pavement.....	71,289	sup. feet.
" " Cobble pavement.....	2,545	" "

AMOUNT OF STONE BROKEN.

McAdam stone by stone-breaker.....	3,234	cubic yards.
Telford " " hand.....	5,404	" "
Spal " " ".....	4,781	" "
Total.....	13,419	" "

MATERIAL MOVED.

During 1867. Total to Jan. 1st, 1868.

For grading and shaping drives, bridge-roads, walks, meadows, and slopes.	Cub. yds.	134,098	136,613	219,279
For lakes, pools and streams.....	" "	" "	" "	" "
For Plaza.....	" "	123,764	170,355	" "
For sewers and drains.....	" "	25,191	39,090	" "
Soil.....	" "	184,277	249,477	" "
Peat.....	" "	20,596	44,739	" "
Clay.....	" "	18,932	24,838	" "
Manures and compost.....	" "	10,787	10,787	" "
Stone.....	" "	34,769	52,212	" "
Gravel and sand.....	" "	6,933	6,933	" "
Miscellaneous.....	" "	13,237	13,731	" "
Total cubic yds.....		709,197	968,054	

THE SMALLER CITY PARKS.

The smaller Parks in the City of Brooklyn having been placed under the care of the Commission during the year, surveys were made, and topographical maps constructed, as a basis for designs for their improvement. At Carroll Park, no proper provision had been made for the escape of surface water, which overflowed the walks at every storm. An inlet basin has, therefore, been built at the lowest point of the ground, and connected with the Smith Street sewer. This has been located with reference to a future more complete system of drainage. The fence of this Park has been painted, and the gas-lamps, which were unserviceable, have been renewed. The fence of the City Park has been repaired. Nothing in the way of construction has been done at the Washington or City Hall Parks.

EXTERIOR WORK.

A Survey of the Kings County Parade Ground, and the adjacent roads and streets, has been made, and a topographical map constructed. A careful test survey has been made of the lines for the proposed extension of Clinton Avenue from Atlantic Avenue to the Plaza. A topographical examination and preliminary survey have been made along the location of the proposed Parkway from the Plaza to the City Line.

THE ENGINEER CORPS.

The general organization of the Engineer Corps remains as at the time of the last Annual Report. The Assistant Engineers, Mr. Wilson Crosby, Mr. James C. Aldrich, and Mr. L. V. Schermerhorn, have rendered careful and appreciative service upon the divisions of the work entrusted to them, and the other members of the corps have been constant and faithful in the discharge of their respective duties. Accompanying this report will be found a map, showing the general progress of the work; a map, showing the drainage system, as far as executed, and a map showing the water distribution now laid down.

Respectfully submitted,

JOHN BOGART,

Assistant Engineer in Charge.

REPORT OF J. Y. CUYLER,

ASSISTANT ENGINEER IN CHARGE.

PARK COMMISSION, CITY OF BROOKLYN,
ENGINEER'S OFFICE, *January 1st, 1868.*
MR. C. C. MARTIN,
Engineer in Charge.

DEAR SIR:—The following is a report of means and materials employed in the construction and maintenance of the Park, during the year 1867:

FORCE EMPLOYED.

The earlier part of the year 1867 was marked by an unusual prolongation of severe weather and continued frost, which was so far favorable to the advancement of the work, as it secured good roads and runs.

This work mainly consisted in heavy earth excavation in the Plaza district, mucking and composting in the Pigeon Ground, and the general collection, assorting and preparing of stone, for roads, walks, &c.

These operations gave employment to an average force, comprised of horses and carts, teams, stonebreakers and laborers, of about five hundred men, through the months of January, February and March.

Active Spring operations were resumed, early in April, with a force of six hundred men, increased to one thousand at the close of the month.

In the early part of the Summer, a large area of new ground coming under the jurisdiction of the Commission, the force was gradually and continuously increased, to meet the necessities of the developing work, in this newly acquired district.

