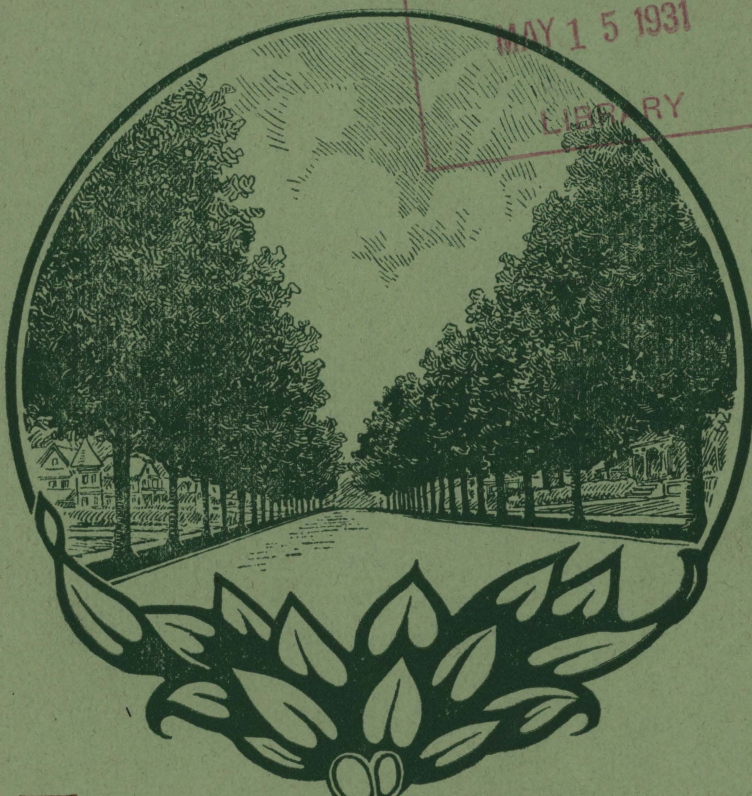


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EIGHTH ANNUAL REPORT



Newark Shade Tree Commission.

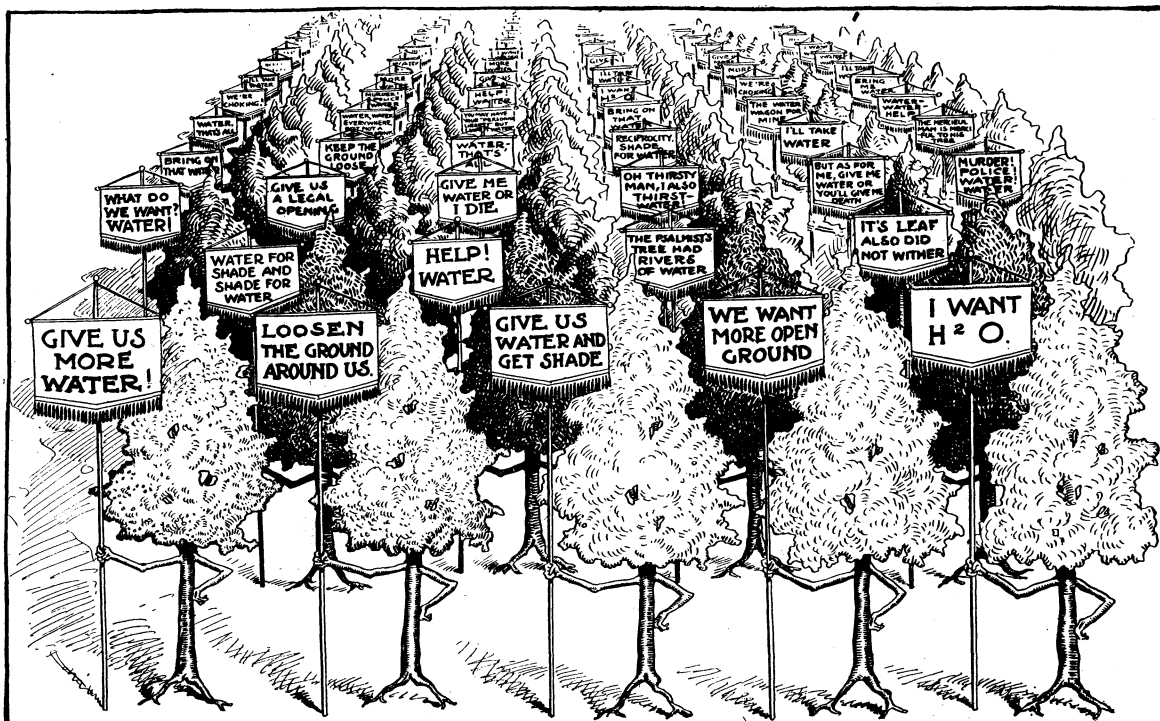
Eighth Annual Report
OF THE
Shade Tree Commission



NEWARK, NEW JERSEY
1911

THE ESSEX PRESS, PRINTERS
Newark, N. J.





THE APPEAL OF THE INNOCENTS
ONE THOUSAND YOUNG TREES WERE KILLED IN NEWARK LAST YEAR FOR LACK OF WATER.

INTRODUCTION.

Not the beauty only but also the utility of shade trees is becoming more and more universally recognized. Progressive cities everywhere are adopting the idea of municipal shade tree control. In New Jersey alone the State law, in co-operation with municipal ordinance, has created fifty municipal Shade Tree Commissions; and Newark may, in all modesty, congratulate itself that nowhere in State or Nation is a more effective work being done for the beautification of a city by means of trees.

This is made possible by the cordial co-operation of other branches of the city government, the earnest support of property owners and the pride the people take in and care they bestow on the trees. This public attitude is not spasmodic but permanent; as in one phase is shown by the interest of the school children, part of the school curriculum being a training to the love of Shade Trees and the care of the same.

If the present interest continues, then, by 1920, Newark will be a veritable city in a park with over 100,000 Shade Trees; each such tree daily increasing in beauty and value.

For generous co-operation from many and varied sources during the past year we extend our sincere thanks.

We are under a special obligation to Dr. Charles Sprague Sargent for cuts in the Appendix, which he generously and freely permits us to use. These are from his famous work, "The Silva of North America," and are considered exceedingly accurate representations of our native trees. The cuts showing the Norway Maple and Horse Chestnut are from the Museum of the New York Botanical Gardens, New York City.

For several of the photographs we are indebted to the excellent work of Mr. J. K. Hillers, of Washington, D. C.

JAMES A. BERRY,
President.



EIGHTH ANNUAL REPORT

OF THE

Shade Tree Commission

*To the Honorable, the Mayor and Common Council of the
City of Newark, New Jersey:*

GENTLEMEN:—The Shade Tree Commissioners have the honor herewith to submit their report for the year 1911, being the eighth annual report of this Department.

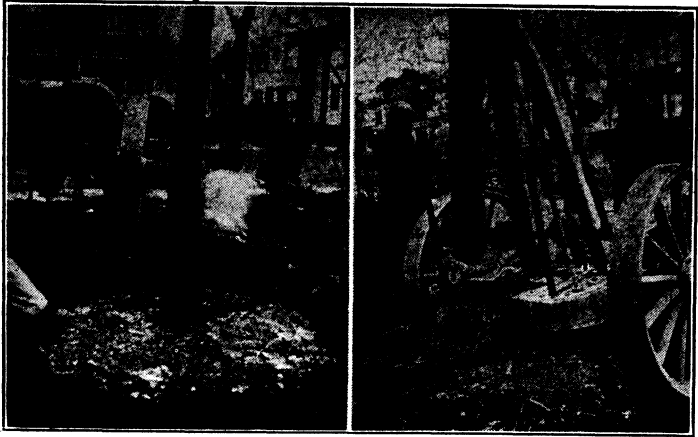
CITY PARKS.

When our fathers, in planning for the Newark to come, provided for open spaces that might be set apart and maintained for public use, and be developed in such a way as to afford pleasure to the eye as well as opportunity for open-air relaxation and recreation, they did a thing that merited for them the lasting and grateful remembrance of Newarkers throughout the city's generations. For who will tell the amount of pleasure ministered to us all by such open stretches of green as (say) Military Park, or Washington or Lincoln? And who will measure the extent of good that these parks and their rational use have achieved and are achieving for these densely crowded neighborhoods?

Be thankful.

Whatever may have been the case "once upon a time," it is no longer necessary to construct elaborate arguments to show that parks make a city inviting to desirable residents and home builders, thus enhancing real estate values and promoting the general prosperity. The logic of events has set that down in type so clear that he who runs may read it. It is meet, of course, that we should rejoice thereat; but a matter of much more moment has been, and continues to be,

Rejoice.



Tree Moving: Preparing the ball of earth. Fastening truck to the trunk.

that the providing of well-kept park facilities vastly relieves the unnatural conditions of crowded cities and hence that such provision is an imperative necessity to the great mass of the people.

SEASONAL ASPECTS AND ACTIVITIES.

"While the earth remaineth, seed-time and harvest, and cold and heat, and summer and winter, and day and night shall not cease."

"Thus with the year seasons return"; and work on our city parks varies of course with the season. To begin at the end, take winter. Just before the advent of frost, dead trees were taken down, the roots dug up, and new trees set out instead. For this latter operation we use chiefly the Norway Maple. Sometimes trees of this variety, ranging in caliper from 4" to 8", are presented to the Commission for such park planting. These are usually the gifts of citizens who happen to be clearing portions of their holdings in order to build. Trees of this size we shift from their original standings and set out in the parks by means of our tree-moving machine, a picture of which appears here.

Winter



Park Scene in Winter.

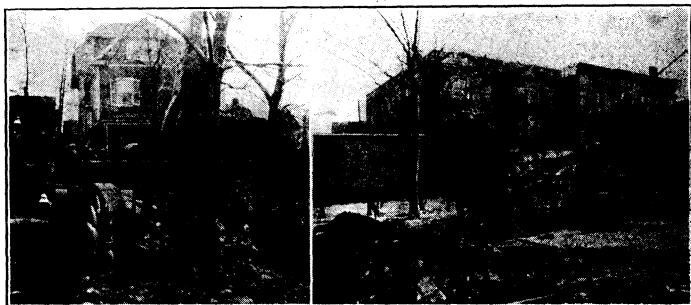
Blankets.

Then topsoiling where necessary and the spreading of lawns and flower beds with manure were other labors of this season. This treatment serves a double purpose. It protects the roots from the nippings of our old acquaintance, Jack Frost; and it goes far to account for the fine showing of the park lawns in summer—having received their quantum of plant food they thrive accordingly.

Repairs.

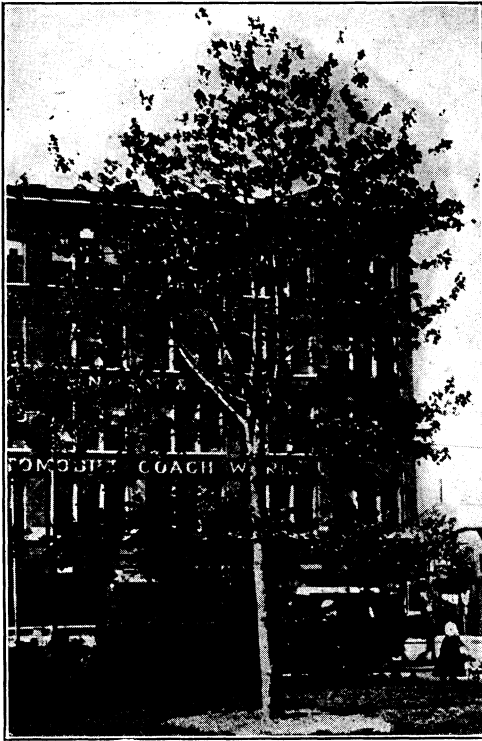
Sundry repairs claimed attention at this time. Park walks were overhauled. Park fences (these "fences" are just simple contrivances of iron pipe, or wire, set at a height of eighteen inches enclosing the flower beds) well, these fences came in for repair. Park settees were gathered in to our storeroom and there repaired and repainted; also new settees were constructed. We make our own wire tree guards, as well; and these operations enabled us, at this as at other seasons, to utilize the services of our men when weather conditions preclude work in the open. Repairing fountains was also in order, as at Clinton and other parks; also the setting out of privet hedges as at Brientnall Park and elsewhere.

When at last bluff Old King Winter comes to reign in earnest and spreads his robe of snow upon the lawns our chief task is to keep open the park walks—of which we have four miles or more. Snow shovelling then came to the



Hitching on the front wheels.

En Route.



The same tree June 15, 1912.

park paths for early pedestrians on their way to work. The schedule works with like precision and promptness in case of Sunday snow.

At length Winter passeth and cometh Spring with her (sometimes) "ethereal mildness." And in the Spring the park man's fancy lightly turns to thoughts of summer and to preparations for its golden coming. So when the snows had melted on the lawns we began by clearing away the manure which under its blanket of white had been feeding the rootlets all winter. Then in some of the parks we carried on extensive sub-soiling. This was done wherever the need existed, as at Belmont Avenue Park and elsewhere.

fore. Our men are so assigned by schedule, previously prepared, that each man at every moment knows his post of snow-duty and proceeds there-to at once when snow comes and without waiting for specific assignment. Thus it comes to pass that when it snows at night, for instance, our men are on the job in the sma' hours with plows and shovels clearing the

Snow men.

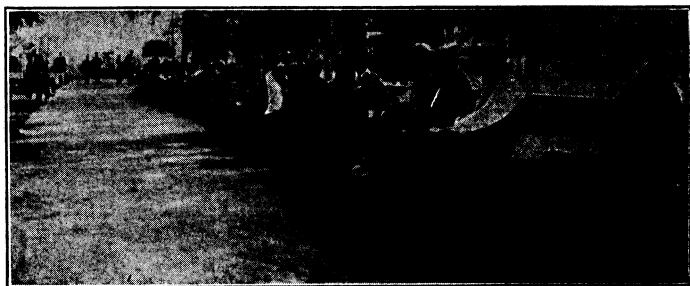
Spring.

