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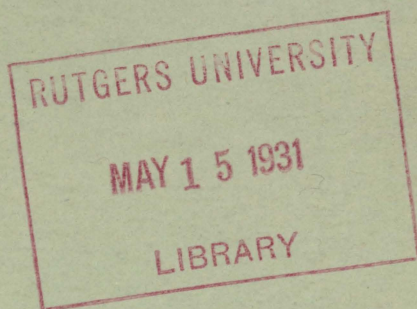
# ANNUAL REPORT

OF THE

# Shade Tree Division

[DEPARTMENT of PARKS and PUBLIC PROPERTY]

—  
City of Newark, New Jersey



For the Year Ending December 31, 1917

DEPARTMENT OF PARKS AND PUBLIC PROPERTY

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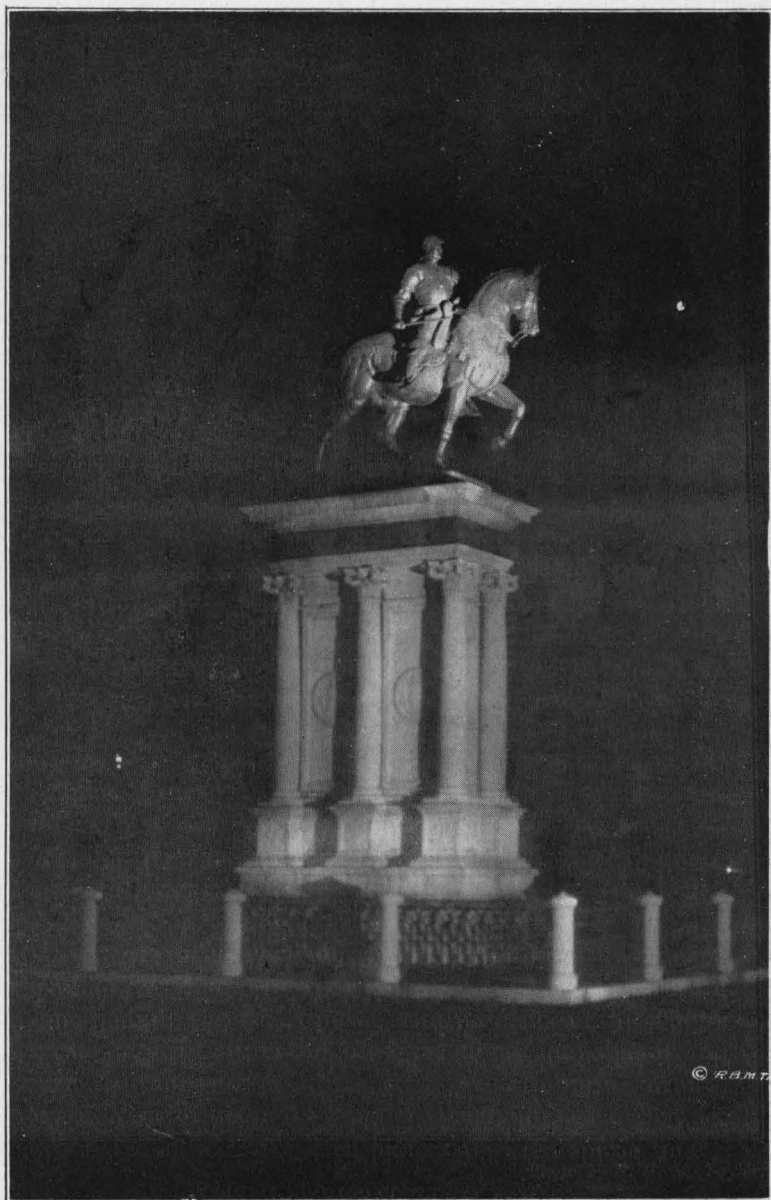
CITY OF NEWARK, NEW JERSEY



FOR THE YEAR ENDING DECEMBER 31, 1917



THE ESSEX PRESS, PRINTERS  
NEWARK, N. J.



COLLEONI STATUE

*Photo by R. B. M. Taylor.*

ANNUAL REPORT  
OF THE  
Shade Tree Division  
DEPARTMENT OF PARKS AND PUBLIC  
PROPERTY

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*Hon. John F. Monahan, City Commissioner, Director of the  
Department of Parks and Public Property.*

DEAR SIR:

We beg hereby to submit to you a report of the Shade Tree Department for the year 1917. In it we undertake a brief account of the year's activities in the two lines of service allotted to us, viz.: (1) the planting, care, protection and maintenance of street trees; and (2) the development, care and maintenance of the city parks.

THE CITY PARKS.

There are twenty-four of these, covering a total area of 21.77 acres. This exclusive of street parking strips, of which we speak later. The largest of the city parks are those centrally located, like Military with its 6.45 acres, Lincoln with 4.37 acres, Washington with 3.40. With regard to all these areas, a duty of prime importance is

THEIR UPKEEP.

The laying out and developing of a park would be money, time and labor lost, unless *after* development that park is "kept up." And this latter job requires persistent attention. The beauty of a park is not the result of

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happy chance. Much planning and hard work are called for in the making of that beauty to begin with; and much planning, hard labor and constant care are called for to *preserve* that beauty once it is attained. The lawns, the walks, the trees, the shrubs, the flowers, the statuary, the settees, even so prosaic a matter as the removal of scattered litter—all these call persistently and insistently for attention; and if they are not attended to, or only slackly attended to, the result is a park which has ceased to be a thing of beauty and has become an unsightly (and, we may add, malodorous) nuisance.