The following statement will show the average number of employed force during the several months of the year, together with a comparative table of force for a partial corresponding season of 1866:—

STATEMENT SHOWING THE AVERAGE NUMBER OF EMPLOYED FORCE FOR THE MONTHS AND YEARS NOTED.

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1866.	Work Park	com- July	men- 1866.	ced on the			325	450	550	620	700	725
1867.	700	630	410	800	1,000	1,150	1,200	1,325	1,750	1,825	1,800	1, 100

There were 289 working days for the year, giving an average of 24 days per month.

From the foregoing statement it will be seen that the largest force employed, collectively, at any time during the season, was between eighteen and nineteen hundred men, although, owing to changes continually occurring, employment, for a period of from half a day to three days, was given to at least three thousand different individuals during the year.

The scheme of organization remains substantially the same as last year, consisting in the division of the labor force into gangs of convenient size, each with a competent Foreman and Assistant; the whole being under the direct charge and supervision of a General Foreman, who is responsible for the efficiency of the force. He suggests all details, and transfers, and recommends promotions, removals, &c.

The Foremen are responsible for the exact execution of the orders they receive from the General Foreman, and are required to make their men work industriously and effectively during all the time for which they give them credit in their time-books. When, therefore, from any cause, they cannot secure profitable labor, with good order, from any man, cart, or team, they must immediately withdraw him or it from the work, and so of the whole gang, or any part of it.

To enable them to carry out these requirements, foremen are given the power of suspending any one, or any number, or all, of their men, teams and carts, at any moment, and are required to report every day, in writing, (a convenient printed form being provided for the purpose), the amount of labor performed by all their men, together with the names of any for whose work they are responsible, who fail to do the service required of them.

This places the laborer in direct responsibility to the foreman under whose eye his work must be performed; and it is the foreman's fault, if he cannot control his men, and secure an efficient and industrious gang.

Abuse of authority, on the foreman's part, is held in wholesome check by the fact, known to all the employees, (by a printed notice conspicuously posted on each tool cart on the Park), that redress for wrongs may be had by application at the Superintendent's Office on the Park. Calls for this purpose are made almost daily, when the work is in progress.

In addition to the ordinary labor force, a large number of mechanics have been employed this year, consisting of stone-cutters, stone and brick masons, blacksmiths and carpenters.

These were classified in gangs, and placed under the charge of a general foreman, having special qualifications for their supervision and the management of mechanical works.

DISCIPLINE.

The following statement, being an abstract of the office record, will show the number of suspensions and discharges which have been made during the year:—

DISCHARGES.

Number of Foremen discharged for insubordination,.....	1
Number of Foremen discharged for inefficiency,.....	1
Number of Assistant Foremen discharged for inefficiency,.....	8
Number of Assistant Foremen discharged for other offences,.....	2
Number of Laborers discharged for neglect of duty,.....	75
Laborers and others discharged for inefficiency,.....	300

SUSPENSIONS.

Number of Foremen suspended for breach of discipline,.....	6
Number of Assistant Foremen suspended for breach of discipline,...	2
Number of Laborers, &c., suspended for breach of discipline,.....	85

Discharges of foremen, assistants, laborers, &c., result mainly through their failing to meet the requirements demanded of them in their several capacities.

The suspensions were of a disciplinary nature, for minor offences. During the year one laborer has been promoted to the office of an Assistant Foreman.

Seven Assistant Foremen have been promoted to the office of Foremen, and two Foremen have been advanced to the rank of Assistant General Foreman.

KEEPERS AND THE PUBLIC USE OF THE PARK.

During the year the temporary watch force referred to in the report of 1866, has been enlarged and reorganized with reference to the use of the Park by the public.

In addition to the ordinary patrol of the Park with a view to the enforcement of the ordinances of the Commission, guiding and instructing visitors, checking slight misconduct, and reporting accidents, disorder and irregularities occurring in any part of the Park, at any hour of the day or night, the force has also had the duty of guarding the large number of tools and supplies which are necessarily much exposed, especially during the intervals when the labor force is not at work.

