

Forest Hills Gardens
Architecture and Landscape Planning
in a Model Garden Suburb, 1908-1915

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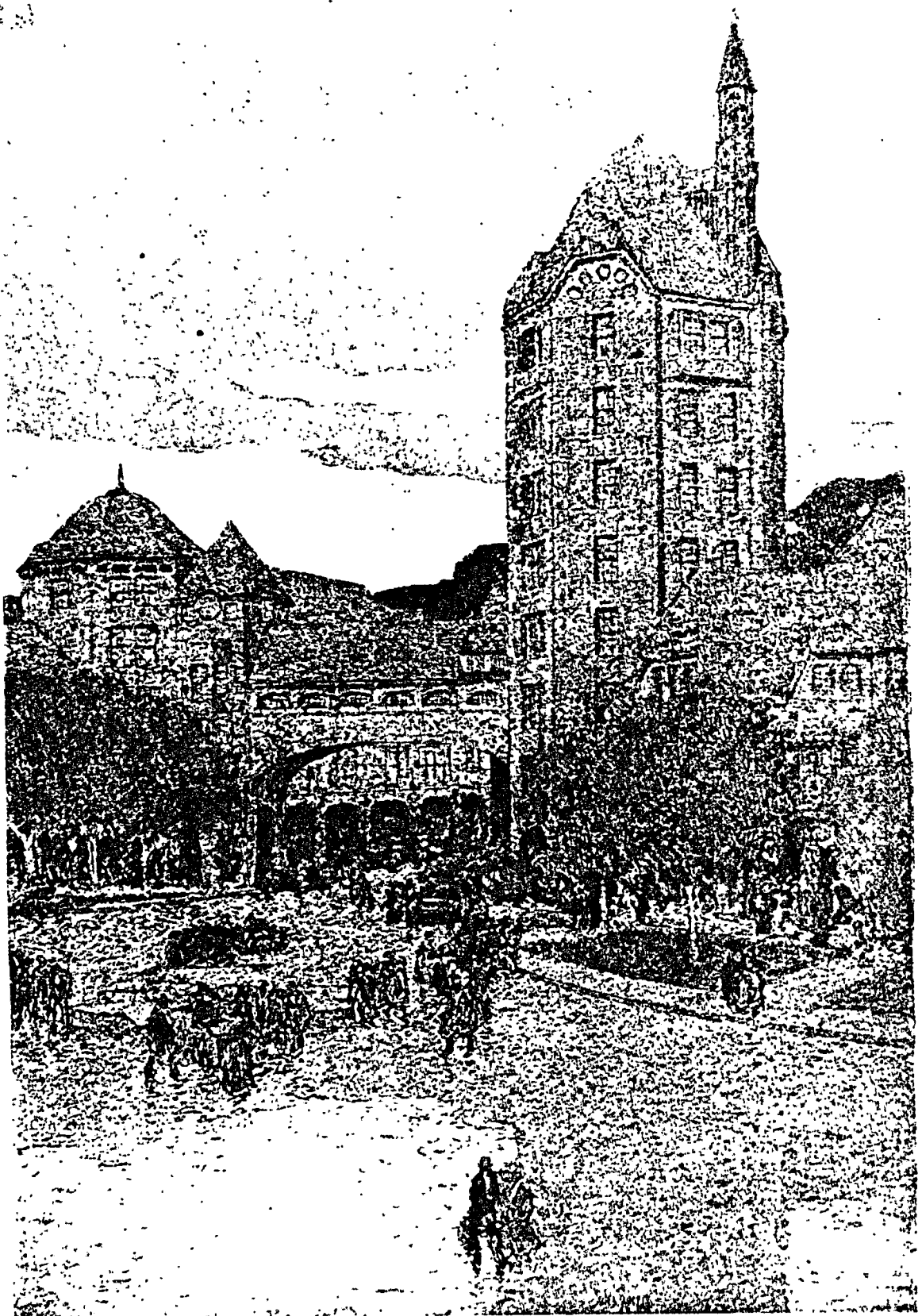
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Frontispiece. Forest Hills Gardens, Station Square. Watercolor rendering by Jules Guerin, ca. 1912.