Lawns were graded, re-sodded in places that had become bare, and re-seeded where necessary. Flower and shrub beds were cultivated. Walks were "lined out," the edges of the lawns being cut to present a neat border. Also, and of course, the lawns were mowed. Certain hedges were removed. New shrubbery was set out to replace stock which had become too old to be at its best or had been injured. The tulips set out the previous fall began to unfold in beautiful bloom. Other blooms made their successive appearances; pansies, salvias, geraniums, cannas, sweet alyssum, argoretum, coleus, chrysanthemums and others. Trees were sprayed. The routine work for the season was inaugurated in all the parks. Special work of a routine nature and of various kinds was done in Military, Lincoln, Clinton, Belmont Avenue, Springfield Avenue and other parks. Court House Park was entirely overhauled to make a harmonious setting for the noble bronze Lincoln. This was done at the suggestion of the sculptor, Gutzon Borglum, and is elsewhere described in detail. The unveiling of the Lincoln, also described elsewhere, occurred on Memorial Day, Tuesday, May 30, an ideal Spring day.

Bloom in
beauty side
by side.

Summer.

Now Spring merged into Summer and the parks put on their perfect beauty. The care and labors of preceding times and seasons began to show their fine fruition. Every-





Shelter—Central Square.

where lawns rich with green gladdened the eye. Trimly kept walks showed fitly to the view. Trees, all clean and trig, waved on high their lofty tops, spread wide their leafy boughs, and gave their grateful shade. Fountains tossed in air their crystal, cooling drops. At times merging with the beauty of the visible there was the beauty of the audible—strains of sweet music and of singing. Here of an evening the workers and their children gathered and found these wide green spaces conducive to rest and enjoyment and forgetfulness of the hard day's cares. Here early of a Summer's morning would sit at ease many a mother and her babe resting or asleep in the cool morning freshness of the park after a torrid, sleepless night indoors. Or, again, in the very midst of the day's glare and heat, here the busy wayfarer sat him down under some spreading tree and in its shade found rest and coolness for a while, then rose refreshed to take his way again. Such in brief was the Summer aspect of the parks, and such the uses to which the people put them. The parks are the people's; the people enjoy their own; and thus give very practical testimony to their appreciation of the efforts made by their city to maintain and increase the parks' attractions and conveniences.

Coolness.

Rest.

Ours.

Forum.

We add that during these months the parks are used under certain necessary restrictions as meeting places for all sorts of public gatherings; religious, political, patriotic, social, and the like. These, for the most part, occur in Military Park; and here also take place the annual Police Review, the Boy Scouts' Drill and other quasi-military demonstrations.

Spick and span.

As for our Summer park activities, these were almost altogether routine; the time for really productive labors having passed. These Summer labors, however, routine though they be, are highly important. Our twenty acres of park space, consisting of lawns, walks, terraces and beds of shrubbery and flowers, had to be "well kept," their attractiveness had to be conserved, and this necessitated persistent attention to such matters as mowing the grass, edging and watering the lawns, taking out weeds, watering and mulching the shrub and flower-beds, trimming and spraying the trees, painting and keeping in repair the settees and refuse cans, gathering up fragments of paper and debris, repairing and recovering the walks, re-seeding and re-sodding the lawns—and so on, and so forth.

Fall.

So swing the seasons through their golden round and into view comes gorgeous Autumn. She comes trailing the hues of heaven with her. Hill and dale and wood and stream put on the robes of iridescence. And not to be be-



Children at Lincoln Park.

hind in glory the parks bedeck themselves in scarlet and russet and gold. The trees' active labors for the year are near an end and now they stand as though attired for holiday:

In the hush and the autumn silence of the chill October night, Some wizard has worked his magic with fairy fingers light. The leaves of the sturdy oak trees are splendid with crimson and red And the golden flags of the Maple are fluttering overhead.

The park lawns, which had languished somewhat during late Summer, freshen into new green. This is due to a less hot sun and to the shortened period of its daily shining, also to the more plentiful rains. The flower beds are now at their best; cannas, salvias, begonias, geraniums, all in fullness of bloom. The shrubbery bursts into color; the red of the rosa rugosa, the barberry, the viburnum, the dogwood; the blue and gray of the privet; the white of the snow-berry.

Colorful.

Our park activities for the Autumn are such routine doings as above outlined, under Summer; besides the raking up of fallen leaves, the sowing of grass seed, and the planting of beds of tulips against the coming Spring, their time of bloom. And as the season ages into Winter and the days come that are "frosty but kindly" we once more make the parks all snug for their annual sleep; and there an end.

Adios.

THE SQUIRRELS.



Our frisky friends, the squirrels, continue to enjoy themselves and to give enjoyment. It will be remembered that the aborigines of the colony were installed in 1908 at Lincoln Park. These consisted of twelve pairs and were the gift of Mr. W.W. Blanchard. Houses were built for the wee pets and placed in the tree boughs. The newcomers

O. K.

proceeded to make themselves at home in their new quarters. The experiment proved a success in every way. It had been the fear of many persons that the locality was too exposed and their predictions concerning the fate of the squirrels were unhopeful. Notwithstanding these forebodings, the little families have flourished from the start and are proving a never-ending source of delight to children and to grown people alike.

City folks.

The squirrel population has not discernibly increased. It remains about the same. Mr. Dog and Mrs. Pussy could doubtless explain this in a measure. Besides, some individual squirrels of select taste preferred the more secluded backyards and migrated thither. But branch colonies were founded at Military and Washington Parks. They all take kindly to city life and bid fair to continue a feature of the landscape and a factor in the attractions of these parks. Some kindly visitors have assisted in the feeding and nursing of the squirrel population. They record the genealogies and romances of the tribe, calling each member by name and receiving a sweet return of exclusive attention and confidences.

NEW LIGHTING SYSTEM—WASHINGTON PARK.

During the year conduits were installed in Washington Park for a much needed new system of electric lighting. The old equipment was altogether inadequate. Certain legal dubitations intervened to hinder this work. But in good time the Law Department solved the problems; and the installation of the conduits was at length pushed to a finish.



Milford Park—New Plantings.

Accordingly, everything is now ready for the setting up of standards, of which there will be fifteen, the placing of clusters and the turning on of the power. "Let there be light" in Washington Park. Fiat Lux.

COMFORT STATION—MILITARY PARK.

The equipment here was improved during the year in a few particulars as experience showed the necessity. Thus we installed a new motor so that a more adequate supply of air could be constantly introduced and the vitiated air expelled. This has worked satisfactorily and bids fair to prevent what was a source of great annoyance before. A Ruud Heater was installed to give a sufficient supply of hot water. This had been overlooked in the original construction and is manifestly a necessity. Additional radiating pipes were also installed to make the attendants' room on the women's side more comfortable. The roof has given a great deal of trouble and plans are now under way for complete repairs, which will be guaranteed. Apparently the water comes in where the skylights have been joined to the plaster, perhaps because the plaster was placed in extremely cold weather and did not properly set. A convenience.

In our Financial Report will be seen an itemized statement of disbursements incurred in the maintenance of the Public Comfort Station for the year. The total, which includes salaries of four attendants, is \$4,910.74. The attention of the Honorable the Common Council is invited to the fact that while this constituted an additional tax on our Department's resources, no added provision to meet it was made in the Tax Ordinance Appropriation for the year. But better fortune next time, perhaps. The station continues to be a great public convenience. The attendance by actual count exceeds four thousand on some days. In its service to the people this structure has already paid for itself many times over.

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 thirty-five thousand dollars. The items constituting this total and the acreage of each park are given below:

PARK.	ACREAGE.	APPRAISAL.
Lombardy Park .....	.23	\$ 10,000.00
Washington Park	3.40	1,700,000.00
Orange Park .....	.18	7,500.00
Court House Park .....	.18	72,000.00
Clinton Park .....	.49	100,000.00
Military Park	6.45	6,000,000.00
Union Park .....	.15	15,000.00
Brientnall Park .....	.04	5,000.00
Buchanan Park .....	.14	2,500.00
Wallace Park .....	.21	6,000.00
Mt. Prospect Park.....	.35	5,000.00
Arlington Terrace .....	...	1,500.00
Elwood Park .....	.54	20,000.00
Central Square Park.....	.85	30,000.00
Waverly Park .....	.02	2,500.00
Madison Park .....	.02	1,000.00
Peshine Park .....	.02	2,000.00
Milford Park .....	.97	10,000.00
Jackson Park .....	.34	15,000.00
Lincoln Park	4.37	1,200,000.00
Carlisle Park .....	.02	2,000.00
Sussex Park12	10,000.00
Vailsburg Park48	2,500.00
Court Street Park.....	.50	17,500.00
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	20.07	\$ 9,237,000.00

THE LINCOLN MEMORIAL.

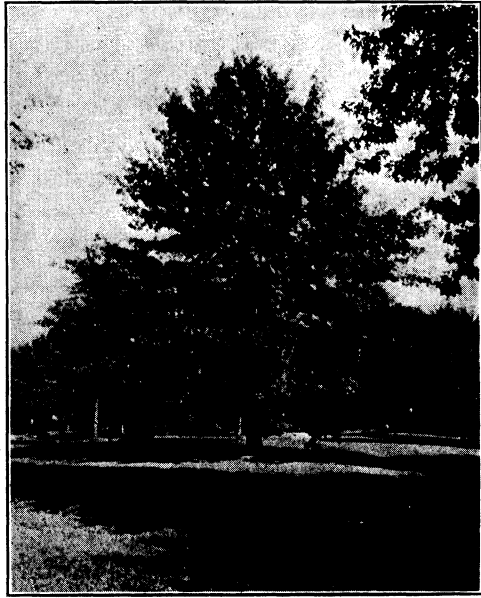
The year was rendered noteworthy in our annals by the unveiling of Gutzon Borglum's heroic bronze Lincoln at Court House Park in the forenoon of Decoration Day.

It was a red letter event. Nature favored the occasion with fair skies, a sun-flooded earth, a crystal atmosphere, and cooling breezes. From all parts of Newark and from beyond its borders thousands gathered to Court House Park



Former President Roosevelt—Presenting the Lincoln Statue.

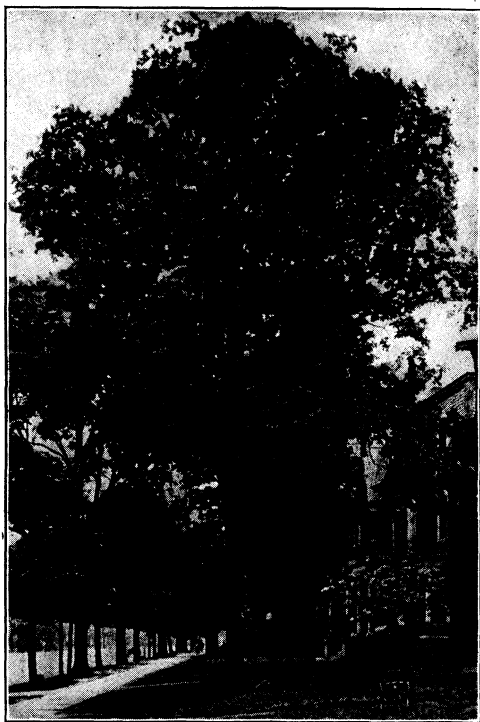
and thronged the square, filled the sidewalks surrounding it, banked themselves on the terraced Court House steps, gathered in doorways, on stoops, in windows, on roofs and indeed wherever foothold could be had, extended in almost solid mass from High street to Plane street, and formed a mighty gathering of enthusiastic humanity. In the stands, among other notables, were former President Roosevelt, who was to accept the statue on behalf of the Lincoln Post, G. A. R., Chancellor Mahlon Pitney, who was to present it on behalf of the trustees of the Van Horn Estate, Ralph E. Lum, Esquire, who was to remove the veil, and His Honor the Mayor, Jacob Haussling, who was to accept the Statue as a gift to the City from Lincoln Post. Veterans of the Post occupied seats of honor in the speakers' stand.



Pine Oak—Heller Parkway.

As became the day and the occasion, the ceremonies were simple, solemn, deeply impressive. They began with prayer. Next came a reading by Charles Rann Kennedy of Walt Whitman's Lincoln poem, "O Captain, My Captain." Then Mr. Lum arose to draw the veil. As he stood up a profound stillness imposed itself upon the great assemblage. A ribbon of the national colors, by means of which two American flags were draped around the Statue, was in his hand, and at the close of a brief address he released the flags and the Statue was for the first time revealed to the public.

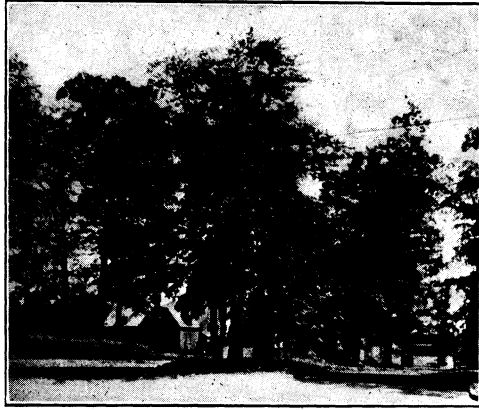
As the bronze was exposed the exclamations of those who were close enough to appreciate the beauty of the modeling mingled with the exultant shouts of the thousands who only knew that the formal unveiling had been effected. In the midst of the demonstration three wreaths were placed on the Statue by little Miss Ruth Martenis, Master Ralph E. Lum, Jr., and Master Lyndon Arnold.



Shagbark Hickory, Clinton Avenue—Planted 1828.

Chancellor Pitney, on behalf of the trustees of the Van Horn Estate, then presented the Statue to Lincoln Post. This was accompanied by the signing of the deed, engrossed on sheepskin, by the three trustees—Mr. Lum, Mr. John Martenis and Mr. George W. Wire. At the conclusion of Chancellor Pitney's speech, another deed, similarly engrossed, was signed by Commander Edwin B. Smith, of the G. A. R. Post, conveying the Statue to the City. The signature of Mr. Smith was witnessed by Colonel Roosevelt. This deed is now on exhibition in the public office of His Honor, the Mayor. The former President's speech then followed, accepting the Statue on behalf of Lincoln Post and

on the same behalf presenting it in turn to the City of Newark. The gift was received by Mayor Haussling on the part of the city. He took occasion to express the gratification of Newark and to convey the thanks of its citizens for this noble Memorial of Lincoln. At the conclusion of the Mayor's remarks, Bishop Edwin S. Lines pronounced the benediction and the exercises were at an end.