This duty, though performed with commendable zeal, has not entirely prevented pilfering.

The following is a list of arrests made :

For stealing shrubbery.....	1
“ “ Lumber and tools.....	4
“ Obstructing a Keeper in performance of duty.....	1
Total.....	6

The organization of the force during the latter part of the year has been as follows :

2 Head Keepers ; 4 Ward Keepers ; 8 Keepers.

An auxiliary body of forty-eight men have also been employed, who have served a part of the time as garden workmen ; five of the latter have been detailed to answer the inquiries of visitors at the Park gates, keep a record of visitors coming in, prevent the entrance of forbidden articles, to guard property in their immediate vicinity, and to give instructions to those bringing materials for use on the Park ; six men have been employed in the care of smaller Parks.

The following statement shows the number of visitors from Saturday, October 20th, on which day carriages were first admitted to a portion of the Park drive :

SUMMARY OF VISITORS ON BROOKLYN PARK FROM OCTOBER 20 TO DECEMBER 31, 1867.

	Single Carriages.	Double Carriages.	Equestrians.	Pedestrians.
Week ending Oct. 26.....	3,341	2,133	1,163	10,569
Week ending Nov. 2.....	4,047	2,269	1,247	14,185
Week ending Nov. 9.....	3,259	2,183	1,169	8,576
Week ending Nov. 16.....	2,895	2,274	1,183	8,386
Week ending Nov. 23.....	3,225	2,577	1,558	6,322
Week ending Nov. 30.....	2,242	1,606	1,072	4,465
Week ending Dec. 7.....	1,705	1,128	982	1,673
Week ending Dec. 14.....	818	573	305	1,270
Week ending Dec. 21.....	1,003	836	85	474
Week ending Dec. 28.....	1,411	1,166	645	1,724
Three Days, Dec. 29, 30, 31.....	802	596	357	1,598
Total.....	24,748	17,341	9,766	54,242

The weather during the month of December was very unfavorable for out-door exercise.

Estimating that four persons accompanied each two-horse vehicle, and two persons each one-horse vehicle, the total number of visitors for the period above noted was 180,868.

The largest number of visitors on any one day, entered on Sunday, October 27th, viz : 14,906.

SUPPLIES.

Appended will be found a table, showing, under six hundred heads, the various tools, materials and supplies of all kinds, for the general care and proper disposition of which I have been responsible, comprising all that have been purchased for the Park from the outset of the work. The Table also shows, under each head, the quantities received, issued and on hand, at this date; the deficiency under each head is likewise shown, most of which is due to the loss by fire, reported last year.

While active operations are in progress, an amount of tools considerably in excess of the number of men employed is required to supply temporary deficiencies, occasioned by repairs and exchanges.

The supply of Rollers, Derricks, Trucks, Wagons, Carts, &c., belonging to the Commission are generally in good condition, and all tools susceptible of repair are now being overhauled and made serviceable for work in the Spring.

The following quantities of manure, night soil and fertilizing materials have been received: 1,195 two-horse loads of selected horse-manure, equivalent to about 3,346 cubic yards. About 3,654 cubic yards, or 1,305 two-horse loads have been received, under contract, from the several City Railroad stables.

There have also been received:

2,462 Loads of Night Soil (used in composting).
136 Loads Disintegrated Bamboo fibre.
328½ Barrels of Fish offal.
20,000 pounds of Fish Guano.
35,114 pounds of Super-Phosphate of Lime.
16,011 bushels of Shell Lime.
1,755 bushels of Marl.

The Park nurseries now contain the following stock:

Deciduous Trees..... 13,402
Evergreen do..... 11,671
Shrubs..... 20,911
Besides which the Commission possesses a large quantity of rooted cuttings of shrubs.