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Introduction

The American suburb was frequently chosen by reformers as an alternative to city life since the early nineteenth century. Forest Hills Gardens, in Queens, New York, was a unique example of the garden suburb. This was due to the strong role played by the Russell Sage Foundation, the founder of the suburb. Under the direction of Mrs. Russell Sage, the Foundation established guidelines for every phase of the development. These guidelines reflected the thinking of contemporary reformers, particularly those involved in the Progressive reform movement of the early twentieth century. The relationship between the two is important, but one which is rarely considered in connection with the Gardens.

Mrs. Russell Sage established the Sage Foundation in 1907 as a philanthropic organization with the goal of "improving the living and social conditions in the United States."¹ This broad objective for widespread reform drew support from Progressive reformers who shared Mrs. Sage's desire for social and educational change. They endorsed the Foundation and looked to it as an institution which might lead in scientific research and the investigation of conditions in the environment, ultimately providing methods useful to reformers nationwide. In the same manner, the public anticipated the Foundation might sponsor projects that would

benefit them. Subsequently, when the Foundation announced its intentions to begin a model suburb in New York, many people assumed it was acting in a charitable capacity.

This was not the case, as became apparent in the Foundation's early publicity and actions. The Foundation's central purpose there was to develop a prototypical suburb which would set new standards for suburban design. The primary objectives for the development were to provide well-designed homes, sound real-estate economics, and an attractive but functional landscape plan. The Sage Homes Company combined the talents of architects, landscape architects, and real-estate managers, in what they termed "collective planning." Restrictions pertaining to land-use and building were established. These were considered essential to counteract changing conditions in the real estate market, and to exert control over future development in the suburb. Theoretically, if one followed the Sage Foundation's model, the suburb could be repeated anywhere in the country. The construction of such an educational model fit in with the Foundation's larger goal of improving social and living conditions in America.

From 1908 to 1915, architect Grosvenor Atterbury and landscape architect Frederick Law Olmsted, Jr. acted as representatives of the Sage Foundation in the development of the physical community at Forest Hills. Both men were active participants in the Progressive movement, having devoted much of their careers to housing research and urban

reform. They held a common notion with the Foundation that an ordered environment affected individuals in a positive way. The suburb represented to them the possibility of creating a new social structure conducive to family life and 'face-to-face' neighborhoods.² They believed this would be realized through a carefully designed environment wherein architecture and the landscape were medias for potential social reform as well as aesthetic enjoyment.

Chapter one will deal with the context of the Progressive movement in the early twentieth century. Although Progressivism as a broad-based reform movement which embraced many concerns, of interest to this thesis is the reform in housing. Tenement legislation, model tenement design, and the City Beautiful Movement were all extensions of the Progressivist's aim to improve the social and physical habitat of the city. Increasingly during this time city planners and architects sought pragmatic approaches to the planning process such as the garden city, industrial towns, and garden suburbs. These formulas for supposedly controlled environments allowed them to better realize their ideal society.

Chapter Two describes the beginnings of the Russell Sage Foundation and its initial objectives, which became a rallying point for Progressive reformers in New York and throughout the country. The creation of the Sage Foundation Homes Company to direct the building of the suburb at Forest Hills Gardens is the subject of Chapter Three. It was apparent at this early stage that a discrepancy existed between

what the public expected the suburb to be and what the Foundation actually intended it to be.

Chapters Four, Five, and Six deal with the real-estate methods employed, the landscape plan, and the architecture, respectively. It was in these three areas that the Foundation claimed its most significant advances would be made. The members of the Homes Company carefully outlined restrictions for the building of homes, principles for the planning of roads, and standards for the architectural development. If the Sage Foundation's suburb was to succeed in Forest Hills, or anywhere else for that matter, it had to comply with the guidelines of the model established by Atterbury, Olmsted, Jr., and others.