### THE LAWNS.

Take, for example, the park lawns. A well-kept lawn is surely a pleasure to look upon. But think of some of the many things necessary if a lawn is to be "well kept." There are the weeds, for instance. These must be watched for all the while; and, when detected, must be spudded out. And this at once and without delay. For if instant and thorough "spudding" is neglected the weeds spread like a blaze and the lawn is ruined. Then there is the mowing. If a lawn is to be kept trim it must be mowed at least once a week, and this not only for appearance sake but for the health and vigor of the grass. Again, the lawns must be watered. We all know how burning and consuming are the dry, hot spells of our Summers. At such times especially the lawns must be watered, and well watered at that. Otherwise they would become hot, thirsty, feverish, and would brown up and wither. And it is to be noted that this watering must be done just so, and to just such and such an extent. It must be regulated by just what is needed; it must go just as far as will help, and must stop at where it will hurt rather than help. It seems a simple thing to water a lawn, but it's not as simple as it seems. Only men that "know how" can be trusted with the job.

And when the heat of the Summer is over and the chill days of late Autumn have come, the lawns have to be protected from the approaching cold of Winter. Our job then is to tuck them in under blankets of manure. Later the snows come and spread their white counterpane atop of this manure. And thus the lawns are doubly protected against the killing breath of Winter's blasts; and the rootlets down in the sod are kept warm against the Springtime that is on the way. This blanketing of the lawns with manure serves another purpose. After awhile, as we have said, the snows come and spread themselves. In due time the days of thawing come and the days of rain. The melting snow and the falling rain percolate the manure and the juices thence resulting seep down into the soil, enriching it and rendering its stored-up plant food available for the rootlets of grass above referred to. And so it is manifest that this job of manuring the lawns for the Winter is more than merely important; it is essential.

By and by the season mellows more and more toward Spring. Then we take up the rake and go forth and gather up the spread manure and remove it out of sight, for it isn't very sightly. The next thing is to get out the roller and roll these lawns. We are reporting here only the most important of our labors in the upkeep of these lawns, and there is not one of these labors which is quite as important as this of rolling. In the Spring the lawns *must* be rolled. To the lawn Spring would not be Spring without its Spring rolling. The lawn simply cannot get on without it. Rolling spreads the root fibres, keeps the lawn firm, encourages a close mat, produces springiness, tends to the "refinement" of the grass. It is readily to be seen, then, that rolling is important. Indeed, it is indispensable to the good appearance of the lawns and consequently to the good appearance of the park as a whole,





PARK SCENE IN WINTER.

Then, in the Spring, and again in August, is the time for the sowing of the lawns with seed. In due course the seed that is sown "dieth and is quickened, and is raised up and changed into the glory of grass." And the lawns proceed to flourish and to gladden with their beauty the eyes of our people who by the thousands frequent these city parks throughout the season. But be it remembered that the said lawns will not flourish through the Summer if left to themselves. A good start in the Spring will not suffice. All through the season there must be constant watchfulness and care. There must be no let up in all needed weeding, and watering, and mowing, and rolling.

Another word re the lawns before we turn from the subject, a word in respect to the litter that gets itself scattered abroad over the face of a park. We have receptacles, of course, for the bestowing of refuse and rubbish. Most of the folks use them; but some do not. And so all sorts of odds-and-ends are left behind on the settees, or dropped on the walks, or thrown on the lawns. And this, of course, involves perpetual "cleaning up." It would never do to let a park become littered over with old newspapers, lunch remnants, egg shells, soda water bottles and "strong stuff" bottles ("strong stuff" gone), discarded socks, peanut shucks, cigar stumps, soiled collars, and so on and so forth. No; that would never do. Yet such would be the aspect afforded by the parks were it not for the work of constant "cleaning up." It's all right; we're not complaining. The parks are the people's, and they are for the people's use, and the people do use them—no end of people, we're glad to say. And out of the thousands who use the parks it is not to be wondered at if a few do not always behave quite according to Hoyle. No; we allude to the scattered litter and to the "cleaning up" it necessitates merely to point out another important item in our work for the Upkeep of the City Parks.



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### OTHER LINES OF PARK UPKEEP.

But, beside park lawns and park litter, other factors in the park ensemble need "looking after" to preserve their beauty. Take the park trees. Slightly growths they are; but they would soon cease to be slightly if they were allowed to go uncared for. Dead twigs and branch ends must be kept cut away. Diseased and injured wood must be cut out. The object is not only to improve the trees' appearance but also to prevent decay spreading from the dead wood. Some of the older trees perhaps may be found to have a portion of the trunk decayed, though otherwise the tree is in fine condition. To save it, the operation known as "tree dentistry" is performed, and the tree becomes "as good as new." And when the insect season comes around, the park trees must be sprayed and otherwise treated to ward them from the tussock moth caterpillar, the elm leaf beetle and other predatory grubs who, if they had their way, would strip every leaf from every tree in every park in town. But this matter is dealt with more at length in the second half of this report, that dealing with our street work. Another need of the park trees is subsoiling now and then. The object of such an operation is to strengthen the soil and preserve the fine growth of the trees.

Then take the shrubbery and flower beds in the parks. The upkeep of these is a job of some dimensions. There must be constant cultivating so that the soil may be kept loose and friable, that the plant food in the soil may be liberated and made available for the use of the rootlets, that air and water may have ready access to the roots, and so on. Then the beds must be kept carefully free of weeds, and must be properly watered. Dead flowers must not be tolerated. And the trimming of the plants must be all the while "looked after." Also the covering of the beds with their coat of manure for the Winter must not be neglected.

But too much space must not be used in this part of our report; and perhaps enough has been said, anyhow, to give a fairly clear notion of what is involved in the upkeep of the parks—in the preservation of their beauty.