Survivals of Camp Frelinghuysen,
Roosevelt and Fourth Aves.

INSCRIPTION ON TABLET.

(Inscription on tablet erected in Branch Brook Park
by High School Pupils.)

"IN 1862, WAS ORGANIZED CAMP FRELINGHUYSEN TO SERVE AS RENDEZVOUS AND DRILL GROUND FOR VOLUNTEER REGIMENTS OF THE STATE.

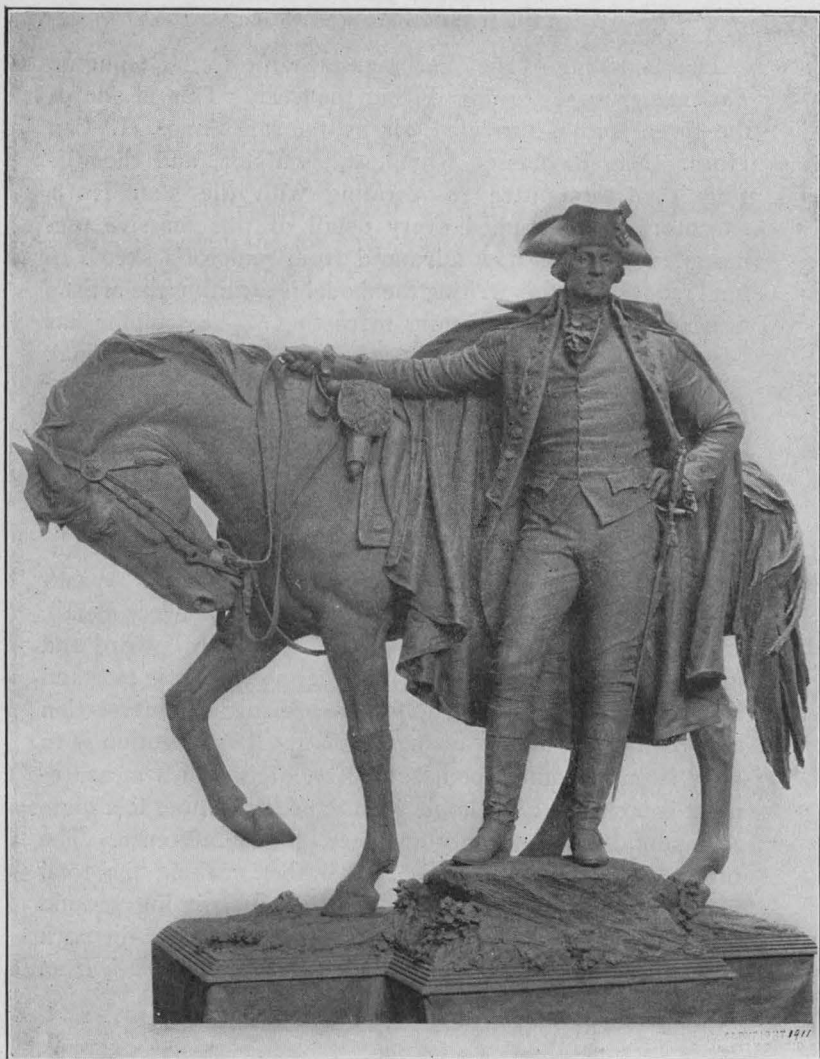
"IT LAY WITHIN THE TRACT BOUNDED BY THE MORRIS CANAL, ORANGE STREET, ROSEVILLE AND BLOOMFIELD AVENUES.

"TO COMMMORATE THE PATRIOTISM OF THE MEN OF NEW JERSEY, WHO MARCHED FROM THAT PLACE TO PERFORM, FAITHFULLY AND GLORIOUSLY, THEIR PART IN THE CIVIL WAR, THIS TABLET WAS ERECTED MAY 30, 1912, BY STUDENTS OF BARRINGER HIGH SCHOOL.

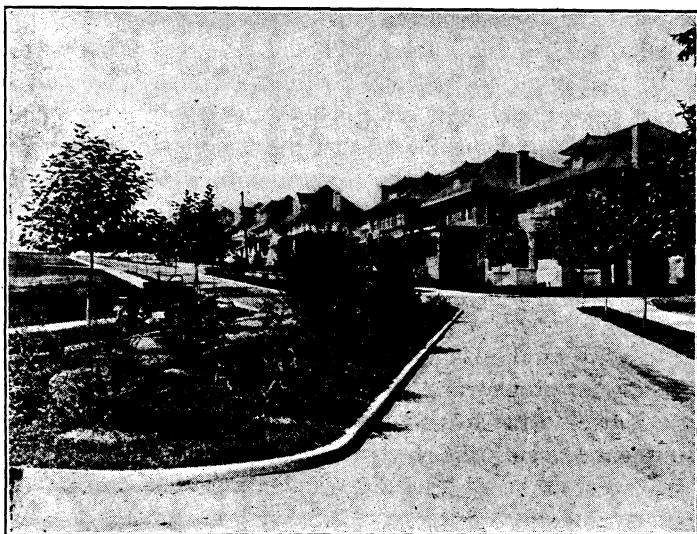
"MEN FROM THESE REGIMENTS LIE BURIED ON EVERY IMPORTANT BATTLEFIELD FROM ANTIETAM TO APPOMATTOX."

THE WASHINGTON STATUE.

The modelling of the Washington Statue for Washington Park progressed steadily during the year. This is one of the three statues provided for by the late Amos H. Van Horn. Mr. J. Massey Rhind, the sculptor, and the distinguished committee co-operating with the Van Horn executors, have studied every detail of this massive memorial, and it has now advanced from sculptor's sketch to final model. At this writing the model is awaiting the artist's finishing touches preparatory to casting. The sculptor has been most happy in his conception, and distinctly original. The memorial will be an equestrian statue with the rider dismounted. The horse, a-tingle with life, handsome, with arched neck and curbed animation, paws restlessly in the rear while the General-in-Chief of the patriot armies stands in front on a slight elevaton, addressing a few words of counsel and farewell to the troopers who had been his companions in the hard-fought New Jersey campaigns. Washington is portrayed with historical fidelity in every detail, from the handsome dress uniform to the typical sword and insignia of the Colonial period. The monument is to stand in the southeast corner of the park, facing the intersection of Broad street and Washington place. The intention is to have it on a mound about seven feet high, which measurement is inclusive of a simple granite pedestal three feet high, the mound to be seventy-five feet in circumference. The bronze will rise above this twelve feet, making the total height about nineteen feet above the surrounding ground level. Some of the smaller trees in this section of the park are to be taken up, leaving the larger trees farther back from the two streets to serve as a fitting background.



Proposed Van Horn Washington Memorial.
J. Massey Rhind, Sculptor.



Meeker Avenue Parkway.

PARKING STRIPS.

A mode of street construction susceptible of much variety of ornamental treatment is the inclusion of a parking strip. To reserve such a strip from ten to forty feet width in the middle of the roadway gives the thoroughfare an attractive and park-like appearance. When this strip is well sodded, planted with appropriate shrubs, and set out with trees, it makes a picture worth beholding, and varying in color and texture with every altered condition of season and weather. Such cities as Washington, Buffalo and Rochester have made much use of this treatment either through municipal effort or private laying out of streets. Here in Newark through the efforts of private land companies such strips were constructed of late years on Meeker, Custer, Seymour and Chadwick avenues and Scheider, Conklin and Yates streets. These were deeded to the city and parked with grass and shrubbery by the Commission.

In 1911 we thus acquired further parking territory on Pomona, Goldsmith, Vassar, Wilbur, Belmont and Fourth avenues, Heller Parkway and Grafton avenue. An experiment is being made with magnolias in the Goldsmith avenue case. It is to be remembered that the maintenance of these strips will devolve upon the Commission, which means of course an added obligation to be considered by Council in fixing our annual allowance.

STREET WORK.

The duty of the Commission under this head is, briefly, to maintain, protect and care for existing street trees and from time to time to add to the number of these by new plantings. During the year we set out 3,425 young trees under what is called "statutory" planting. By request of property owners we set out 168; and under Arbor Day work, 48. Here, then, were planted 3,641 new trees, contributing just that much to the increase of Newark's beauty. The cost of the "statutory" plantings (i. e., of planting done under authority of the statute creating Tree Commissions) is met by assessing the properties benefited. The average assessment per tree in 1911 was \$3.17. 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 \$4.00 for a tree not exceeding 2"

New
plantings.

Cost.



Young Norways.

to 2½". 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 sub-soiling, as well as of the wire guard, rubber collar and stake. Also, we guarantee the tree, and take annual systematic care thereof. Annexed is a table showing the streets planted and varieties set out in 1911.

Guarantee.

Adding the number of street plantings for 1911 to the totals for previous years it will be seen that the Commission since its inception in 1904 has set out on Newark's streets no less than 21,178 new trees. By this time people who think need not be told that this crop of new plantings cannot fail to become a most profitable asset for Newark. And the profit is of the progressive kind; for every dollar judiciously invested in a street tree the dividends to the second generation will be larger than to the first; the dividends to the third generation larger than to the second; and so on.

Total.

Profit.

Having planted the trees our next duty is to care for them. This involves periodic visits by our men at divers seasons along a frontage of one hundred thirty miles of streets. It means that the soil must be kept loosened and

Care.



Watering Young Trees.

Poplars at Washington Park.

Expensive.

watered and otherwise treated. Various preventive and defensive measures must be undertaken against insect pests. The trees must be annually pruned. Stakes and guards must be replaced when and where necessary; and the percentage of these new plantings which die from whatever cause must be replaced. All these matters make up a not unformidable obligation when it is considered that we have some 22,000 young trees thus to care for. The expense must be provided for in our budget; and the Commission hopefully looks to the Common Council to enable it to meet these obligations as heretofore.

Protection.

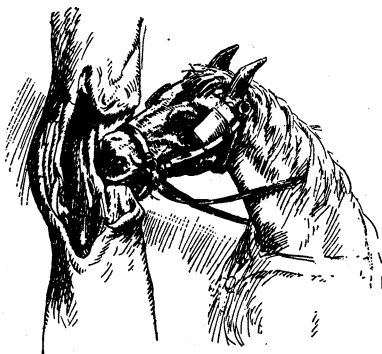
Injuries.

Carelessness
or worse.

Cheer Up.

Then there is the protection of the trees, both old and new, against various mechanical injuries. What a piece of work is man!—and so on. Quite so. Yet he hasn't quite given over his trick of hacking and otherwise injuring the trees. What with his underground conduits and his overhead wires and his leaking gas pipes, his pavers and sidewalk-layers and builders who surrepticiously cut the roots and bruise and maim the trunk, the tree has abundant need to be protected against the carelessness, or worse, of its kinsman Man. And the job of so protecting some 80,000 trees is no child's play. Yet the job was undertaken, and from year to year it comes nearer to accomplishment. Praise be! Conditions are improving. The Golden Age is not yet; but it is nigh, even at the doors. Meanwhile the trees are faring better and better at the hands of folks.

Our friend the horse comes in for a word here. He dearly loves a tree—that is, to be precise, he loves the bark.



Watch the horses. Don't let them lunch on your tree.



'Tis a tidbit of rare delicacy to him; and when the bark of the tree meets the bite of the horse there is trouble for the tree. Himmel! 'tis a pity to see the scars that horse doth leave behind him. And there are so many of him—the horses of the butcher, the baker, the candlestick maker, the milkman and the medical man—and then some. And there stands the tree without a guard. No wonder that the bark is not only soon removed and the wood exposed; but as the horse is an animal which prefers the softer bark to the harder

Bark and Bite.

wood, the fresh borders of the wound are repeatedly attacked until deformities of enormous size result and the nutrition of the tree is cruelly deranged. Let the accompanying picture bear witness. Observe the deep and unsightly cavity caused by decay, an aftermath of the peeling of the bark. The wood of the tree, bared of its bark, is left exposed to the weather, to rain, dew, dirt, bacteria and what not. Of course decay sets in and the tree rots. 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.

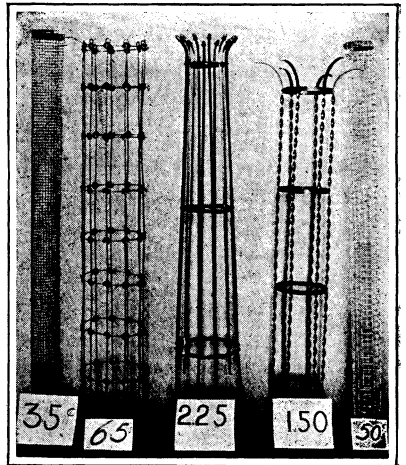
Oh, Pity!

Found Guilty.

Now, who's to blame? Come, who is to blame? NOT THE HORSE. Settle that at the start, NOT the horse. He but does what man would do were man a horse. Then the driver is to blame, you say? Well, yes, in part. But the individual on whom 99% of the guilt abides is the owner of the property in front of which the murdered tree stands. That's the party to blame. For a few dimes he could have safeguarded that tree absolutely from the horse's teeth. A wire guard would have done it. A wire guard—that's all. In towns and cities the trunk of every tree, whether young or old, newly planted or in full growth, should be enclosed to a proper height in a guard. For the young trees the guard should entirely surround the trunk, and should be made of no less durable material than half-inch mesh No. 16 wire, galvanized, lined with a collar of rubber hose to prevent chafing. This would cost at retail about 35c. For the older trees a wire screen on the side of the tree toward the roadway would suffice. This should also be of half-inch mesh galvanized wire, No. 16. The wire assumes the same color as the bark of the tree naturally. It would cost at retail about five cents per square foot. This simple expedient would effectually protect our street trees from the teeth of the horse. Every property owner, for his own sake, should thus guard the trees abutting his tracts of realty. It costs little, achieves much and ends the havoc wrought by the horse.