Contemporary reform journals such as Charities and the Commons, and The American City were examined for information on housing reform and city planning. The Sage Foundation published a number of pamphlets and brochures on the Homes Company and Forest Hills Gardens, as well as a two volume work on the history of the Foundation spanning the years 1907 to 1946. Activities in the Gardens were reported by the New York Times and the suburb's own publication Forest Hills Gardens Bulletin. Information on the designing, planning, and construction of the Gardens was covered in contemporary architectural journals, including the Craftsman, Building Progress, Architectural Record, and The Brickbuilder.

Chapter 1

The Ideological Background of Progressivism:

Environmental Reform and the Suburb

American attitudes towards the urban environment at the turn of the century were largely influenced by Progressive reform. From 1890 to the beginning of W.W.I., Progressivism was the most influential force in national urban reform, effecting changes in social, economic, political, and aesthetic affairs. Progressives accepted technology and progress as part of an optimistic, forward-looking philosophy. At the same time, they clung to a set of traditional values and forms which they perceived in their concept of a utopian past.

Although as a group they are difficult to classify, Progressive reformers shared an "ethos of responsibility" which stemmed from a strong religious background and, consequently, a sense of moral obligation to mend the ills of urban society.³ Although they were optimistic about the powers of science and organization to effect change, they remained conservative in their philosophy and actions. Progressives wanted to redirect the course of nineteenth century philanthropy which had been emotional and altruistic in nature. Twentieth century philanthropy would be geared

towards education, professional skills, institutions, and scientific investigation of the environment.⁴ New York City lead the country in the establishment of reform organizations and the passage of reform legislation. According to Jacob Riis, "In this generation, and for many to come, New York City will be the workshop for the whole country."⁵

Progressives believed that major social problems were caused by the rapidly increasing population in cities which was due to immigration and the depopulation of rural areas. Inadequate housing was seen to be a crucial problem because they observed that it lead to crime, disease, and a lack of cohesive community. Progressives concentrated their efforts on tenement reform because the tenement was the primary housing type of the immigrant population.⁶ The tenement environment seemed to represent urban decay in an extreme state. It "fostered crime, hoodlumism, sexual impurity," and subjected its inhabitants to "tenement house rot."⁷ The sensationalistic exposure of tenement conditions through muck-raking journals, and the photorealism of Jacob Riis, for example, contributed to the sense of urgency for tenement reform.⁸

Progressive reformers wanted to counteract the social problems associated with the tenement. This mean improving upon the substandard speculative-built tenement which dominated the housing market, and ultimately providing controls for future building. Two main methods were adopted in order

to achieve these goals--restrictive legislation and model tenement designs.

Reform legislation was aided by the creation of municipal organizations such as the 1894 Tenement House Committee in New York City, which collected and publicized statistical information. Progressive reformers realized major achievements in the New York Tenement House Commission and Exhibit of 1900. They established new standards for tenement construction and provided an organization to enforce them.⁹ The Commission also counted many architects among its members, thus assuring their role in guiding tenement design.¹⁰

In the second half of the nineteenth century, tenements were frequently built by individuals who were motivated by profit and philanthropic sentiments. The wealthy housing reformer Alfred Treadwell White (1846-1921) represented the sense of moral obligation which characterized the nineteenth century reformer. White declared "It is time to recognize that if the intelligent and wealthy portion of the community do not provide homes for the working classes, the want will be continually supplied by the less intelligent class and after the old fashion."¹¹

White and contemporary tenement builders such as Elgin Ralston Lovell Gould (1860-1950), were inspired by the English notion of investment philanthropy and English examples of model tenements. Gould studied the model housing developed by private industry and cooperative associations in Britain,

France, and Germany. He published his results in a report for the Commissioner of Labor, entitled The Housing of the Working People, 1895.¹²

During the Progressive Era, model tenements introduced substantial practical and aesthetic improvements in comparison to the nineteenth century tenement. Housing reformers emphasized the term model in connection with the tenement, because the latest advances in domestic technology and construction were employed. Architects associated with housing reform played an increasingly important role in new model tenement designs.