#### THE PARKWAYS.

Our topic should include also some reference to the "parkways" consigned to our care. These are strips of highways reserved in this or that thoroughfare for parking purposes. Such a strip ranges from ten to forty feet in width and is set in the middle of the roadway, running the length of it. When such a strip is well sodded and well lawned, planted with appropriate shrubbery, and set out with trees, it makes a brave and inspiring picture—a picture varying in color and texture with every altered condition of season and weather. These parkways are to be found on Belmont, Chadwick, Custer, Fourth, Goldsmith, Grafton, Meeker, Pomona, Seymour, Vassar, Wilbur, Conklin, Scheider, Yates, Hawthorne Avenues, and Heller Parkway. Their area totals 8.50 acres. And this adds just that much to the city's park domain, for the development and upkeep of which this department is responsible.

#### A WORD AS TO MILITARY PARK.

. This, the oldest and most historic of all our city parks, had in 1917 what was unquestionably the busiest year in all its long career. It has ever been the favorite rallying place for all sorts of popular outdoor gatherings—gatherings political, gatherings social, gatherings economic, gatherings musical, what not. From the old band stand all sorts of orators have discussed all manner of causes affecting the people's welfare. Here Presidents and ex-Presidents of the United States have held forth to listening thousands. Here the famous Municipal Band Concerts have sounded forth sweet music to great



THE TIDES OF LIFE FLOW ON, FLOW ON  
Military Park—To and from the "Tube."

throng of rejoicing people. Through all the years that have come and gone since it was set aside as the people's common (in 1669), old Military has served the people as a people's rendezvous. But never has it served this purpose as fully, or more nobly, than in this war year of nineteen hundred and seventeen. No need to go into detail, here, on this topic; the press has been full of it all, and the people have been kept informed of it all, through all these crowded months since that eventful sixth day of April when our country took up the challenge thrown at her and drew sword to defend her own outraged rights and to "make the world safe for democracy." At this time of day it would be only "carrying coals to Newcastle" to describe to Newark's people how Military Park has acted through the year as a recruiting centre and as a rally ground for enormous gatherings of roused people assembled to push Liberty Loans, War Stamps, and all other causes having to do with the prosecution of the war. Other parks, Lincoln and Washington, also served on these lines; but old Military, true to its name and its traditions, has been the favorite stamping ground of patriotism. The spirit of Seventy-Six and of Eighteen Twelve and of the Sixties walked once more in Military Park.

#### A MODEST ARBORETUM.

During the year we installed a collection of new shrubs in Washington Park, shrubs of a nature that will best lend themselves to city conditions (smoke, dust, etc.). This was intended to be the beginning of a small arboretum which will not alone adorn the park but will also serve as an example and object lesson to Newarkers who contemplate planting shrubbery. The varieties so far constituting the little arboretum are privet, sumach, bayberry, Austrian pine, barberry, forsythia, spirea. It's a modest beginning, but we hope to extend and diversify it.

## SOME PARK MISCELLANEA.

At Boudinot Park we installed a new walk of concrete, 5 feet wide, 150 feet long, extending from East Park Street to the Mulberry Street entrance of the Terminal.

At Landing Place Park we installed a flight of concrete steps, 10 feet wide and mounting from the street walk to the top of the terrace at the monolith. Also, from this park, early in the year, we removed some 500 yards of gravel and replaced this with a like amount of topsoil and then rough graded the surface. Lack of soil and other conditions incident to these strenuous days of war have so far delayed further work which we had hoped to undertake for this new park.

At Phillips Park we installed a concrete basin for the fountain to be set up there. This fountain figured formerly at Clinton Park, whence it had to be removed to make way for the Colleoni Statue. It was a fine bit of fountain artistry in a rustic setting of boulders and water plants, designed by Harold A. Caparn, the distinguished landscape architect, and on its former site commanded much admiration. It will be reproduced exactly, with all its former appurtenances, at Phillips.

Military, Washington and Lincoln Parks, in each of these we set out a number of new trees. They were elms, oaks, liquidamber (sweet gum), and Norway maple. We had to take out of Military two giant elms which had stood there for upward of 150 years. They had become practically dead and altogether dangerous. They had nobly served five generations of Newarkers, and so were entitled to this, their honorable discharge.

Along Lincoln Highway and on the lawn of the City Hall we set out some new plane trees, fifty of them on the highway, four on the Hall lawn. This was done at the behest of the Contemporary of Newark, as one way

to honor and keep green the memory of the great American after whom the highway is named. The planting of these trees occurred in April and was made the occasion of much ceremony, the Mayor of the City, the President of the then Shade Tree Commission and other officials, besides ladies of the Contemporary, taking part.

#### THE DOANE PARK BLACK WALNUT.

There came a day in August of this year when necessity was laid upon us (a sad necessity) of taking down the famous and beloved black walnut tree which for long generations had adorned the lawned and treed triangle, bounded by Rector and Broad Streets and Park Place, and known as Doane Park. After its long term of service death had come to the old tree. It had kept to its post for 167 years, giving shade and shelter and beauty to this fine bit of parkland in the center of which it had stood for that long period. It reared its height some 75 feet above the lawn, had a trunk circumference of 13.3 feet and a spread of about 80 feet. It was a thing of beauty at all seasons of the year; not alone in the sweet days of Summer when it "shook its green leaves in the breeze," but even in winter as it spread abroad its bared, leafless boughs to the music of the gale, there was a majesty to it, and a grace of outline, such as gave one joy to look upon. Fine old Black Walnut of Doane Park! we mourn thy loss.