Guards.

Another phase of tree protection. Rendered



Tree Guards

necessary by the practice, in some quarters, of flagging or cementing the sidewalk close up to the base of the tree. Now water must have free and unimpeded access to the roots or the tree will die. To bring the walk so close to the butt is to shut off from the tree these essentials to its life. To deny it these is inevitably to kill the tree. Hence the Commission inserted a provision in its Ordinance as follows:

Air.
Water.
Life.

It shall be unlawful for any person, firm or corporation to place or maintain upon the ground in any public highway or city park within the City of Newark any stone, cement, or other material or substance in such manner as may obstruct the free access of air and water to the roots of any tree in any such highway or park. Unless otherwise provided for in a written permit there must be maintained about the base of the trunk of each shade tree in the public highways and city parks of the city at least six square feet of open ground for a tree of three inches in diameter, and for every two inches of increase of such diameter there must be

Law.

an increase of at least one square foot of open ground.

Any person, firm or corporation which shall violate or authorize or procure a violation of any provision of this section shall, upon conviction thereof, forfeit and pay a penalty of Ten Dollars (\$10.00) for each and every such offence.

Penalty.



Oriental Planes—Ridge Street.

Be generous.

However, note that the dimensions prescribed as above represent only the minimum figures. And it is likely that the Ordinance will be amended so as to raise the requirement to at least four feet square for a 3" tree and pro rata for trees of larger caliper. But the wise lover of his tree will not wait for legal requirements. He will be generous and not stint his tree. He will make and maintain a plentiful area of open ground about it that it may get its fill of air and water. Elbow room for the tree! Feeding room also! Make four feet square your minimum for a 3" tree, and for each increase of 2" in caliper make your minimum one square foot more.

On application we give a diagram that will help in this matter of enlarging openings for trees. Be sure though to raise the figures in accordance with what is said just above.

YET SHOW
WE UNTO
YOU A
MORE
EXCELLENT
WAY :

and that way is
the Tree Belt.
Let it be writ
large—the
TREE BELT.

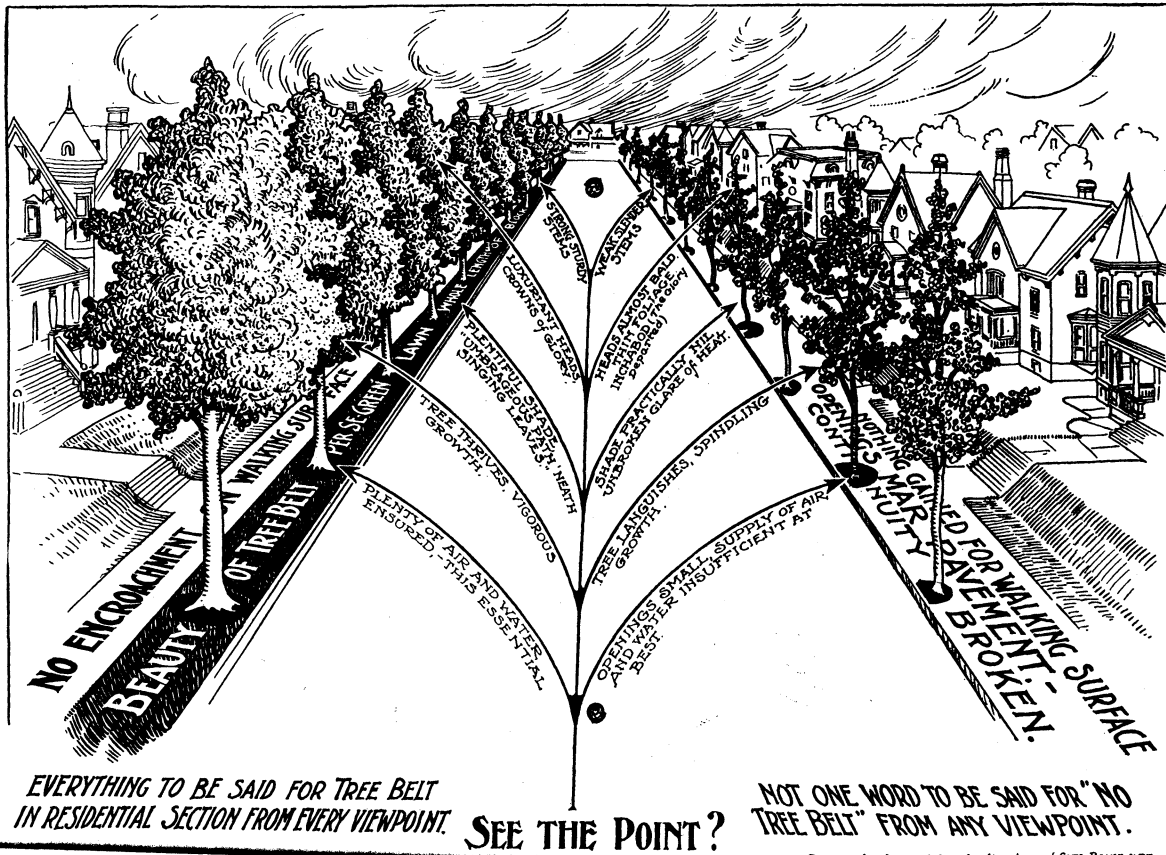
The tree belt's



Horse Chestnut in Bloom—Millard Ave.

Here's the
Thing.

TREE BELT — VERSUS — SCANT OPENINGS



Drawn by LOUIS WISA by direction of CARL BANNWART

the thing wherewith we'll catch the conscience of the King—of the tree lover, that is. For look you; look here on this picture and on this.

Here are the belted trees; and here the unbelted. See what a grace is seated on this first, a combination and a form indeed where every power hath seemed to set its seal to give the world assurance of a tree. A TREE; not a spindly abortion like the unbelted one which, as you see, shows "like a mildewed ear blasting its wholesome brother."

Say not in thine heart, 'tis easy to make pictures. Our word for it, the reality exceeds the picture. Go through the city's residential streets and look about you. Here is a row of trees, of which each is set into a scant opening cut in a pavement of cement or flagging; and the roadway is of asphalt, at that. A fine chance these trees have to thrive! Look at them. They peak and pine and, had they a voice, they'd likewise whine—and small blame to them. Fancy, dear sir, going about with your shapely throat encased in a tight collar made of granite and your noble torso enswathed in asphalt. Don't you strangle at the very thought? Well, have mercy on these trees and give them "a man's chance." Give them their Tree Belt and



Adequate Openings.

see them live long in the land and prosper in the thing whereto they were sent, viz: the beautification of your home, your street, your city.

And apart from the welfare of the trees, is not the tree belt worth while in itself—that strip of ground open and swarded extending from walk to curb and stretching the whole length of the block—that sash of living green dappled with here bright light and there soft shade as the sun filters down through the waving foliage overhead, so transforming what was a mere thoroughfare to a parkway of delight. But there is no room for more words here. Carefully scan the picture and its notations. STUDY them. 'Twill be worth your while.

RECOVERING FOR GAS KILLED TREES.

We have been “rounding up” on different thoroughfares throughout the city a number of street trees which had been killed by gas poisoning. Illuminating gas escaping from defective pipes had impregnated the soil, poisoning the roots and thus causing the death of the trees. We put the matter up to the Gas Department of the Public Service Corporation. Negotiations were instituted, the outcome of which was an agreement on the part of the Gas Company to bear the cost of “taking down the dead tree and setting out a live tree instead.” The City has been reimbursed to the extent of several thousand dollars for the loss of these gas destroyed trees; the money thus collected going to the removing of the old trees and the planting of new ones to take their places. Gas cases.

It is necessary in each case not only to remove the dead tree but to remove the root system thereof as well; also to dig out four or five tons of gas impregnated soil and replace this with four or five tons of top-soil. In many cases it becomes necessary to wait a year or more until the gas has escaped from the surrounding soil. Then the new

tree is planted and furnished with a stake and wire guard, the latter to protect the tree from horse bites. The cost appraised against the Gas Company covers all these items, the work, of course, to be done by us. The new trees are guaranteed by the Commission.

Now it is evident that the mere "cost of taking down the dead tree and setting out a live tree in its stead" does not begin to be adequate compensation for the damage done. A construction company in New York State, doing some work on a street, destroyed certain trees. Suit was at once brought against that company, the damages being laid at \$500.00 for each tree cut down. The plaintiff recovered for the *full amount* as the *value of the trees*, and the court added \$1,000 *more for punitive damages*. This verdict was carried by the company to the Appellate Division of the Supreme Court. The Appellate Court sustained the judgment of the Court below and the damages assessed stand. This is what the courts think in a case of this nature. The time must arrive when, here in New Jersey, the Gas Company will have to be mulcted to the same extent. The merely nominal compensation exacted does not rouse them to sufficient zeal in preventing leaks.

\$500 a tree.

OTHER FORMS OF INJURY.

Wires.

Other forms of injury to trees arise from overhead wires, brine water, liquid dyes, oils, etc. We have been constantly on the trail of the wire people; and much has been accomplished in this direction. But the one and only sufficient remedy is the UNDERGROUNDING of the wires. Speed the day when that shall be an accomplished fact!

Salt.

Then as to brine water and the like, the brine water especially. We mean the salt water which is poured or allowed to flow or drip from ice cream tubs and seep into the soil. This means not injury alone—it means Death to the tree affected. Again and again we have warned the ice

cream companies and dealers; so that there should now be no compunction in prosecuting offenders to the limit. The man who thus injures a tree, especially after he had been informed as to the deadly nature of the injury, deserves severe treatment.

Then there is here and there the man who thinks he is "some pumpkins" and above the law. So Mr. Man, without permission as required by Ordinance, for some petty whim, or through some paltry motive, arms himself with saw and axe and rope and ladder and in an hour has felled some noble tree that has adorned the street for a century, mayhap. It is difficult to speak temperately about such an act; let's be content to name it outrageous vandalism. And there should be stern dealing with the vandal. However, we're glad to say there are but few of him.

Crime.

Surely it is true that no street tree should be marked for destruction without competent investigation. The Shade Tree Ordinance is designed to secure such investigation. The Commission holds that in every tree in a public street the public has an interest; and the Commission represents that public and that interest. Manifestly there should be some conference between property owner and Tree Commission before the growth of the patient years is ruthlessly cut down. While representing the public the Commission is not unmindful of the rights of the property owner; its function is to help him also, and generally the matter is adjusted satisfactorily and without friction.

Go easy.

PRUNING.

During the planting season and that of spraying every employee is busy at these respective labors. In the intermediate seasons the most efficient of the men are engaged at pruning. The same policy with reference to this work has been consistently followed by the Commission for several years. The Commissioners assign a section of the city,

By section.

for example the territory east of Broad street. In this assigned district all the living trees are pruned.

The change effected by this treatment is radical. Thousands of trees take on a new outline. They are groomed—cared for. The pruning has been done in the sight of all the citizens and speaks for itself. The cuts are treated antiseptically so that the bark may cover the scar before decay can set in. Aside from the removal of unsound wood,

Benefits.

which menaces the life and limb of the passer-by and which threatens adjacent property, the decayed portions which are also breeding places for insects are removed and the cocoons and egg-masses are destroyed. The owners are requested to remove their dead trees so that the neighborhood may make a new start as far as its trees are concerned.

In addition to pruning streets within an as-



Giving the Trees a Chance.

signed section as above remarked the trees of our own planting all over the city received all necessary attention. The Poplars are pruned annually, other varieties when necessary.

Some five hundred requests for pruning on behalf of some fifteen hundred trees were received. These were complied with in order of their needs. Requests.

Many owners applied for permits to prune the street trees fronting their properties. In such cases we first inspected the trees; then if they needed pruning and if we had assured ourselves that the work would be done by competent hands we readily granted the permit requested. Caution was and is necessary, inasmuch as many splendid trees have been ruined by inept pruning. Caution.

INSECT WORK.

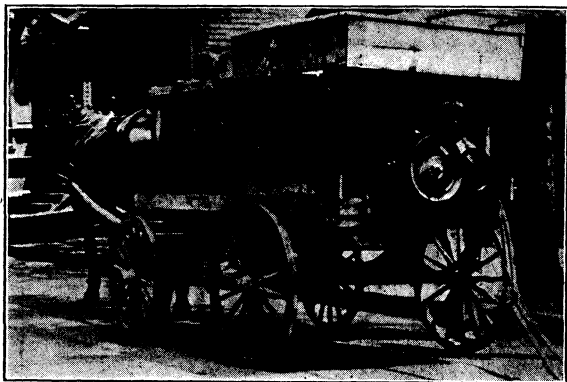
From late May to August our energies for the greater part centered on the insect campaign. The territory in and around Newark has several pests capable of alarming depredations. They are the Tussock Moth, the Elm Leaf Beetle, the Tent Caterpillar, etc.; also the Leopard Moth, the Maple Borer and several forms of scale. There are times and seasons when to combat these various destroyers and do it effectively. But there is not space for de-





The Liquid Artillery for Leaf-eaters.

tails. Great encouragement is in the fact that the insect Enemies. problem, hitherto full of unknown quantities, has been reduced to definite terms. Given an adequate equipment intelligently and energetically directed and the problem of warfare against the leaf-eating insects, at present indigenous to or naturalized in this section, is all but solved. We got after the tussock moth and the beetle, and the other leaf eaters, with the arsenate of lead solution and this did the business for these gentlemen. A list of streets thus sprayed accompanies this report. Heretofore we had used almost exclusively the Niagara Sprayer, the motive power of which is carbonic acid gas. It has many good points; but the cost of maintenance is rather large. To avoid that we purchased one Gould gasoline Sprayer, 2½ H. P. Gas Engine. This was especially equipped with single shaft and wooden wheels. We have had abundant proof that the gasoline sprayer is more suitable for our use since we spray on every clear day, if not too windy, for a period of five weeks from May 15th to June 20th, which is the best time; and for such continuous work the gasoline sprayer covers more territory and at a smaller cost of maintenance than the Niagara. This Commission is therefore gradually exchanging its Niagara Sprayers for the Gasoline.