The employees co-operating with me in the several departments under my charge, have efficiently discharged the duties assigned them. Respectfully submitted,

JOHN V. CUTLER,

Assistant Engineer in Charge.

REPORT ACCOMPANYING A DESIGN FOR WASHINGTON PARK.

To the President of the Board of Commissioners of Prospect Park, Brooklyn:

Sir:—In accordance with your instructions, we have prepared, and herewith submit, a design for laying out the public square known as Fort Greene, or Washington Park.

The ground to be improved—over thirty acres in extent—is in the heart of the city, and is mainly elevated above the adjoining land. The rise in parts is so considerable that the surrounding buildings are overlooked, and interesting views are commanded, extending far up the East River, and down the Lower Bay. We also, find, that even in the hottest weather of summer, and when the air in the adjoining streets is disagreeably close, a refreshing sea-breeze can often be enjoyed on the higher levels of Fort Greene.

Owing to the advantages it thus offers of fine prospect and pure air, combined with extended and varied character of surface, the ground suggests a more complete and interesting arrangement of accommodations for popular recreation than can often be attempted in the public squares of large towns; and yet it is altogether too restricted to be properly laid out as a park.

The general treatment which will be likely to give those who frequent the grounds, during the day, the greatest enjoyment, must be of a somewhat rural character; but it is undesirable, with reference to public morals and the general police of the city, that grounds laid out in this way should be left open after dark, or that they should be used for the assemblage of public meetings, the display of fireworks, or for other incidental purposes which bring together large crowds.

Such public needs may be considered in the preparation of the general design, but they must not be confused with the objects which are to be had in view in the laying out of such portions of the ground as are to possess the character of a garden; for the requirements involved, being essentially dissimilar, can with no greater propriety be incorporated together in a ground intended for popular resort, than can the requirements of a lecture-room and a dormitory be incorporated together in a building which is to be used for educational purposes.

Assuming that there is adequate space for the development of both ideas in this case, our first study has been to establish a division which shall give to each class the site which will be most convenient for it. For refreshing purity of air and beauty of prospect, the central part of the square is, beyond question, to be preferred. As a place for public assemblages, the lowest ground, in the angle between Myrtle avenue and Canton street, has the advantage of being readily accessible from the more densely populated parts of the city, and offers a sufficiently large area of surface that will require but little alteration to make it available.

We accordingly set off, in this quarter, a space 370 feet in diameter, which will give easy standing-room for a mass meeting of thirty thousand persons. The whole of this ground will have a regular slope towards the north end, which furnishes a suitable location for the display of fireworks, and is provided in the center with a "rostrum" for public speakers, to which may be attached, if thought desirable, convenient accommodations for the seating of guests of the city, for bands of music, or for committees.

Although the space is not large enough for the practice of military manoeuvres, it will serve for the parade and drill of a regiment, and for a marching review of a division or larger body. It would, on any occasion of necessity, be a convenient and suitable position to place and hold in readiness for service a large or small body of troops.

It has the advantage for this purpose of being in the immediate vicinity of the State Arsenal, and between it and the Jail and the City Hall; and as there is no other position in the city which could be thus occupied, without interrupting the common use of the streets, such a reservation may eventually prove to be one of importance. The whole space may be brilliantly lighted. There will be no fence or barrier of any kind between it and the streets on either side, and when occupied by public meetings, thousands of persons may pass in and out, without confusion or serious disturbance to the main body.

The high ground in the interior of the Park, immediately opposite the rostrum, has been the scene of great historical events, and for many years has been used by the citizens of Brooklyn as a place for patriotic demonstrations. The sentiments and purposes which are thus associated with the site should, we think, be respected. We therefore propose to reestablish, in a more fitting manner, at this point, the feature of the "SALVING GROUNDS," and have laid out, in connection with it, a road for artillery, 20 feet in width, which will be entered from the gate nearest the Arsenal.