This tree had witnessed many an historic event in the long career of Newark. It was set out at least thirty years before the town's population had attained to 1,000; it endured to see that population figure at 400,000. It was twenty-six years old when the Declaration of Independence was signed, and proclaimed here. In that same year it saw the sojourn here for five days of Washington and his little patriot army of 3,000 men; and six years later it saw Father George pass through on his way to

New York when the war was over and Freedom had been won. When the tree was a youth of sixty-two years it heard the war of 1812 proclaimed and saw a draft made of every seventh man of Newark's people, and it saw one thousand Newark volunteers leave to take active part in throwing up entrenchments on Brooklyn Heights for the defense of threatened New York. The whirligig of time went on paying out its tale of years, and came a day in February, 1861, the Black Walnut being then 111 years young, when the tree looked down on all Newark entertaining one Abraham Lincoln, who was here on his way to Washington to be inaugurated as President of the United States and to take up the titanic task that awaited him. A mere fraction of a hurried interval in the life of the tree went by, and then it heard the echo of the guns of Fort Sumter—and Civil War was on; Civil War and four years of horror. Through it all the stately tree stood steadfast, looking its approval while Newark sent thousands of her men to the front and at the same time became "one of the main workshops of the North, turning out arms and clothing and sustenance for the soldiers engaged in the war." In time came Peace, and with peace came "Liberty and Union, one and inseparable, now and forever." And the old tree rejoiced and survived the speeding years till came the momentous war year, 1917, when Newark again gave her heart and hand to the cause of the country, gave again her men and money, and time, and thought, and toil "that this Nation may live, and that government of the people, by the people, for the people, shall not perish from the earth." And the Black Walnut of Doane Park looked on, and "saw that it was good." Then it seemed to say, "It is enough. Let me go hence and be gathered to my fathers."

And so the kingly old Tree, its end being come, was taken down and removed from sight. It had fought a



good fight. It had finished its course. Henceforth there is laid up for it a place in the remembrance of the Newark it served so long and so well.

## ACREAGE AND REALTY VALUE OF CITY PARKS.

Besides the aesthetic and other values of the city parks, it is worth knowing that as mere land they are appraised by the experts at the interesting total of nine million, two hundred and sixty-seven thousand dollars. The items constituting this total and the acreage of each park are given below:

Parks	Acreage	Appraisal
Arlington Terrace .....	.....	\$ 1,500.00
Berkeley Park .....	.25	4,000.00
Breintnall Park .....	.04	5,000.00
Buchanan Park .....	.14	2,500.00
Carlisle Park .....	.02	2,000.00
Chancellor Park .....	.10	1,000.00
Clinton Park .....	.49	100,000.00
Court House Park .....	.18	72,000.00
Court Street Park .....	.50	17,500.00
Halstead Park .....	.75	10,000.00
Jackson Park .....	.34	15,000.00
Landing Place Park .....	.25	10,000.00
Liberty Square Park .....	.85	30,000.00
Lidgerwood Park .....	.35	5,000.00
Lincoln Park .....	4.37	1,200,000.00
Lombardy Park .....	.23	10,000.00
Madison Park .....	.02	1,000.00
Milford Park .....	.97	10,000.00
Military Park .....	6.45	6,000,000.00
Mt. Prospect Park .....	.35	5,000.00
Orange Park .....	.18	7,500.00
Peshine Park .....	.02	2,000.00
Phillips Park .....	.54	20,000.00
Sussex Park .....	.12	10,000.00
Union Park .....	.15	15,000.00
Vailsburg Park .....	.48	2,500.00
Wallace Park .....	.21	6,000.00
Washington Park .....	3.40	1,700,000.00
Waverly Park .....	.02	2,500.00
	21.77	\$9,267,000.00

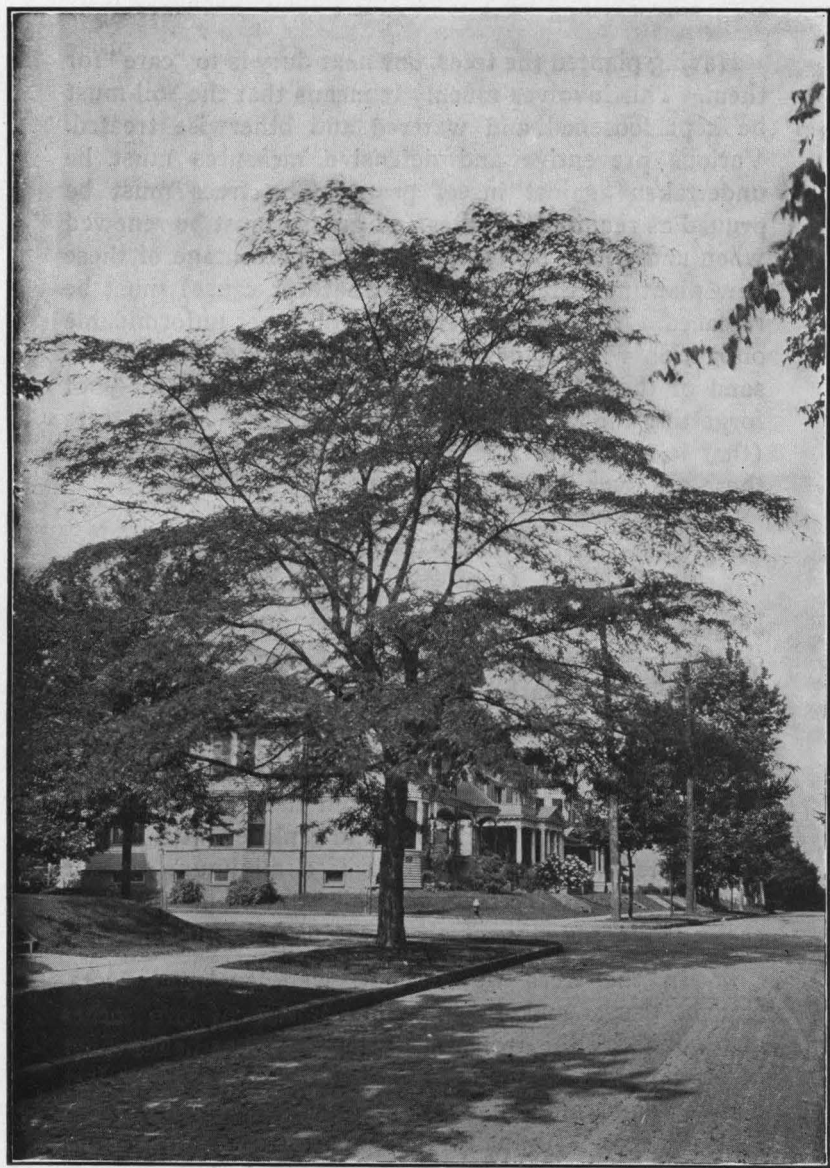
Adding the acreage of "parkways" (8.50) to the above, it will be seen that our total park area amounts to 30.27 acres.