Gasoline Sprayer—3½ H. P.

Bad beast.

As for the Borers. We are sorry to say these pests are numerous throughout this territory, especially in the cases of Silver Maples and Elms. We have to say also that they are by no means "under control." And we are persuaded that the most effective way to get rid of them is to eschew the varieties above named and set out only those not susceptible (or, at the least, not so readily susceptible) to borers; for instance, Norway Maple, Oak, Buttonball. To stamp out the pest by the mere remedial measures to which we are now limited seems hopeless. For consider the history and habits of the "beast." The eggs are deposited upon the bark and the young soon hatch and crawl to a convenient place and commence to bore into the wood, working first upon the smaller branches and then descending to more spacious quarters as they increase in appetite and size. They are voracious in

Death.

their feeding habits, and a single borer often causes the death of a young tree. Their work can easily be seen in large trees, as it takes the form of a gnarly exuberance, sometimes of a depression, on the surface of the bark. The treatment of this pest is



Centennial Linden—Parker St. Planted 1876.

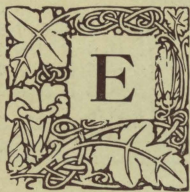
THE TREE CALENDAR



*Presented by the Shade Tree Commission
and the Board of Education to the Children of
Newark that they may learn to love trees.*

ARBOR DAY 1912

Our Heritage



ESSEX County is as rich in the variety and luxuriance of its plant life as any district of equal area in the Northern United States. Its parks are unrivalled in the variety of their beauties, both cultivated and wild; unexcelled in area proportioned to population. Its shrubs and bulbs and flowers, its lawns and swards and park-scapes are the admiration of visitors from everywhere. Its specimen trees are surpassed by those of the Pacific Coast alone. It has, too, its old historic trees. Venerable witnesses these to many thrilling and epochal events! Beneath their spreading boughs they saw go struggling by the war-worn patriot army, the tattered, famished, battered, but still right undismayed and fighting Continentals, Washington in command with Lafayette for co-adjutor. The older Broad Street trees and those in Military Park looked upon Lincoln and Grant, on Kossuth, Sherman and Sheridan. From their green and growing towers these trees have seen a quiet village develop into the big, bustling, hustling Newark of to-day—the fourteenth largest city on a continent of large cities.

Within the limits of Newark we have thoroughfares, bordered with all that is rich in plant life gathered from every quarter of the globe. In these and in our environs, the Oranges, and Montclair, may be seen rare landscape effects; choicest plants arranged in exquisite setting, unfolding their seasonal succession of varying blooms. Within a few miles from Newark's center the student of botany may study the life histories of all the trees, shrubs, and flowers capable of thriving in the temperate zone. There is then no reason why any Essex County boy or girl, man or woman, may not view the very best in the plant kingdom; one thing only can hinder, and that is to walk through our streets and parks with shut eyes—or shut heart.

CARL BANNWART.

very difficult, the only method in use at present is to go over the trees at regular intervals and exterminate all that can be found. This is accomplished by killing the larvae with a sharp pointed or heated copper wire, or by injecting bisulphide of carbon into the cavity where the grub is feeding and closing the passage with putty. The fumes of this bisulphide of carbon will kill the borer if they reach him. Both of these methods are efficient, as far as they go, but are necessarily very tedious. After the borers are killed the decayed wood should be cut out and the hole treated antiseptically and refilled 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 borers' depredations.

Methods.

The scale, in whatever form, is quite another proposition. This pest is a sucking insect and is therefore treated with a contact poison, such as a lime and sulphur solution, soluble oil, kerosene emulsion, whale oil soap, etc.

Of late we have been using soluble oil chiefly.

All these scale-cides are also deadly to the foliage and should therefore be used only when the tree is not in leaf. Moreover they are of such a nature and of such varying effects on the tree that their use should be left to the expert; they are not safe in the hands of the layman. We are able to report good success in dealing with the scale.

Scale.



Spraying Arsenate of Lead.



Berkeley Avenue, Oriental Planes.

ARBOR DAY.

Our Arbor Day work consisted of plantings in front of or in the yards of school buildings. The actual work of planting was supplemented by the preparation, publishing and distribution by the Board of Education of an Arbor Day memento in the form of blotters containing crisp sentiments concerning trees, their care and treatment.

Teaching the
Young Idea
to shoot.

We bestow trees to be set out by the children, under our own planters' supervision of course, and in connection with the school ceremonies of the day. This year there were some half hundred trees thus set out. We undertake to clothe this work with all due sentiment; for we realize that the day and its exercises mean much not only to the children's future but to the future of the trees as well. And this also was the motive behind the preparation of the blotters; the children had these before them for a good part of the school year and many got the sentiments by heart and memorized the instructions.

Good.

Another act characterizing the day was the presentation to the school children, by a local firm, of 50,000 catalpa trees to be set out by the youngsters under proper supervision in their Arbor Day planting. The trees were duly distributed after sanction of the plan by the Shade Tree Commission and approval by the Board of Education. And this good deed became a good example and, as such, was followed in

other cities. This enlisting the personal interest and active efforts of the children in behalf of trees cannot fail, if properly directed, to achieve good. It appeals to and develops the children's love of nature; it trains them to the appreciation of trees and to the intelligent, sympathetic care and protection of the same; and as a factor in the education of the children it has a value not easy to compute. Incidentally it creates for the future—and the very near future, at that—a tree-loving, tree-fostering, tree-protecting citizenship. And so, more power to it!

PRIVATE PLANTING.

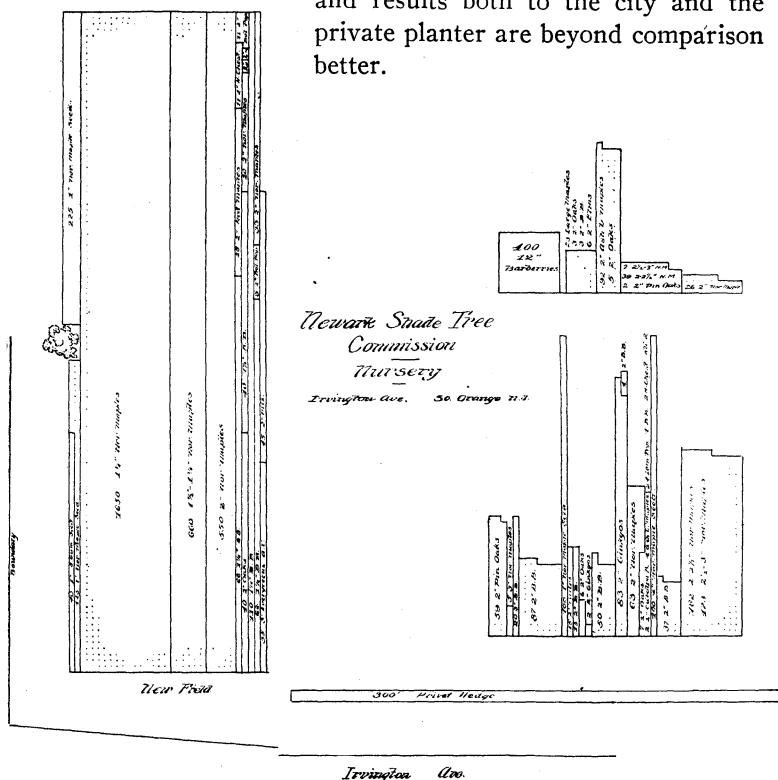
It is encouraging to note that the "Shade Tree Idea" is spreading. Not only does it find multiplied expression in municipal Commissions empowered by law but it is taking hold of real estate men and recommending itself to them from a money making point of view. Accordingly we find these hard-headed business men investing in the setting out of street trees along the thoroughfares fronting their marketable properties. For instance, a certain realty company holding extensive tracts in the outskirts of the city have sought to enhance the desirability of their sites by setting out rows of the beautiful Magnolia Tree. One of the company was much taken with a photograph of Oxford Street, Rochester, where two hundred magnolias burst into bloom every spring. He conceived, and carried out, the idea of setting some in parking strips along the thoroughfares in which his company was interested. Although these magnolias were paid for by the realty company, we may note that they came into possession of the city when planted; and the city's Tree Commission will very gladly do all in its power to protect these trees and foster their growth and development.

Money in it.

In connection herewith a word of warning should be spoken. The evil results of much private planting carried

Warning.

on through inexpert and irresponsible agents constrained the Tree authorities to incorporate in their Ordinance a provision requiring that no street tree may be set out without the written permit of the Shade Tree Commission. It was becoming too common a practice to set out undesirable varieties and poor specimens in all sorts of ways and without regard to alignment, interspacing, adequate subsoiling or any other requirement of good work; and results had become deplorable. Now, by virtue of the enactment above referred to, all such private street planting may be brought under the supervision of our trained men, arboriculturists, and results both to the city and the private planter are beyond comparison better.

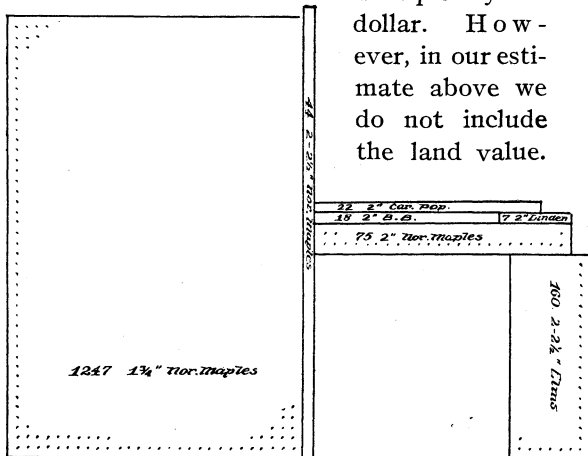


CITY NURSERY.

The City Nursery continued to do good service during the year; 12,763 trees are there being cared for. The policy is not to raise from seedlings, but to set in trees about one and one-half inches diameter. These are nursed two or three years until they become fully two inches, the smallest size we set out on the street. The cost per annum for cultivating, manuring, pruning and slight loss, is estimated at twelve cents per tree. The difference in price between a 1½" and a 2" tree

A Good Thing.

is frequently one dollar. However, in our estimate above we do not include the land value.



The plot of ground is not our asset. It is held by the city for future reservoir purposes and meanwhile is loaned to us for nursery uses.

Some of the merits.

Then the Nursery gives ample space to develop thrifty plantings with symmetrical heads and good roots. Frequently the nursery transplantings forestall loss in transplanting to street. We have, therefore, a smaller percentage of loss than would be the case with other stock.

Certain shrubbery is also raised in the nursery from the cuttings made annually in the parks; and these are used in the new plantings of parkways. One-eighth of an acre is sown to grass seed. This gives excellent sod with which to patch worn park surfaces, a job which recurs each year.

Another advantage is that requests for larger trees, four or five inches in diameter, can be served in the not distant future by holding a number of trees in readiness for this increasing demand. Norways and Planes of four-inch diameter would be available only at forbidding figures if we were not thus provided. This is a permanent policy of the City Nursery.



Second Annual Field Day of Shade Tree Protectors.

SHADE TREE PROTECTORS.

The leagues of school children banded to do needful things for the neighborhood trees increased in number and efficiency during the year. It is the simple truth that at the times when trees most need help these leaguers did what in money value approximated one thousand dollars a week. The reports of one week read as follows:

Number Leagues formed, May 15 to June 30..... 24
 Number Protectors enrolled, May 15 to June 30..... 2,135
 Number Protectors reporting work..... 1,857

1,857 boys and girls watered 9,256 trees 29,610 times, and cultivated 13,168. This represents only one week's work. Figures taken from first reports. No account of subsequent meetings included.

LEAGUE.	REPORTS.	TREES. WATERED.	TIMES WATERED.	TREES CUL- TIVATED.
Morton St. School.....	169	1,229	2,467	2,961
Spruce (18th Ave.) School.	158	432	1,503	571
Lafayette St. School.....	155	1,045	3,667	1,031
Burnett St. School.....	108	188	360	201
Newton St. School.....	107	671	1,335	619
Riverside (So. Market)....	103	809	2,765	915
South St. School.....	102	....	....	191
Chestnut St. School.....	89	202	578	171
15th Ave. School.....	85	323	1,038	295
South 10th St. School.....	83	186	236	217
Hawthorne Ave. School....	82	929	2,832	1,158
Franklin School	67	164	457	147
Sussex School	64	135	398	134
Avon Ave. School.....	62	546	1,135	425
Bergen St. School.....	58	976	5,031	1,255
Miller St. School.....	54	....	....	107
Central Ave. School.....	54	348	1,133	302
Oliver St. School.....	43	303	1,487	192
Belmont Ave. School.....	50	261	745	1,362
Summer Ave. School.....	38	118	428	93
14th Ave. School.....	40	88	90	90
Pioneers (Washington St.)	32	145	409	150
Charlton St. School.....	30	72	876	107
Seventh Ave. School.....	24	86	140	474
	1,857	9,256	29,610	13,168

The results are greater than can appear in a summary. The youngsters themselves were benefited by the attention they gave these plantings, the knowledge they thus gained of vital processes, and the interest in the great nature world thus awakened in them.

To introduce any new idea into the social scheme and incarnate that idea into a living and continuing movement, the "best people" to begin with are the children of the schools; they are in embryo the men and women of the days to come. And they are receptive. That is why we began this phase of Tree Work in the schools. A large part of this labor was performed outside of office hours. Ought not this work to continue? Merely to begin is not enough. The successful outcome is so assured, the benefits both to the children and the trees are so certain, and even present returns are already so tangible, it would seem fitting to employ a person in thorough sympathy to further this work it has become rooted and grounded among the people—such person to be employed by the Board of Education or by that body jointly with this Commission.



A Section of Shade Tree Exhibit—New Jersey Fair.

STREETS PLANTED AND VARIETIES SET OUT IN 1911.

SPRING, 1911.

FALL, 1911.

L NORWAY MAPLES.

L

NORWAY MAPLES.