Professionally trained at the Ecole des Beaux-Arts, architects such as Ernest Flag, I.N. Phelps Stokes, and Grosvenor Atterbury were adept at designing large-scale tenement blocks. Their designs were, in part, derived from developments in European model housing. They focused on economic planning and ornamentation. As Progressive reformers, they shared a common objective that the model tenement would result in a model community. The tenement block was frequently designed to enclose its inhabitants physically within a benevolent and garden-like setting, intended to protect them from the slums without the walls.

Through careful site planning and efficient room arrangements, architects increased the amount of central open space available to tenants. Phelps Stokes introduced a park-tenement plan which consisted of a wide green space between two

rows of buildings. The central space was devoted to gardens and playgrounds.¹³ Atterbury's renaissance-inspired design for the Phipps Model Tenement (1904-1906), simulated a park-like environment with fountains, and gardens and covered sleeping pavilions on the roof (fig. 2). These aesthetic features were meant, in the words of Atterbury, to "combat that [effect] produced by the corner saloon, and the district boss."¹⁴ Despite their attempts to upgrade tenement design, architects felt their creativity was hindered by the legislative restrictions enacted by the Tenement House Department, and the speculative builder's monopoly of the housing market.¹⁵

The City Beautiful Movement which roughly spanned the years 1893-1910, allowed architects, artists, and landscape architects greater opportunity to reform the aesthetic image of American cities. The Chicago World's Columbian Exposition of 1893 initiated the optimistic attitude which pervaded the movement throughout its short life. The World's Fair symbolized the ideal that the urban environment could be transformed and even made beautiful. Subsequently, it reinforced Progressive reformers' attempts to holistically change the environment.

The Movement was characterized by three major trends. One was the impact of landscape architecture and European Baroque schemes on American city planning. The McMillan Commission Plan for Washington, D.C. (1901), was an example of the highly architectonic and formal designs from this period. The plan was a collaboration of architect-planner,

Daniel H. Burnham; landscape architect, Frederick Law Olmsted, Jr.; architect, Charles Follen McKim; and artist Augustus Saint-Gaudens.

Municipal improvement was a second trend of the Movement, which occupied designers and reformers nationwide, in an effort to clean up the appearance of cities.¹⁶ Associations such as the National League of Improvement, formed in 1900, supported measures to install streetlights, street fixtures, new paving materials, and parks. The third trend of the City Beautiful Movement was civic design. The New York Architectural League (1886), and the Municipal Art Society of New York (1893), were two organizations which sponsored exhibitions and publications with the intent of encouraging civic art.

Progressivists eventually came to view the trends of the City Beautiful Movement as incomplete and impractical solutions for the deepseated urban problems which were untouched by aesthetic reform alone. Population congestion, and housing shortages remained the central problems. Progressive reformers argued in favor of dispersing the urban population to suburbs, because they were frustrated by the slow gains in tenement reform. It was also felt that more comprehensive planning controls could be established in undeveloped areas adjacent to the city.

Population congestion dominated the attention of housing reformers and planners. In 1907, the New York Committee on Congestion of Population was formed. Its main objective was

the redistribution of the urban population. An exhibit entitled 'The Congestion Show' was sponsored the following year in order to give the public an idea of the extent of the population problem. The show included maps and diagrams of population density, as well as displays representing scenarios of their various solutions--improved rapid transit systems, the relocation of industry in rural areas, and the creation of model villages.¹⁷

The English Garden City was also suggested as a solution to population congestion by the Committee as it provided a rational model for the growth of cities. Ebenezer Howard's Garden City was first described in Tomorrow: A Peaceful Path to Real Reform, 1898. Howard's plan for the garden city was a utopian scheme for a "social city" of art, culture, cooperative industrialism and ownership.¹⁸ His intent to reunite the people of the industrialized city with the land was influenced by the theories of nineteenth century social reformers. "The people of this country and of other countries," Howard stated, "should forthwith gird themselves to the task of building up clusters of beautiful home-towns, each zoned by gardens."¹⁹