Through the liberal action of the Mayor and Common Council, with whom the idea originated, a tomb for the reception of the remains of the "Prison-Ship Martyrs" is included in the design, and we have been very desirous to give full emphasis to this important feature in the arrangement of the general scheme of improvement.

The hill-side between the Saluting Ground and the exterior of the Meeting Ground seems to be the most appropriate position for the erection of the contemplated memorial, and we have, therefore, reserved at this central point a site amply adequate, not only for the structure itself, but for the approaches and other accessories that will require to be connected with a work of this character.

The monument proposed to be placed over the tomb would thus be at a short distance from the Meeting Ground below, and would be inaccessible to those occupying it whenever the Park gates were closed; but it would be at all times a conspicuous object, and would be well calculated, in connection with the other circumstances to which we have alluded, to aid in establishing the real solemnity of the duty which meetings ostensibly held for political and patriotic purposes should always have in view.

With the intention of securing to visitors an agreeable walk in the immediate vicinity of the square, when the gates of the enclosure are shut for the night, the adjoining sidewalks are proposed to be increased in width to 30 feet, and to be planted with a double row of trees.

Gates are provided at the various angles, and in the center of each side.

Special prominence is given to the angular approaches, and they are enlarged and symmetrically planted with trees, so that they may present a more agreeable effect to visitors entering the Park, and also offer facilities for an easy turn in connection with the exterior sidewalks.

The closure of Canton street, between Willoughby street and DeKalb avenue, being now made permanent by a special Act of the Legislature, one-half of the land that would have been taken up by the street is included within the present boundaries of Washington Park, while the other half belongs to the adjoining owners. The fence, as at present constructed, is carried on a line with the centre of Canton street; but this is a very undesirable arrangement, as it entirely spoils the two park entrances that should properly occur at the points where the public thoroughfare is interrupted. Under these circumstances, we have suggested, in our design, a modification of this boundary line which will allow of the introduction of symmetrically planned park gateways where they are needed, and at the same time

offer such advantages to the adjoining owners, that no objection to the change is likely to be made by them.

A large portion of the boundary fence would require, for constructive reasons, to be in the form of a retaining wall, and it would probably, therefore, be better to use a wall, in preference to an iron fence, for the other portion of the work; but this point is not one that requires immediate settlement.

In the enclosed pleasure-ground, broad walks are, in the first place so laid out that the whole space is thoroughly traversed and turned to account. Lines of communication, tolerably direct, and of easy grade, are at the same time secured for those who may have occasion to cross the Park during the day.

The general surface of the ground is very irregular, but it has been thought desirable to arrange for a nearly level lawn, of considerable extent, for boys; and for another lawn, of about the same dimensions, for the use of girls and children.

The undulating ground is intended to be somewhat closely planted, and is proposed to be so laid out that it will offer a series of shady walks that will have an outlook over open grassy spaces at intervals.

On the upper plateau, a site is arranged for a "Vine-Covered Walk," of considerable extent, which would offer, in hot weather, a sufficient protection from the rays of the sun, even at noonday. The ground plan of this shelter is in the form of a cross, one arm of which connects with the Saluting Ground, another with a building to be set apart for the sale of refreshments; a third with an "Observatory," of moderate elevation, to be erected on the site indicated on the plan; while the fourth commands the most interesting view over the city that can be obtained within the limits of the property.

The present surface is intended to be so modified that the grades of the walks will be easy and natural over the whole territory. In the execution of the design, it will probably be found desirable to dispose of some surplus material outside the limits of the square; but the plan is so conceived that all the earth to be moved may be distributed over the surface of the property itself, if this should turn out in practice to be the more economical arrangement.

Respectfully,

OLMSTED, VAUX & CO.,

Landscape Architects.

BROOKLYN, *September 9th*, 1867.

APPENDIX.

At a meeting of the Commissioners on the 25th day of January, 1868, Mr. A. A. Low submitted the following report on the subject of a sale of Washington Park, which, on his motion, seconded by Mr. Bergen, was ordered to be published in connection with the Annual Report, as an Appendix, expressive of the views of such members of the Board as should sign it.