Bergen St.....	87
Bruce St.....	94
Charlton St.....	85
Custer Ave.....	82
Cypress St.....	21
Demarest St.....	16
Gould Ave.....	14
Governor St.....	15
Hinsdale Pl.....	44
Jelliff Ave.....	58
Newton St.....	42
No. 6th St.....	130
Osborne Terrace	158
Parker St.....	56
Peshine Ave.....	55
Rose St.....	53
Schley St.....	8
So. 8th St.....	7
So. 9th St.....	205
Stuyvesant Ave.....	65
Summit St.....	26
Third St.....	50
Wallace St.....	20
Weequahic Ave.....	55
—1507	

Alexander St.....	52
Badger Ave.....	14
Belmont Ave.....	11
Bergen St.....	61
Eighteenth St.....	31
Halstead St.....	35
Hillside Ave.....	23
Johnson Ave.....	11
Lehigh Ave.....	136
Mapes Ave.....	133
Porter Ave.....	29
Porter Pl.....	22
Ridgewood Ave.....	87
Sanford Ave.....	73
Scheerer Ave.....	74
Second Ave.....	55
Shephard Ave.....	142
Stengel Ave.....	47
Sunset Ave.....	77
Twentieth St.....	54
—1167	

ORIENTAL PLANES.

Beverly St.....	20
Boyd St.....	41
Broad St.....	4
Fifteenth Ave.....	27
Frelinghuysen Ave.....	96
Hawthorne Ave.....	82
Jay St.....	33
Lackawanna Ave.....	17
Nassau St.....	47
New St.....	46
Peddie St.....	10
Pierce St.....	26
State St.....	18
— 467	

LINDENS.

Highland Ave.....	180
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HORSE CHESTNUTS.

Shaw Ave.....	68
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OAKS.

Voorhees St.....	36
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Total Statutory Planting.....3425

Request Planting..... 168

Arbor Day Planting..... 48

Total.....3641

FINANCIAL STATEMENT FOR 1911.

RECEIPTS.

Balance on hand January 1, 1911.....	\$ 2,634.86
By Tax Ordinance Appropriation.....	50,000.00
" Shade Tree Assessments and Arrears.....	11,557.10
" Refund on Christmas Trees—shortage in delivery....	61.11
" Sale of Trees.....	980.25
" Sale of Tree Guards.....	62.35
" Sale of Flagstone.....	125.00
" U. S. Express—damage to shipment.....	20.00
" Compensation re Gas-Killed Trees.....	1,496.00
" Comfort Station Receipts—use private closets.....	156.60
" Miscellaneous Receipts	912.43
	<hr/>
	\$ 68,005.70

DISBURSEMENTS.

Payroll—Planting Street Trees.....	\$7,597.70
" Maintaining Street Trees.....	8,437.88
" Spraying Street Trees.....	2,934.38
" Parks	9,067.58
" Comfort Station	2,397.53
" Office	6,568.75
	<hr/>
	\$ 37,003.82
Carting (Other than Payroll).....	254.10
Trees	8,235.05
Tree Guards (Manufactured).....	66.67
Tree Labels	372.40
Tree Collars (Hose for).....	98.00
Wire	1,792.40
Stakes	918.40
Manure	525.80
Fertilizers	280.06
Shrubs	186.07
Annuals (Bedding Plants).....	308.12
Guards for Flower Beds.....	75.00
Straw	5.80
Canvas	3.30
Seed	108.41
Sods	41.30
Soil	22.00

SHADE TREE COMMISSION.

51

Stone, Cement, Sand.....	122.70
New Sidewalk, Rector Street side Military Park.....	188.49
Boulders for Rustic Fountain.....	55.03
New Water Systems for Lincoln Park and Belmont Avenue Parking Strips.....	510.58
Water Rent	100.00
Plumbing	5.70
Hose	38.09
Squirrels and Squirrel Feed.....	37.05
Park Light Standard, Model.....	80.80
Purchase of United States Flag.....	22.25
Flag Repairs and Halyard.....	10.21
Painting Flagpole and Lacquering Ball.....	27.00
Signs	38.35
Refuse Cans and Standards.....	93.00
Electric Conduit, Washington Park.....	58.00
Taxicab, Park Inspection.....	3.00
Spraying Outfit Appurtenances.....	63.91
Spraying Hose (1,050 feet).....	157.50
Gas for Sprayer.....	390.00
Sprayer (Gasoline Power).....	330.00
Insecticides	508.00
Paints, Oils, Brushes.....	182.83
Harness, Fodder and Keep, 2 Horses.....	626.68
Truck Repairs, Repainting and Refurnishings.....	254.95
Snow Plough	15.00
Tools	216.39
Tools Repaired and Sharpened.....	112.86
Hardware	72.73
Ladders	28.49
Lumber	8.28
Sundry Field Supplies.....	1.00
Storage Rent	231.00
Purchase of Automobile (Allowance on Old Car, \$450) ..	350.00
Garage, Auto Supplies and Repairs.....	866.95
Annual Reports, Ordinances and other Printed Matter....	1,103.76
Stationery	255.28
Postage	191.69
Drawings, Photos, Photo Supplies.....	219.53
Blue Prints	14.50
Books, Periodicals, Pamphlets, Directory.....	49.41
Wall and Book Maps of Newark.....	83.00
Sundry Office Supplies.....	2.00

Tree Protectors' Badges.....	140.63
Outing to Shade Tree Protectors.....	4.00
Messenger Service	15.55
Extra Help	2.55
Telegrams and Telephone Service.....	20.47
Street Car and R. R. Fares and Travelling Expenses....	114.28
Expressage and Freight.....	229.39
Incidentals re Local Inspections.....	31.15
Landscape Architect's Services.....	100.00

RE LINCOLN MEMORIAL—

Construction Work at Court House Plaza and Materials	2,000.00
Service Pipe Installed, Court House Plaza.....	108.58
Artificial Stone Pavement, Court House Plaza.....	143.55
Removing Cement Walk at Court House Plaza.....	60.00
Grand Stand at Unveiling Memorial.....	180.00
Chairs for and Invitations to Unveiling.....	19.70

COMFORT STATION—

Water Rent	763.15
Motor Rent	26.00
Soap	189.17
Towel Supply (cloth).....	23.19
Paper Towels	202.50
Toilet Paper	75.97
Sanitary Napkins	8.00
Disinfectants	68.50
Polish	8.75
Electric Bulbs	16.29
Fuses	13.80
Sundry Supplies	13.69
Steam Heat Appurtenances and Installation.....	68.25
Water Heater	100.00
Plumbing	35.50
Closet Seats	36.00
Marble Work	29.80
Terrazzo Floor, Repairs and Cleaned.....	35.00
Installing Ventilation Fans.....	31.09
Sundry Repairs	11.33
Electric Lights	265.50
Electric Power	340.43
Gas	18.80
Coal	132.50
Advertising Legal Notices.....	1,135.54

SHADE TREE COMMISSION.

53

Insurance	47.00
Refunds on Tree Assessments (\$13.65 of this as per Auditor)	73.22
Rebate on Flagstone Sale (overcharge).....	50.00
Rebate on Deposits re Private Planting—conditions complied with	25.00
Balance, including Trust Fund (gas-killed trees), \$1,496.00	2,969.19
	<hr/>
	\$ 68,005.70

Of this amount \$37,457.19 was expended for the planting, maintenance and care of trees on streets; \$19,362.47 for the development, maintenance, care and improvement of Public Grounds and Parks other than Court House Plaza; \$3,306.11 for the reconstruction of said Plaza necessitated by the placing of the Lincoln Memorial and for expenses incidental to unveiling the latter, and \$4,910.74 for the maintenance of the Public Comfort Station in Military Park—all from January 1, 1911, to December 31, 1911.

Respectfully submitted,

JAMES A. BERRY, *President,*

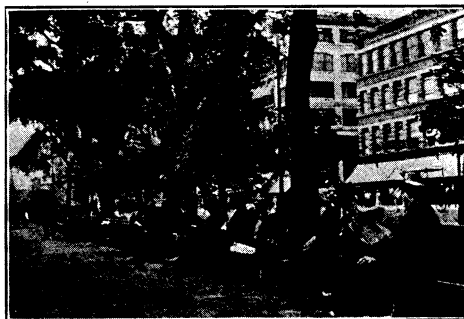
GEORGE B. ASTLEY,

BERNARD M. SHANLEY, JR.,

Commissioners.

CARL BANNWART, *Secretary.*

December 31, 1911.



Military Park.

THREE KINDS OF PLANTING COUNT THEM—3

Three of a Kind

P *PLANT TREES; by all means, Plant Trees. That's number one. But don't forget to*

Plant also the Love of Trees. That's number two. For this kind of planting, the best soil is the heart of childhood and of youth. And while you are about it

Plant likewise Knowledge concerning Trees. That's number three. Not necessarily the Forester's technical knowledge; just a comfortable "working knowledge," you know. The leading species and how to distinguish them; how, and what kind, to select for planting—or to reject; how to set out a Tree; how to care for and protect it; and so on. Not very recondite knowledge this, and easy to impart—also easy to take in. And useful? Yes, masters, eminently useful; and, if Newark is to do its best in trees, indispensable.

Now, of the three plantings above recommended, number one would mean in time a Newark adorned throughout its length and breadth with stately trees. Number two would mean a Newark of tree-loving, tree-fostering, tree-protecting people. And number three a Newark noted for, and profiting by, its sound judgment in tree matters—its intelligence in the conservation of trees and in their planting, care and protection.

Trees, love of trees, knowledge of trees, these three; and the greatest of these (one ventures to think) is Knowledge. For to know trees is to love them; and to love trees is to plant, care for, protect and conserve them. So the last becomes first; heads the shining list; leads unfailingly to the other two. And, indeed, without Knowledge, love would be helpless and planting of little avail. "My people perish," 'twas said of old, "for lack of knowledge." And as with the people, so with the people's trees. Selah!

LEADING STREET TREES

Carl Bannwart, Secretary.

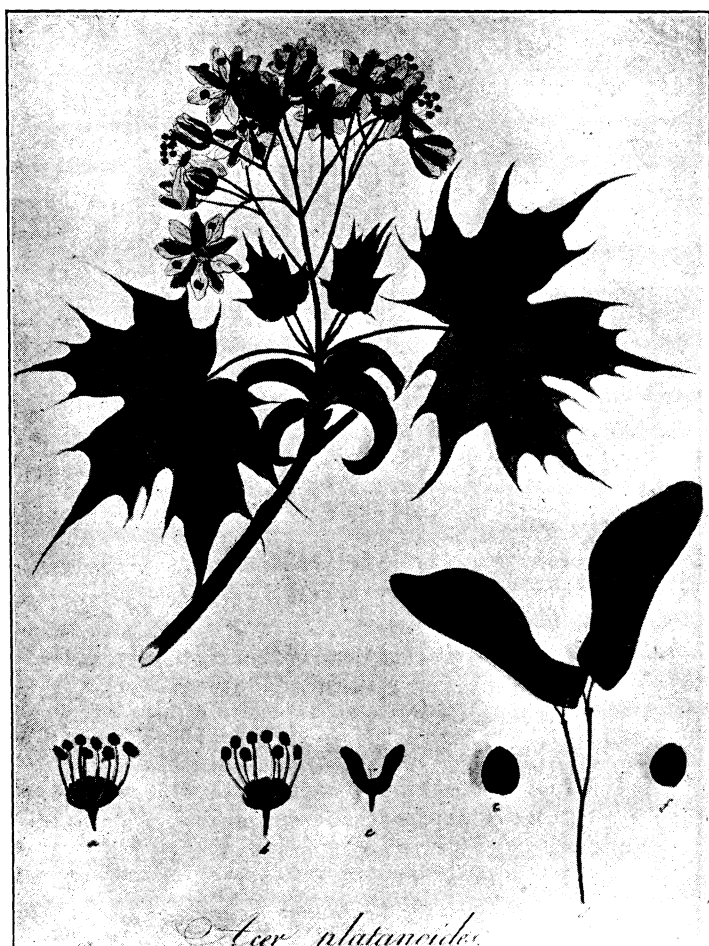
Our continent is rich in the number, diversity and quality of its native and imported species. However, only a few are adaptable to the artificial conditions of city streets. Those varieties which are known from extensive observation and experience to have proven best adapted to cities, we here recount. This list has the endorsement of foresters of the most important cities which have seriously made systematic planting and care of trees a function of the city government. Some of these species are immune from insect ravages, others cause a minimum of litter or odor. Again others will send out grateful shade, though you hem in the trunk with pavement, thus excluding air and water from the roots. Some trees have all these faults (if faults they be). All trees have some faults. With all their faults a tree is yet a wonder, and a city tree the most heroic of its kind.

The ideal tree has not yet been produced. It would possess various desirable and Aladdin-like qualifications. In the matter of size it should be telescopic, adjusting itself automatically to width of street and proximity of houses. This Utopian tree would tolerate sewer and illuminating gas, would not encroach upon the sidewalk, would not make demands for a certain amount of unpaved area for the ingress of air and water. Its upper branches and trunk would take no harm from electric currents or from brutal prunings. Again such a tree would repel borers which attack its trunk; or it would absorb them, as does the pitcher plant its visitors. It would be a hydra, each stalk capable of sending out two new leaves where the caterpillars and beetles have stripped it of one. In the spraying season it would exude an arsenate of lead of its own distillation. Furthermore, this ideal city tree would send out its blossoms without scattering pollen in the air or petals and stamens on the walk, discharging these by a convenient chute of its own grafting into the ash carts which would arrive at preconcerted times. The same as to autumn leaves and fruit debris.

We invite attention to certain liberties taken in the illustrations, thus:

1—The flowering branch of the Red Oak is pictured and the fruiting branch of the Pin Oak. These Oaks resemble each other closely in fruit, flower and branch so that separate illustrations of the different species are not called for since this is not a scientific treatise.

2—For a like reason the American Linden is pictured, though the text endorses the European Linden; and the text endorses the Oriental Plane, while the picture shows the Occidental Plane.