### STREET TREES.

The other branch of our work as a department is "the regulation, planting, care, and control of shade and ornamental trees and shrubbery upon or in the highways" of the municipality; and we beg to submit here a brief, and necessarily condensed, report of our doings along these lines in 1917.

#### PLANTING.

During the year we set out 320 trees under what is known as "assessment" planting. At the request of property owners we set out 80. Under Arbor Day school exercises we planted 25. Here, then, was a total of 425 trees set out to increase by that much the verdure of Newark's streets. Of the class of plantings first above referred to, the cost is met, according to statute, by assessing the properties in front of which the trees are set out. The average assessment per tree in 1917 was \$5.03. The cost of "request" planting is met by bill rendered to the property owner; the price per tree varying with caliper and other conditions. Generally, the figure is \$5.00 for a tree not exceeding 2" in caliper. The assessment above referred to, as well as the charge for request planting, covers the cost of the tree itself and of all necessary stone cutting and subsoiling, as well as of the wire guard, stake, and rubber band. Also we guarantee the tree, and take annual systematic care thereof. Note that under our guarantee we replace without charge any tree of our planting that dies. Adding the number of street plantings for 1917 to the totals for previous years it will be seen that the Shade Tree department since the inception of its work in 1904 has set out on Newark's streets no less than 30,052 trees.



HONEY LOCUST—SECOND AVENUE, COR. CLIFTON.

Having planted the trees, our next duty is to "care" for them. This involves much. It means that the soil must be kept loosened and watered and otherwise treated. Various preventive and defensive measures must be undertaken against insect pests. The trees must be pruned as required. Stakes and guards must be renewed when and where necessary; and the percentage of these new plantings that die (from whatever cause) must be replaced. All these matters make up a not unformidable obligation when it is remembered we have thirty thousand of these "new" plantings to thus "care" for—not forgetting the additional care required by the older trees (that is, the trees planted before our time), of which there are over thirty-five thousand.

#### THE SETTING OUT.

A brief word here as to this important phase of the subject of tree planting. We must ask readers to be content with the following condensed account of how we "set out" in Newark:

1. An excavation is dug four feet in length, four feet in breadth, and three and one-half feet in depth, making a pit of fifty-six cubic feet. From this excavation the common street soil is removed and replaced with topsoil or is otherwise enriched. This is a minimum pit. It gives the young tree an opportunity to find nourishment easily while adjusting itself to the new conditions.

2. In the trees we set out, well-developed roots, straight trunks and a minimum diameter of two inches one foot above the ground are required. The heads must begin not less than seven, nor more than eight feet above ground, and must have well-developed crowns and good leaders. Annually transplanted trees, free from diseases and from injurious insects, we insist on; none others are accepted.

3. In our time we have used divers varieties of trees; but of late years we have limited our plantings to Norway maples, oriental planes, lindens, red oaks, pin oaks—as being under all the circumstances the most promising for this clime and locality.

4. Each tree is surrounded by a galvanized wire guard, six feet high, six inches in diameter, one-half inch mesh, topped with a collar made of rubber hose to prevent chafing of the bark.

5. A stake not less than two and one-half inches in diameter and nine feet long is driven deep into the soil, and to this stake the tree is attached, the tree being thus held in place until it has acquired its own firm grip upon the soil.

6. In a number of cases it has been necessary to cut the flagging or cement. In every such case the Commission takes pains to so finish the cut that it presents a perfectly neat appearance.

7. We may add that a tree assessment is not recurrent; once paid—that's the end of it. And we may repeat, here, that where any tree of our planting dies (whatever the cause of death) we replace that tree without further charge to the property.

#### INSECT WORK.

We have spoken in the lump of soil treatment, trimming, and the like. May we undertake to tell in somewhat more detail of the work of combatting and controlling the insect enemies of trees. There are insects and insects. Some of them are harmless, some are even beneficial, some are downright destructive. The insects we have in mind when we speak of "the insect enemies of trees" are of the downright destructive class. Unless the proper measures are employed against them they will

strip a tree "overnight," as the saying is. They wouldn't leave a green thing in sight if they had their own way. Witness the ravages of certain of them in New England, where they devastated whole regions of country as might a breath of poison flame, and where they wrought a destruction on shade and fruit and woodland trees that entailed millions of dollars of loss. Oh, the tree-attacking insect is a destroyer, all right. But the Shade Tree department is on the job to destroy this destroyer.