Progressives supported the garden city because of its association with reform and similarity to their own ideals of community. The garden city was a model for comprehensive town planning; an abstract scheme which could respond to the site conditions and climate in England or America. Howard

claimed that, - "modern scientific methods and the aims of social reformers may have the fullest scope to express themselves," within the guidelines of the garden city diagram.²⁰ American reformers could not accept the garden city scheme exactly as proposed by Howard. It implied that existing urban areas be levelled in order to build up the new garden city, and that each city would be economically autonomous.

Americans were interested in the physical qualities of the English Garden City, an interest which intensified after 1903 when the English Garden City Association was founded and the garden city at Letchworth was begun.²¹ Hampstead Garden Suburb, founded by the philanthropists Canon Samuel and Henrietta Barnett in 1908, was widely admired by Americans. Hampstead embodied objectives similar to those of the garden city; limited population density and a pollution-free atmosphere, but it did so on a manageable, village-like scale. Architects Raymond Unwin, Barry Parker, and Edwin Lutyens combined elements of town planning and architecture to create a picturesque environment.

Hampstead's image of a pre-industrial landscape was not based on the garden city idea, but was derived from the English Arts and Crafts conception of the ideal society. Beginning with A.W.N. Pugin (1812-1852), the medieval, pre-industrial period was established as the historic standard for architecture and town planning. People in the medieval town were believed to be happier because of stronger social and religious attachments.²²

In the late nineteenth century, William Morris (1834-1896) revived medieval art and architecture because they embodied the craftsman's spirit and individuality. The medieval village was the animate symbol of self-expression and community. In his 1890 utopian novel, News From Nowhere, Morris described such a village:

Both shores had a line of very pretty houses, low and not large standing back a little way from the river; they were mostly built of red brick and roofed with tiles, and looked above all, comfortable, and as if they were, so to say, alive and sympathetic with the life of the dwellers in them. 23

Ebenezer Howard's garden city model was compatible with the aesthetics of the Arts and Crafts Movement, because it also originated from the desire for social and environmental reform. Although Howard's structure for the garden city became blurred in the English and American garden suburb, the goal of merging the city with the country remained clear. In Hampstead Garden Suburb and Forest Hills Gardens it is evident that the Arts and Crafts ideal of a medieval aesthetic was considered appropriate for the garden suburb.

American Progressives aligned themselves with these English reform movements because they provided physical remedies for similar problems in America. The pictorial representation of the garden suburb appealed not only to reformers, but to individuals who aspired to own dwellings in an arcadian setting, yet still tied to cultural and material resources. These were the individuals who moved to Forest Hills Gardens.

This description fit Carol Kennicott, the quixotic heroine of Sinclair Lewis' novel Main Street of 1920. She wanted to replace the uninspired appearance of her midwest Main Street with a picturesque image, which:

She found...of New England streets: the dignity of Falmouth, the charm of Concord, Stockbridge and Farmington and Hillhouse Avenue. The fairy-book suburb of Forest Hills on Long Island. Devonshire cottages and Essex manors and a Yorkshire High Street and Port Sunlight. A town in California which had changed itself from the barren brick fronts and slatternly frame sheds of a Main Street to a way which led the eye down a vista of arcades and gardens.

Assured that she was not quite mad in her belief that a small American town might be lovely, as well as useful in buying wheat and selling plows... 24

Carol's thoughts echoed those of the Progressive reformer who desired the best of all possible worlds--both beauty and practicality.

Chapter 2

The Russell Sage Foundation

The tenure and direction of the Russell Sage Foundation established by Mrs. Russell Sage in 1907, was to a large extent, based on her moral beliefs and attitudes towards charity. She believed that philanthropy should be based on self-help and education, rather than direct charity. This became the premise of the Foundation and its activities. Robert de Forest, legal counsel and spokesman for the Foundation, played a central role in its formation.