- | | |
|---|---------------|
| a. A staminate or sterile flower. | d. A fruit. |
| b. A perfect flower. | e. A seed. |
| c. Vertical section of a pistil, showing seeds. | f. An embryo. |

The tree which combines more good qualities than any other is the NORWAY MAPLE (*Acer Platanoides*). It is of medium size, pleasing in shape. Whether excess of coal smoke, or of moisture or drought, overtake it suddenly, the Norway leaf keeps its color and performs its work. The debris of its blossoms is a negligible quantity, that of the seeds (samaras) unobjectionable, and extremes of heat and cold alike minister to its needs. It is the best of the Maples for city streets; tough, substantial, long-lived.

If you want your grandchildren to remember you by the tree you set out this Arbor Day, PLANT A NORWAY. Out of 22,000 trees set out in Newark in six years, 9,000 are Norways. Other cities use them in the same proportion.



C. S. Sargent.

RED MAPLE (*Acer Rubrum*).

- 1 & 2. Staminate and Pistillate flowers.
 3 & 4. Staminate flowers and vertical section.
 5 & 6. Pistillate flower and vertical section.

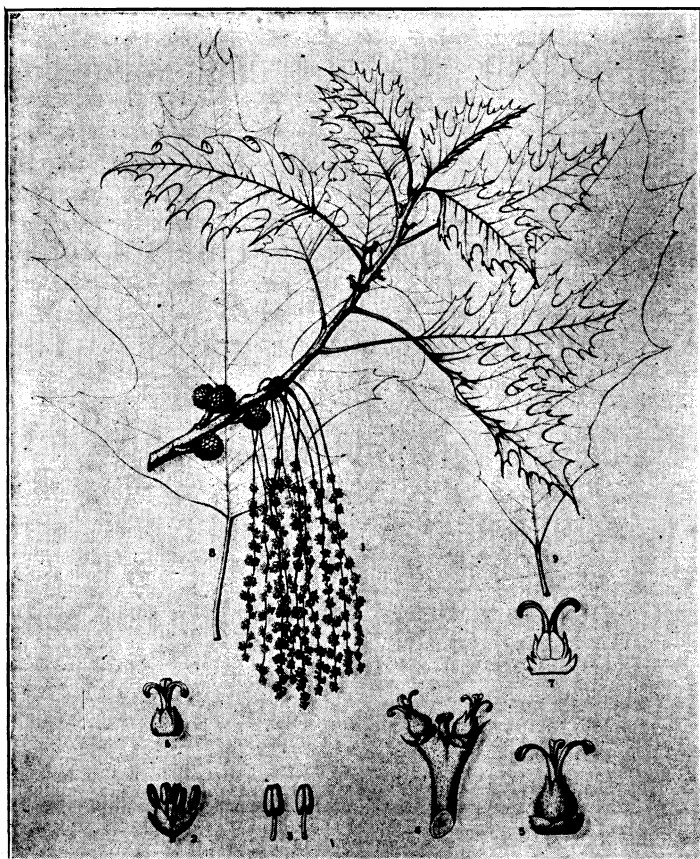
7. A fruiting branch.
 8. Vertical section of a fruit.
 9. Vertical section of a seed.
 10 & 11. An embryo.
 12. A winter branchlet.

Even the RED MAPLE (*Acer Rubrum*) is a good tree—somewhat larger than the Norway. But also it is more brittle, less adaptable to continued drought, scarcely making up by its little ornamental colorings for other qualities which it lacks. It has some of the characteristics of the Linden. If you want to experiment, plant a Red Maple.

Two Oaks are proving their right to hold a first place among city shade trees—PIN OAK and RED OAK (*Quercus palustris* and *Q. rubra*). These are both medium-sized, hardy, tough, seldom bothered by insects—leaves too tough for the pests. The Pin Oak is the more adaptable. It will thrive in moist soil and continue its patient growth in dry soil. The Red Oak is more particular—it wants only dry soil.

The Pin Oak in good health keeps its leaves all winter. The dry, brown, rustling crown of leaves is loath to leave its parent. Only when the sap stirs and the buds swell will the brown leaves depart. Sandy well drained soil.

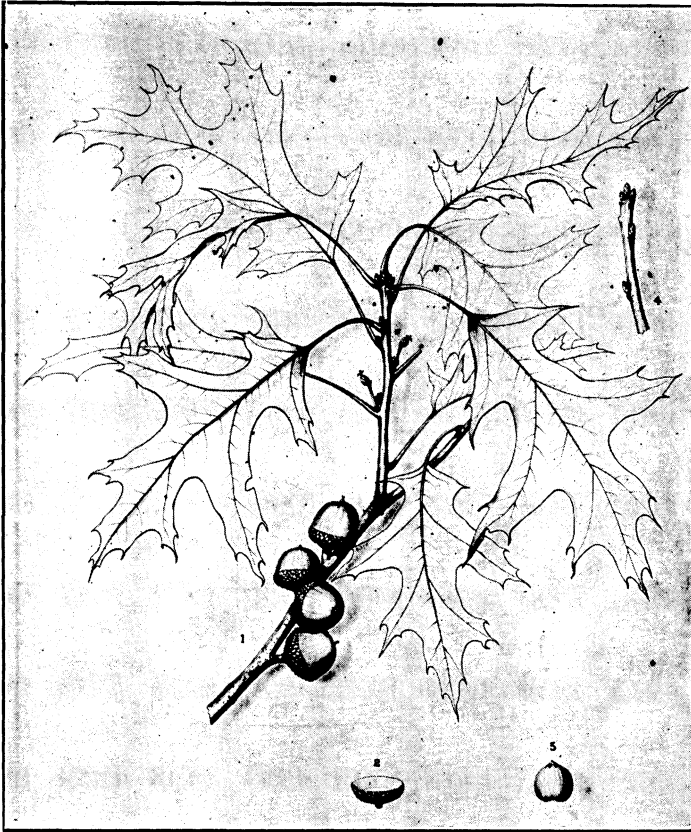
Have you a space? Then in it place
Some good Oak Trees—Live centuries!



C. S. Sargent.

RED OAK (*Quercus Rubra*).

1. A flowering branch.
2. A staminate flower.
3. A stamen, front and rear view.
4. A pistillate inflorescence.
5. A pistillate flower.
6. Pistillate flower, involucre removed.
7. Vertical section of a pistillate flower before fecundation.
- 8 & 9. A leaf.



C. S. Sargent.

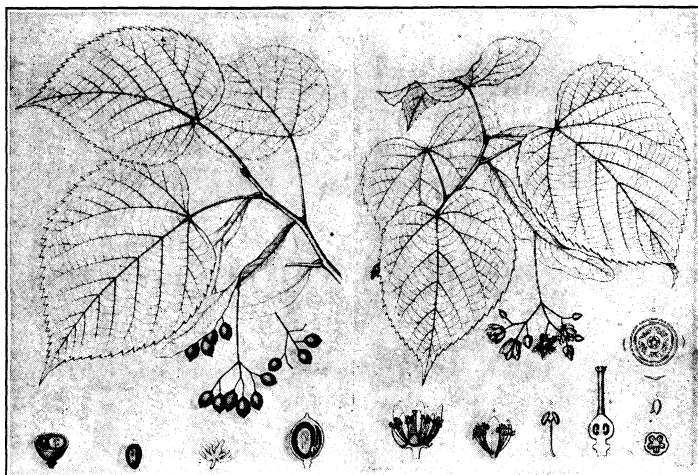
PIN OAK (*Quercus Palustris*).

1. A fruiting branch.
2. A cup, natural size.

3. A seed, natural size.
4. A winter branchlet.

One more tree of smaller size and therefore more adaptable to narrow streets is the EUROPEAN LINDEN. Good tree, fine, showy, fragrant blossom, tender leaves, somewhat more rapid in growth than the Maples and Oaks above mentioned. It is hardy, likes moisture, but will fight it out even in dry soil; only it will be smaller. They have wonderful stories of the Lindens of Europe for age and size. A thousand years some of them have chronicled the seasons' progress. Members of such long-lived races are always deserving of respect; plant some at regular intervals, they will repay with abundance of shade.

Two more certainties are now to be mentioned and the catalog of the certainties for street trees is complete. So soon? Yes, so soon!

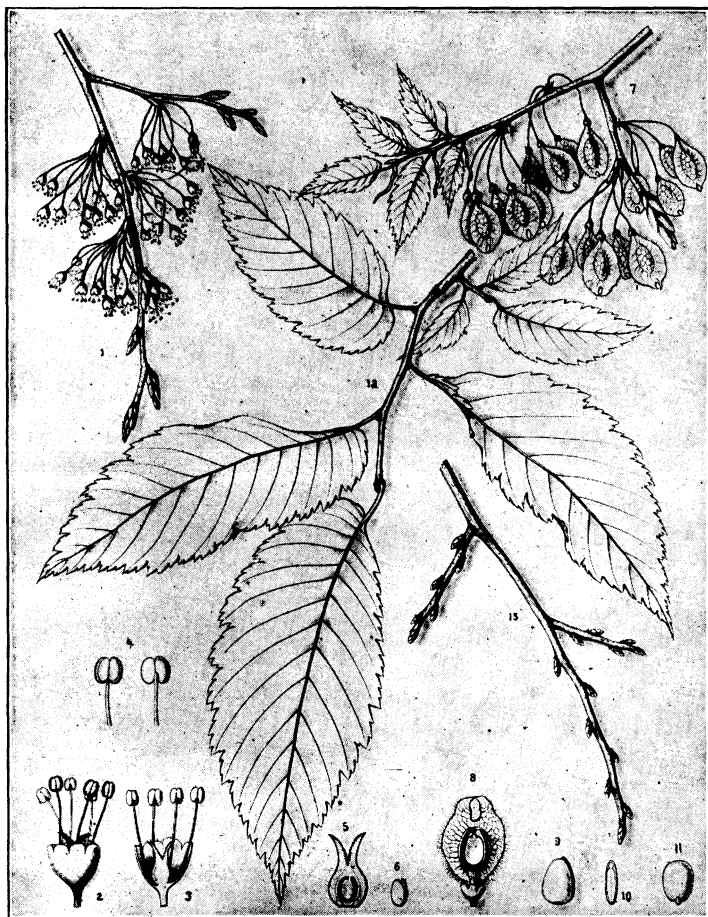


C. S. Sargent.

AMERICAN LINDEN (*Tilia liriiodendron*).

- | | |
|---|--|
| 1. A fruiting branch. | 1 & 2. Flowering branch, diagram of flower. |
| 2. Vertical section of a fruit. | 3. Flower, two sepals and petals removed. |
| 3. Cross section of a fruit. | 4. Cluster of stamens, petaloid scale. |
| 4. A seed. | 5. A stamen and ovule. |
| 5. An embryo, with the five-lobed cotyledons displayed. | 6 & 7. Vertical and cross section of an ovary. |
| | 8. A pistil. |

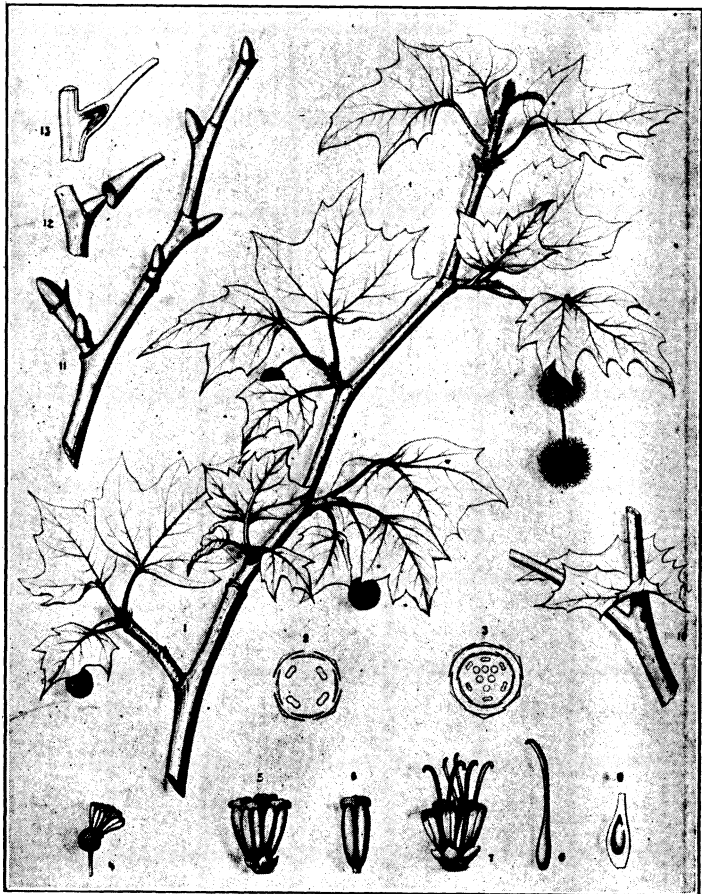
First, the AMERICAN ELM (*Ulmus Americana*), loftiest crown, lightest shade, smallest leaf, and the most graceful of all trees, associating New England with Old England, the home of Elms. Of late it has been losing in favor with us as a shade tree. Its pedigree is unquestioned and its character as good as ever, but it has too many enemies. First, a wood-eater, the borer (wood leopard moth), ugly customer, one will kill a fine tree, hard to control. Second, leaf eaters; elm leaf beetle, tussock moth caterpillar. These are easy to control if you know how and when. Third, sap sucker: Scale, feed on prepared sap, does not do much harm, but looks bad. Keep out borers, keep off beetles, caterpillars, lice, and the elm is as stately, graceful, delicate as ever. One more thing, the Elm must have large open ground around it; in fact, we only plant it in streets having a tree belt—continuous open strip between curb and walk. Needs more air and water, must have good draught to supply topmost branches with sap.



C. S. Sargent.

AMERICAN ELM (*Ulmus Americana*).