Now there are several of him. Here and hereabouts we have the tussock moth, the elm leaf beetle, the bag worm, the red spider, the spiny caterpillar, the wooly louse, the cottony maple scale, aphis, phenacoccus, and the wood leopard moth—a bad lot, all of them. The tussock moth, the elm leaf beetle, and the wood leopard moth (the borer), are the particular Huns of this bunch—the others named being not so destructive and covering only limited areas.

Of the three last named, the tussock and the elm leaf beetle are leaf-eaters, the borer is a wood eater. Hence the modes of combatting them differ. To begin with the tussock moth; in the caterpillar stage he is easily recognized by his very pretty red, yellow and black markings. A not unhandsome thing to look at. But if "handsome is that handsome does," then there is no beauty in the beast. We must set him down as an ugly customer. If left to himself he would do incalculable damage to our trees. He is distinctly a shade tree pest and directs his ravages against an unlimited variety of trees and shrubs. He seems to have a particular zest for the Linden and Horse Chestnut. In Newark he goes for every variety of tree except the Ailanthus, the Ginkgo, the Sycamore. The tussock's eggs hatch in the Spring and the caterpillars forthwith ascend the trees to make a meal of the foliage. And when they get there, unless that foliage

has been "treated," they ravage and feed and fill up until they become full grown. Then they crawl to the lower limbs and form cocoons, which are very conspicuous even to the untrained eye. In a short time the moth emerges from this cocoon and deposits eggs, which soon hatch, and so we have the second brood of the season. And there may be a third. However, here in Newark the first brood is the most destructive, and against these we mass our resources.

The secret of success against this destructive pest is to "get there" before he does. This we do. And when the tussock arrives he finds that foliage all sugared o'er with our arsenate of lead solution. And if he but eats one square meal of that leaded foliage, why, he curls right up and dies; but most of them when they have eaten a few of the leaves turn back from there and come swarming down the tree in myriads. They have decided to let that foliage severely alone.

The elm leaf beetle being also a leaf-eater, we use the same preparation against him. This, as we have already intimated, is a solution of arsenate of lead. We are now using the powdered form of this arsenate, two pounds of it to fifty gallons of water. This we apply in a fine spray by means of a gasoline power sprayer, 3½ horsepower, with a 200-gallon tank. We have four of these machines. In applying the solution we aim the spray at the under side of the leaves, taking pains to do thorough work; and only thorough, painstaking work will accomplish the object. The season of 1917 was the worst in years for caterpillars. Not in a long time had they appeared in such great numbers. And this was true not only here in Newark, but all over the country and in Europe. We're glad to state that Newark got them under control. We sprayed a total of some 32,000 trees, counting "large" and "small" trees. Average cost per



tree, allowing for labor, teaming, insecticides and power, came to about 15 cents.

#### WOOD LEOPARD MOTH.

The wood leopard moth (whose everyday name in the caterpillar stage is Borer) is, as both his name and nickname indicate, not a leaf-eater but a wood-eater. He avoids the leaf and bores his living out of the wood under the bark, the juicy cambium layer of the trees. He affects mostly the Elms and Silver Maples, but does not mind attacking the Sugar Maples and Pin Oaks also, besides the Red Maple and a few others. An important thing to note is that the borer never attacks a tree unless it is already the victim of poor nourishment and low vitality. Hence the sensible first thing to do is to keep the tree in good condition, well nourished, and consequently stocked with vitality. If this is done the borer will let that tree alone; and "an ounce of prevention is worth a pound of cure," as everyone knows.

Now when the borer has invaded a tree, it is difficult to combat him and drive him out. It is so hard to get at him. He is not to be fought on the surface of the tree, as in the case of the leaf-eaters. No, he has tunnelled his way to the inside, and there he abides snug and out of sight, all the while boring, boring, boring. He is hid in there in the dark at the end of some twisted, tortuous passage he has tunnelled for himself. Hence the difficulty of getting at him. The only method of dealing with him at present is to go over the trees at regular intervals and exterminate all that can be found. This is accomplished by inserting a pointed wire into the borer's tunnel and jabbing him to death; but sometimes because of the twists and turns of the tunnel your wire fails to reach the creature. In this latter case we inject bisulphide of carbon into the cavity and close the passage

with putty. The fumes of the bisulphide of carbon will kill the borer, if they reach him. Both these methods are efficient, as far as they go, but are necessarily very tedious. After the borers are killed the decayed wood must be cut out and the hole treated antiseptically and refilled with putty or such, to the outline of the tree, to keep out rain, damp, dirt, bacteria, etc., and help the wound to heal. The next step is to keep the tree as healthy as possible to give it a chance to recover from the borer's depredations.

But there are "two best" ways to exterminate the borer from any locality. (1) Such trees as are as yet unaffected, keep them well nourished and primed with vitality; the borer will shun those trees. (2) Plant only those varieties which are immune from the borer.

#### TREE GUARDS.

Is the horse a noble animal? He is. But he is rather ignoble in one respect. He has a way of dining on the bark of a tree which is not commendable. To be sure, the fine old quadruped is not to blame; he doesn't know any better. He just loves that tree—that's all. To be more precise, he loves the bark. It's a rare and toothsome delicacy to him. That's what he knows. Now when the bark of the tree meets the bite of the horse there is trouble for the tree. It is pitiful to see the scars a horse can leave behind him. The bark is not only eaten into but often peeled away in shreds and strips. The wood is thus exposed to the weather, to rain, dew, dirt, bacteria, and so on. Of course decay sets in and the tree rots. The "rot" extends and in time the trunk so weakens that it can no longer hold up the heavy top. The tree then is liable to fall at any time, especially in a storm, so that it becomes a standing menace to life, limb and property.