SPECIAL REPORT.

In the judgment of the undersigned, were the Park Commissioners free to deal with Washington Park according to their own judgment, of what the best interest of the City demands, they would return the money raised for the improvement of the Park to the City Treasury, stop all expenditures thereon, and initiate measures for a sale of the property by converting it into building lots.

From the Maps on file in the Office of the Street Commissioner, it appears, that within the limits of this Park, as at present laid out, there were 435 lots and parts of lots facing upon the streets and avenues that intersected the Park, which streets and avenues were ordered to be closed.

It is computed that if the whole plot were judiciously laid out and sold with suitable building covenants, and a satisfactory title given, this property would realize more than a million of dollars. If judiciously improved it is safe to assume, at the present cost of building, an expenditure when the whole tract is covered with the average number of buildings, of at least three millions of dollars.

The probable saving to the City may be reckoned thus:—

Value of Washington Park if divided into lots and sold.....	\$1,000,000
Cost of contemplated improvement if retained as a public Park.....	200,000
Direct saving.....	\$1,200,000
The interest on this sum would be per annum.....	84,000
Tax on value of lots and improvements estimated together at.....	3,000,000
At three and one-half per cent. per annum.....	105,000

If this calculation is correct there will be a direct gain to the City of one million two hundred thousand dollars, and the public debt for the cost of Prospect Park will be diminished to this extent; while the taxes on property to be improved will in a few years be sufficient to pay the interest on one and a half millions more.

The undersigned believe that in stopping any further outlay, realizing by sale the full value of the grounds for building purposes, and by the taxes on improvements that would speedily follow, the City would be benefited to the extent of nearly three millions of dollars, and the question may very naturally be asked why the City should not thus be benefited, or why the first Twelve Wards of the City should not be relieved to this extent of the burden which Prospect Park is bringing on a part of the city for the good of the whole?

Three millions and a half of dollars have been already expended for land and improvements, and from present appearances several millions more will be required to carry out the projected plan of improvement. When Washington Park was laid out in 1848, no part of the cost was assessed for benefit on the surrounding territory, because the improvement was considered a public and not a local one.

The cost apportioned to certain wards according to a supposed interest, in the improvement, has since been liquidated, by a general tax on the first twelve, and the twentieth wards of the city. In the event of a sale, a like distribution of a sum equal to the principal of the whole cost, might be deemed equitable.

Washington Park has ceased to be a public necessity, being wholly superseded as a place of general resort, by Prospect Park; and it can never regain its importance, or be of any special value to the community at large. Nor will it be long needed for military exercises; special provision having been made for a parade ground adjoining Prospect Park.

If public money is spent to adorn it, the public treasury will be used for the private advantage, or mainly so of those who live immediately around it, and who have never been assessed for benefit. But it is asserted by those who live in the neighborhood that the Park is not a benefit, but an injury; being the resort of the idle, the dissolute, and the depraved, to the exclusion of respectable citizens. If further expenditures are incurred and the grounds made more attractive, they will not be sacred to any better uses than hitherto, unless maintained at increased expense by a strong force of police, and thus kept free of vagabonds by day and by night.

The bones of the martyrs of the Revolution, may with much propriety be transferred to a portion of Prospect Park, which lies near

to the Greenwood Cemetery, to some spot within sight of the statue to be erected in honor of the great martyr of our late civil war.

For months past the Park Commissioners have had before them a plan for the improvement of Washington Park, the probable cost of which has been estimated at \$200,000. If an iron fence is put around the ground according to the requirements of a recent law of the Legislature, the outlay will much exceed this sum; and the execution of the work has been kept in abeyance, because of a desire of some members of the Board that the sentiments of their fellow citizens should first be known on the subject; a statement of the foregoing facts and calculations is therefore briefly presented in this report for their consideration.

BROOKLYN, *January* 28, 1868.