- | | |
|------------------------------------|---------------------------------|
| 1. A flowering branch. | 8. Vertical section of a fruit. |
| 2. A flower. | 9. A seed. |
| 3. Vertical section of a flower. | 10. Vertical section of a seed. |
| 4. A stamen, front and rear views. | 11. An embryo. |
| 5. Vertical section of a pistil. | 12. A summer branch. |
| 6. An ovule, magnified. | 13. A winter branch. |
| 7. A fruiting branch. | |

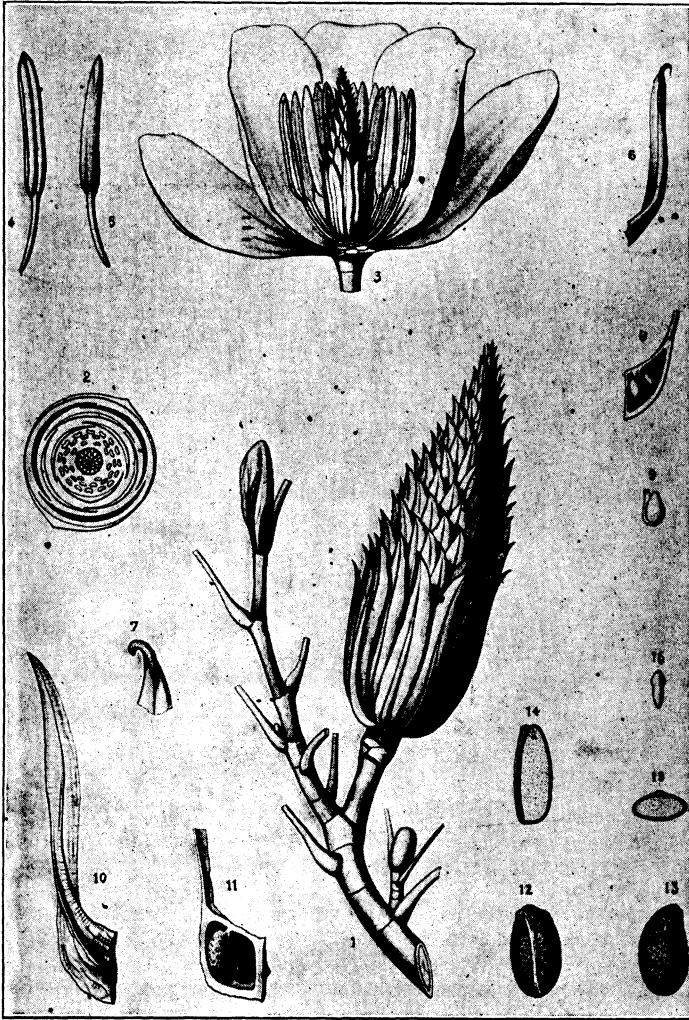


C. S. Sargent.

BUTTONWOOD (*Platanus Occidentalis*).

- | | |
|--|--|
| 1. A flowering branch. | 8. A pistil. |
| 2. Diagram of a staminate flower. | 9. Vertical section of an ovary. |
| 3. Diagram of a pistillate flower. | 10. Portion of a branch and stipule. |
| 4. A head of staminate flowers with most of the flowers removed. | 11. A winter branchlet. |
| 5. A staminate flower. | 12. Portion of a branchlet, showing bud and the base of a petiole. |
| 6. A stamen. | 13. Vertical section of a branchlet, bud and petiole. |
| 7. A pistillate flower. | |

Next tree, another giant: ORIENTAL PLANE (*Platanus Orientalis*), alias Buttonball, alias Buttonwood, alias Sycamore. Plant only on wide avenues; rapid in growth, symmetrical; when young, full of foliage; of straggling, oak-like appearance when old. This seems to be the favorite tree in Paris. The bark of the plane is shed in flakes and, in the younger parts, is white or green or brown, as the seasons vary. There is no risk in selecting Planes. They will grow even with slight moisture, nor are they troubled much by insects.



C. S. Sargent.

TULIP TREE (*Liriodendron Tulipifera*).

- | | |
|--|--|
| 1. A fruit. | 9. An ovule. |
| 2. Diagram of a flower. | 10. A carpel. |
| 3. A flower, a sepal and two petals removed. | 11. Vertical section of a carpel. |
| 4. A stamen, anterior view. | 12. A seed, showing the raphe. |
| 5. A stamen, posterior view. | 13. A seed, showing the side opposite the raphe. |
| 6. A pistil. | 14. Vertical section of a seed. |
| 7. A stigma. | 15. Cross section of a seed. |
| 8. Vertical section of an ovary. | 16. An embryo. |

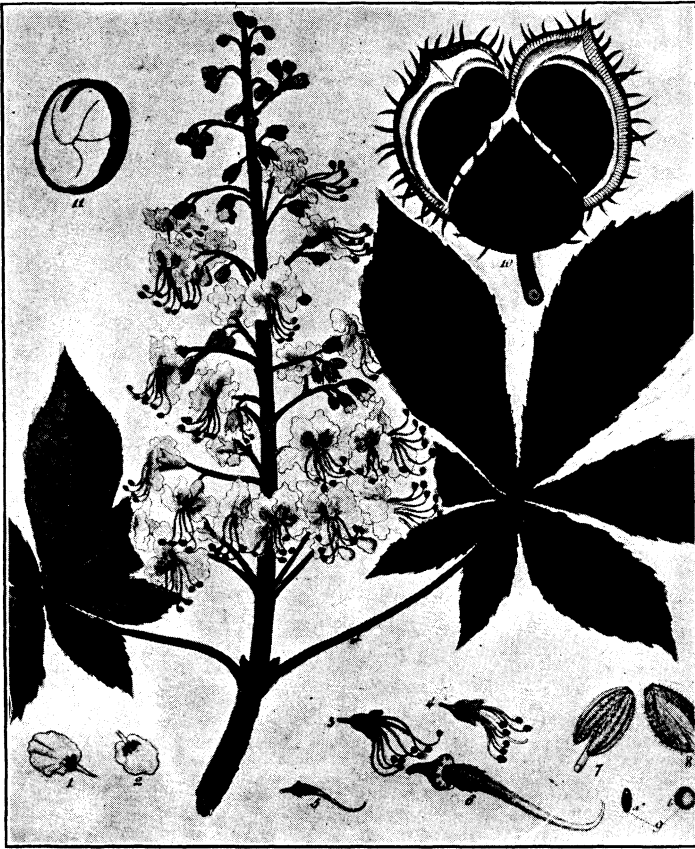


C. S. Sargent.

TULIP TREE (*Liriodendron Tulipifera*).

An experiment is under way to test the qualities of the TULIP (*Liriodendron tulipifera*) as a street tree. This is a beautiful native tree, with showy blossoms. It is sometimes called the Tulip Poplar, perhaps because its growth is almost as rapid as that of a Carolina Poplar. This must be transplanted with a ball of earth, when very young—1" diameter or thereabouts. The trees are not troubled much by insects.

The Ginkgo (*Salisburia adiantifolia*), the Maiden-Hair tree, is a Chinese immigrant. In its native land it has sacred associations. It is hardy, immune from insects, rapid in growth, medium in size, inclined to be scraggly in growth, a tendency which can be checked by good pruning. The Ginkgo is a pleasant novelty in leaf, habits, contour, characteristics and ancestry (this going some nine million years back). The Ginkgo is a certainty, it will grow, but plant only in proportion of dessert to dinner.



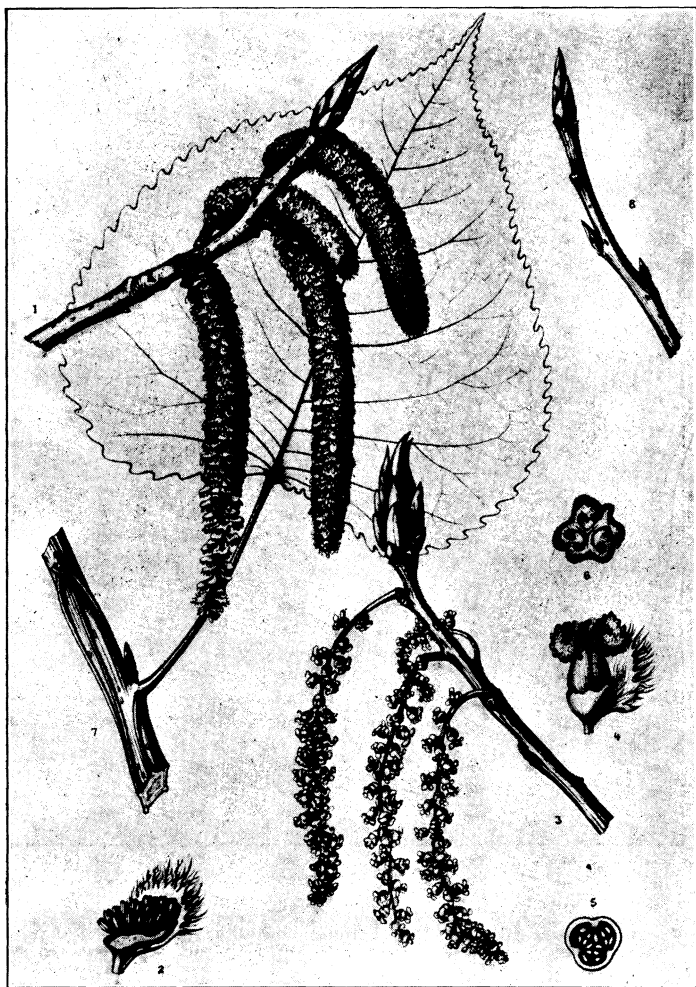
C. S. Sargent.

HORSE CHESTNUT (*Aesculus hippocastanum*).

- | | |
|---------------------------------|---|
| A flowering branch. | 5 & 6. A pistil. |
| 1. A lateral petal. | 7 & 8. Stamen, front and rear view. |
| 2. A superior petal. | 9. Ovule, lateral and vertical section. |
| 3. Staminate or sterile flower. | 10. A fruit with seeds removed. |
| 4. A perfect flower. | 11. Vertical section of a seed. |

THE HORSE CHESTNUT (*Aesculus hippocastanum*) has many good points as a street tree. It is perhaps better adapted to lawns. The foliage is so dense that this variety ought not to be planted unless the house is considerably back from the street line. Unless supplied with much moisture it will begin to shed leaves in July. In blossom time it is a lovely sight with its wealth of white candelabra. The Horse Chestnut belongs among the medium-sized trees. The early dropping of foliage is sometimes due to the fact that the tree sends out many leaves in the time of Spring rains, when water is abundant, and lets these fall when dryer weather has become settled.

Two more village characters to be blackened in this tree gossip, one the CAROLINA POPLAR (*Populus Carolinensis*), although it is the best tree for some situations. It is hardy, more a weed than a tree, brittle, short-lived. But it can do some things well. Plant it under three certain cir-



C. S. Sargent.

COTTONWOOD (*Populus Deltoidea*).

1. Flowering branch of staminate tree.
2. A staminate flower with its scale.
3. Flowering branch of pistillate tree.
4. A pistillate flower with its scale.
5. Cross section of an ovary.
6. A stigma seen from above.
7. Portion of a branch with a leaf.
8. A winter branch.

cumstances only. It will then improve upon acquaintance. Plant it under other circumstances and familiarity will breed contempt. We have only the staminate (male) with us; the planting of pistillate is sometimes forbidden by law because of the nuisance of the seeds and pollen. The "three circumstances only" are as follows: (1) If you want a formal tree to be maintained at a certain set size by annual pruning; (2) if you want immediate shade, the Poplar is the tree; but set it out in alternation with Norways. Let the Poplars give you the immediate shade, and in five

years when the Norways have got well started on their century run, cut down the Poplars. (3) Plant it where nothing else will grow, in factory districts, in streets with filled in soil. The Poplar will stand more abuse than any other tree. WARNING: If you insist, however, on the Poplar, use iron sewer pipes only. Poplar roots enter clay pipes through openings as thick as the lead of a pencil and *fill* the pipes for ten feet with roots. If you want to help your dear friend, the plumber, in winter, why, plant a Carolina Poplar.



C. S. Sargent.

SILVER MAPLE (*Acer Saccharinum*).

- | | |
|---|------------------------------------|
| 1 & 2. Staminate and pistillate flowers. | 7. A fruiting branch. |
| 3. A staminate flower. | 8 and 9. Vertical section of seed. |
| 4. A pistillate flower. 5. A pistil. | 10 & 11. An embryo. |
| 6. Vertical section of pistillate flower. | 12. A winter branchlet. |

One more undesirable among the trees for cities. Remember *in cities*; the character of some of these may change when they have freer conditions of the country with bird neighbors. This is SILVER MAPLE (*Acer Saccharinum*), the black sheep of the Maple family. If you do not want posterity to enjoy the shade of trees you set out, in return for the shade you enjoyed from trees planted by your forbears, plant a Silver Maple. If you want a tree that is easily crippled by storm, that is short-lived, that is infested with borers, plant a Silver Maple. We do not give this tree the freedom of the city; the ban is on it; it is a delusion and a snare, not a tree. If you want to waste money and time, want to wait for shade and get none, want the tree to die before you die, so that no man or beast surviving you will benefit by your efforts, if you want to be arrested, brought to bar, fined, imprisoned, disgraced, beheaded, plant a Silver Maple!

One word concerning the QUALITY of the tree cannot be amiss. Get the best obtainable. A nursery-raised tree, recently transplanted, with a sound, straight stem, and a well developed top. For street planting the head should begin not less than seven feet from the ground. The roots should be full, compact, and fibrous. At no time during the process of taking up, transporting and planting, should the roots be exposed to the sun. Keep them moist, until placed in the ground, to prevent injury to the more tender fibres. Failure of young trees is often directly attributable to this neglect.

We have other good trees: Locust (Robinia), Mulberry, Liquidahmbar, Hornbeam, but they are in the extreme experimental stage—as yet uncertainties as street trees, unknown quantities.

Class I. Widest Adaptability:

Norway Maple (small),	Pin Oak (medium),
American Elm (large),	Red Oak (medium),
Oriental Plane (large),	European Linden (large),

Class II. Good—Under Specified Conditions:

Horse Chestnut (small),	Red Maple (medium),
Tulip (large),	Ginkgo (small),

Class III. Tabooed (Infested with Borers):

Silver Maple,
Carolina Poplar (medium),

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