Now there's just one adequate way to stop this horse-biting of trees. And that "way" is the Tree Guard. There is an ordinance which imposes on drivers the responsibility of keeping their horses from injuring trees, and this is good to an extent and has accomplished considerable results. But the effective thing is the Tree Guard. It's a perfectly simple device, but a perfectly sure safeguard against the bitings of horses. For this reason we never plant a street tree without such a guard. It is made of wire, half-inch mesh, No. 16, galvanized, lined at the top with an inside collar of rubber hose to prevent chafing of the bark. These guards are our own make and the cost to us is about 55 cents, so that tree protection in this respect is not only certain but cheap. These wire guards resist the weather for years, but whenever and wherever one succumbs we renew it. It would be an excellent thing if every street tree, whether new or old, were fitted with one of these protectors. Of course for the larger trees a larger guard would be needed; but in view of the safety provided the cost would be negligible. Every property owner, for his own sake, should thus guard the trees fronting his tracts of realty. This would end for his trees the havoc made by the tree-eating horse.

#### PROTECTION FROM OTHER INJURIES.

In the laying of pipes, underground conduits, and the like, indeed in work of any kind involving excavation at or near the curb, there is danger of serious, even vital, injury to the roots of the street trees. So that it becomes one of our duties to see to it that in the prosecution of such work such injury is avoided as far as at all possible.

Akin to this is our duty of seeing to it that injury to trees is avoided in the work incidental to laying of walks, erection or repair of buildings, the stringing of overhead

wires and the placing of poles for the same, the delivery of goods from trucks to the curb, and the like. It is obvious that carelessness in the conduct of such work, or remissness in the use of certain precautions prescribed by ordinance for the trees' protection, would inevitably result in most serious injury. We are glad to say that most of those in charge of such works co-operate cordially with us in safeguarding the trees from injury. But there is yet room for improvement in this respect, and to secure this we have to "keep on the job."

#### AIR AND WATER.

We referred above to possible injury to trees resulting from the laying of walks. What we had in mind was the tendency in some cases to bring the walk too close to the base of the tree. Now this is fatal. For if a tree is to thrive, nay, if it is even to *live*, there must be free access of air and water to the roots. It is to keep a way open for such free access of air and water that we must from time to time "loosen up" the soil and keep it loosened; and not only so, we must also have a sufficiently adequate area of open earth about the base of the tree so that there may be unhindered passage for the required *amount* of air and water to get through to the roots. This of course cannot be if a walk of cement or flagging (or any other impediment) is brought too close to the tree. It is simply impossible to exaggerate the importance to the tree of getting its quantum, and its full quantum, of air and water at the roots. The tree cannot thrive without it; it will die without it. We would urge all property owners to maintain a generously adequate area of open ground about the bases of their trees and to take pains (it's a short and easy task)—to take pains to keep the soil loosened at the surface. Also from time to time water the soil, say three times a week, using six gallons each time (more for the larger trees).



THERE WAS ONE WHO SAID, "SUFFER THE CHILDREN TO COME UNTO ME,"  
AND OF THAT SAME SPIRIT WAS ABRAHAM LINCOLN

To do these simple, easy things is to give the tree the fair chance to which it is entitled; and it will reward the doer by yielding a vigorous and beautiful growth.

#### PROPAGANDA WORK.

May we invite passing attention, in closing, to another line of our work, the aim of which is to create, maintain and extend a public sentiment in favor of Trees. The means used has been the word printed and pictured and spoken; that is to say, by lectures in schools and other places of public assembly, by wide distribution of booklets, pamphlets and the like, by stereopticon views, by exhibits and by displays of pictures, and so on, we have sought to extend knowledge of trees. Of course we do not mean, here, the professional knowledge necessary to the technical tree man. No; just a plain "everyday" knowledge of trees, a knowledge easy to take in and easy to put in practise; for instance, when and where and how to plant, what varieties to select for this or that place and for these and those conditions, what varieties to reject and under what circumstances, the divers ways of caring for and protecting trees, the uses and methods of cultivating and watering and trimming and spraying, and "so forth else." In the same way, by the same means, we seek to inculcate a just notion of the divers "values" of trees. For trees have not alone the high "value" of beauty; they have also the sanitary value of shelter and shade and coolness and purification of the air, and thus they conserve and promote the city's comfort and health, and this (be it noted) in proportion to their numbers and thrift and the care bestowed upon them. Also they not only adorn the city's streets and homes and thus make for a pleasant homelike town, which endears itself to its people just because it is pleasant and homelike; but for this very reason, conjoined with the other reasons above enumerated, trees have the result

of enhancing the city's realty values and of thus increasing the city's ratables. So it is to be noted that trees have thus the very practical "value" of Dollars and Cents. Trees are money-makers.

Now experience, the wisest of teachers, has taught us that, where knowledge of this plain kind concerning trees is disseminated, people begin (and continue) to think trees and talk trees and interest themselves in trees, and presently they wind up by *loving* trees. And this last is the end we aim at—that *love* of trees shall obtain among all our people. For what a man loves, that he will cherish and care for and protect; and what a *people* love, that *they* will cherish, care for, protect. To have this public sentiment of love and care towards trees prevail, is the object of this part of our labors—our Propaganda Work. And that this object has been effected to a large extent there has been abundant manifestation.