A. A. LOW.

T. J. BERGEN.

A. B. BAYLIS.

W. S. GRIFFITH.

REPORT ACCOMPANYING A DESIGN FOR THE PARADE GROUND.

*To the President of the Board of Commissioners of Prospect Park,
Brooklyn:*

SIR:—We herewith present a plan of improvement for the tract of land required to be prepared by your Commission for a Parade Ground. The plot contains forty acres, and is situated outside the limits of the Park on the south side of Franklin Avenue, and east of the Coney Island Plank Road; it is quadrangular in general form and is comparatively level, but is sufficiently inclined from the northeast to the southwest for good drainage fall. In respect to general lines of surface it is therefore well suited for the purpose to which it has been appropriated and will require comparatively little grading.

On occasions of ceremony it will be generally desirable that the reviewing officer and staff, or personages to be honored, should pass through the Park and enter the Parade Ground from the circular vestibule or ante-park already laid out at its northwest angle. It will be convenient, therefore, that the reviewing point should be directly accessible and in full view from this entrance and we have arranged the design accordingly. It will then be desirable that the column of troops to be reviewed should enter the Parade Ground at the side opposite the reviewing point, and an entrance is prepared for this purpose in the design. A column, entering from the street by companies would then form at once into regimental lines and remain massed on the east side until required to march in review, when it would move in the usual manner along the north side, and return on the south side.

Between the north and south sides, there is a space sufficient for these movements but none to spare; we therefore assume that whenever a

street is opened on the south of the Parade Ground, it will be laid out entirely clear of the property now under control of your Commission.

The reviewing officer would face east and occupy a position from which the whole field could be commanded at a glance, except the comparatively small space in his rear, which is proposed to be reserved for spectators. The boundary of the ground is here irregular and we have taken advantage of this peculiarity to set apart a site for such outbuildings as will, in all probability, be hereafter needed. As these buildings marked B on the plan should not come prominently into notice, and as it is undesirable to retain the present oblique line of the property as the western boundary of an otherwise rectangular field, we have arranged the space required for miscellaneous purposes in such a way that when viewed from any interior point the whole will appear a symmetrical quadrangle.

A site for a building of moderate extent, is indicated on the extreme west and marked A on the plan; the first story of which might be partly open and furnish shelter from sun and rain for a large number of persons; in the second story accommodations could be arranged for the use of officers and invited guests.

As a military parade always has interest for the public, and it is desirable for the sake of the military itself that it should receive attention, it is proper and just that some special provision should be made for the convenience of spectators, so that, without pushing or crowding for front places, or any disorder which would destroy their pleasure, a large concourse of persons may overlook the field. We therefore propose to appropriate a stretch of ground immediately in the rear of the position indicated for the reviewing officer, and marked CC on the plan, for the use of visitors, and to give its eastern face a gradual upward slope, so that it may offer to all who occupy it, a good chance to see whatever may be going on; and as the Parade Ground itself will fall slightly towards this artificial bank, the advantages to be gained by this arrangement will be correspondingly increased.

A large graveled area is shown on the plan at the west side, connected by roads on the north and south sides with a smaller graveled space on the east, the greater portion of the Parade Ground being included in one rectangular central plot of green sward.

It is not proposed to reduce the ground available for military exercises by planting, but a belt of trees is indicated on the west and southwest border of the space to be occupied by visitors, for the purpose of offering prote^{ction} from the afternoon sun. A continuous line of the American Elm is so proposed to be set out inside the boundary fence that

encloses the property, this tree being preferred because the natural angle of its branches adapts it to a situation where abundant clear space is wanted below the foliage.

The plan we have thus presented is intended to be sufficiently comprehensive in its character to include all the more important requirements that naturally appertain to a Parade Ground, but in accordance with our instructions the design is so arranged that it can be carried out in several successive stages.

Respectfully,

OLMSTED, VAUX & CO.,

Landscape Architects.