## FINANCIAL STATEMENT, 1917.

## RECEIPTS AND CREDITS.

Balance from 1916.....	\$ 1,269.27
Tax Ordinance Appropriation.....	55,000.00
"Miscellaneous Revenue" Account.....	2,500.00
1917 Tree Assessments.....	1,682.10
Arrears Tree Assessments.....	1,140.97
Request Planting of Trees.....	810.22
Spraying Yard Trees.....	37.32
Cementing Trees .....	14.52
Removing Tree Stumps.....	18.18
Carting Brush .....	4.87
Sale of Trees.....	92.50
Sale of Tree Blocks.....	119.75
Sale of Tree Mover.....	128.50
Sale of Tree Guards and Stakes.....	4.35
Sale of Manure.....	10.34
Compensation, Gas Killed Trees.....	324.00
Compensation, Damaged Trees.....	25.00
Compensation, Repairs to Auto injured by Trolley .....	20.65
Rebate on Erroneous Expressage.....	.30
Rent of Rooms at Barn.....	120.00
Comfort Station Receipts.....	77.55
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	\$63,400.39

## DISBURSEMENTS.

## Payroll—

Planting and Maintaining Street Trees....	\$18,759.14
Developing and Maintaining City Parks....	19,985.44
Maintenance of Comfort Station.....	3,039.46
Administration .....	7,310.62
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	\$49,094.66

## 32 DEPARTMENT OF PARKS AND PUBLIC PROPERTY

Trees .....	1,323.49
Wire for Tree Guards.....	2,057.20
Belting for Tree Guards.....	142.63
Hose for Tree Guards.....	6.00
Stakes .....	216.11
Manure .....	154.87
Fertilizers .....	123.00
Shrubs, Plants, Seed.....	649.96
Wreath, Lincoln Statue.....	10.00
Pointing Base and Copping, Lincoln Statue.....	40.00
Cement .....	3.20
Extending Sprinkler Service, Milford Park....	192.98
Railing, Military Park.....	65.40
Ring and Cover, Landing Place Park.....	9.00
Water Rents for Parks.....	100.00
Hose .....	41.40
Park Plumbing .....	55.65
Roughing in Pipe, Phillips Park.....	49.09
Landscape Architect's Services.....	35.00
Concrete Stoop, Landing Place Park.....	135.00
Concrete Post, Expressage.....	2.50
Tent Flies .....	34.77
U. S. Flags (\$53), Allies' Flags (\$28.50).....	81.50
Repairing Flags, Painting Poles, Gilding Tops.	81.98
Bandstand (Painting \$4, Light \$1).....	5.00
Park Bench Slats.....	58.00
Lettering Park Benches.....	12.00
Paints, Oils, Brushes.....	164.33
Harness, Fodder, Keep (2 horses).....	747.75
Hire of Horse and Harness.....	20.00
Truck Repairs and Furnishings.....	112.55
Tools .....	168.87
Tools Sharpened and Repaired.....	58.86
Barrows .....	10.75
Brooms .....	5.25
Hardware .....	43.79

Repairing Chains, Washington Monument.....	27.75
Mower (Motor) .....	379.02
Gasoline for Motor (\$13.50), Oil (24c.) .....	13.74
Mower (hand) .....	15.50
Snow Plow Attachments.....	17.52
Lumber .....	13.86
Sawing Black Walnut.....	20.00
Park Miscellaneous .....	7.52
Barn—Rent .....	495.00
Water .....	21.25
Coal .....	22.45
Electric Light .....	20.20
Insect Work—	
Spraying Outfit Appurtenances.....	97.57
Spraying Outfit Repairs.....	2.69
Polarine (\$2.75), Grease (\$2.20), Kerosene (6c.) .....	5.01
Hire of Horse and Harness for Spraying...	98.00
Insecticides .....	737.00
Gasoline for Sprayers.....	45.50
Automobile—	
Gasoline .....	182.19
Polarine .....	20.00
Auto Brushes .....	4.80
Repairing .....	207.71
Painting Auto .....	60.00
Tires and Tubes.....	219.03
Other New Attachments.....	20.05
Annual Report .....	647.09
Other Printed Matter, Blueprints (\$5.58).....	242.78
Cuts and Plates.....	15.74
Stationery and Appurtenances.....	145.27
Repairs Typewriter (\$3.40), Punch (80c.).....	4.20
Postage .....	162.68
Photos (\$8.01), Lantern Slides (\$91.71), Drawing (\$20), Sketch Panel (\$10).....	129.72

### 34 DEPARTMENT OF PARKS AND PUBLIC PROPERTY

Glassware for Office.....	2.31
Books, Periodicals, Maps, Directory.....	53.77
Dictating, Transcribing Machine (allowance old one \$65).....	132.30
Plate Glass Desk Top.....	11.90
Insurance (Liability \$162.52, Chattels \$128.75).....	291.27
Decorations re Parades, etc., at City Hall.....	27.10
Special Police, Fees and Badges.....	20.00
Telephones and Telegrams.....	2.55
Street Car and Railroad Fares.....	40.35
Advertising .....	80.51
Comfort Station—	
Water Rent .....	391.02
Coal (carrying) .....	2.00
Motor Repairs and Maintenance.....	61.38
Ventilation Devices .....	130.96
Plumbing .....	224.79
General Repairs .....	16.35
Soap .....	61.45
Towel Supply (\$13.08), Toilet Paper (\$100), Westowls (\$13.50).....	126.58
Disinfectants .....	69.07
Mops, Brushes, Cleanser, Polish, Pail.....	26.40
Electric Light .....	371.50
Electric Power .....	313.60
Gas (for Heater) .....	37.08
Desk (second-hand) .....	14.00
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	\$62,721.62

#### SUMMARY OF FINANCIAL STATEMENT.

Total Receipts and Credits for 1917.....	\$63,400.39
Total Disbursements for 1917.....	62,721.62

Respectfully submitted, \$ 678.77  
CARL BANNWART,  
*Superintendent.*