The public responded enthusiastically to the Sage Foundation in its formative period. The Foundation sought endorsement and advice from professional social workers and academicians; two groups which represented Progressive thought of the time. They assigned institutions such as the Sage Foundation with the task of investigating socio-economic conditions; an investigation which should begin with the home environment. The goal of housing had been associated with the Foundation from its beginning, and became a concrete objective in 1908 when land was purchased for the construction of model tenements and possibly a model suburb.

Russell Sage (1816-1906) amassed his millions during the second half of the nineteenth century. Beginning as a

small local merchant in Troy, New York, Sage moved on to politics and banking. In 1856 he met future business ally, Jay Gould, who inspired Sage's interest in railroad affairs. Gould also launched him on a lucrative career in stocks and finance. Sage soon developed a reputation for his shrewd and conservative business tactics. In 1869 he married for a second time to Margaret Olivia Slocum Sage (1828-1918).

Mrs. Sage (fig. 3) felt it was the moral obligation of a wealthy woman to contribute her time, money, and energies to the less fortunate. She claimed that "a woman is responsible in proportion to the wealth and time at her command."²⁵ Unfortunately, as she observed, women had heretofore been pre-empted by men in charitable causes, but they should not be prevented from applying their genius in household reform. The home should be artistic and hygienic, according to Mrs. Sage, for the "home atmosphere [led to] the continued integrity of the republic of the United States."²⁶

Despite her thoroughgoing commitment to charity, Mrs. Sage could not compel her husband to donate much of his wealth. Although he was known to give on occasion, it was usually due to his wife's influence.²⁷ Upon the death of her husband on July 22, 1906, Margaret Olivia Sage was presented the opportunity to contribute financially to womens' associations and schools, and charity organizations, as well as to improve the posthumous reputation of her late husband. She inherited nearly sixty-five million dollars which was almost his entire fortune. During the remaining years of her life, she gave

thirty-five million dollars to a wide variety of causes, the majority of which were intended to memorialize the name of Russell Sage.²⁸

On March 13, 1907, ten months following the death of her husband, Mrs. Sage announced the establishment of the Russell Sage Foundation, to be endowed with the sum of ten million dollars. The Foundation was created towards:

...the improvement of social and living conditions in the United States. The means to that end will include research, publication, education, the establishment and maintenance of charitable and beneficial activities, agencies, and institutions, and the aid of any such activities, agencies and institutions already established.

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Mrs. Sage relied heavily on the advice of their family counsel, Robert de Forest, in drawing up the Foundation's guidelines. Robert Weeks de Forest (1848-1931) (fig. 4) was a well-educated, affluent, and highly respected individual whose ancestors were among the original Huguenot settlers in New York. As a Progressive reformer, he was involved in a great variety of causes including municipal art, charity organizations, and tenement legislation. His legal background and business connections proved to be valuable for the many organizations he lead and served with. He was, for example, president of the New York Charity Organization Society, (1888); president of the New York Municipal Art Commission; one of the founders of the New York School of Social Work; and was appointed chief of the New York Tenement House Department.³⁰ De Forest was obviously in a strong position to influence the

actions of the Foundation, which he patterned after the methods established earlier in the century by the Charity Organization. These were mainly investigation and research of urban conditions, particularly tenement housing.

De Forest wrote to his acquaintances in the charity movement, asking them for their suggestions as to the Foundation's direction:

It has fallen to me to advise Mrs. Russell Sage, and though she may not take my advice, and I am certainly not going to press it upon her, I wish to be prepared to advise her as to the best direction either national or local, in which some amount, say from ten to fifteen millions, can be applied...what would you do with it to accomplish the most good?...I have ideas myself...but I would rather have your independent suggestion without knowledge of what suggestions have been made by others. 31

Two months later, De Forest gave Mrs. Sage a list of ten fields of possible study for the Foundation. He prefaced his list by acknowledging her hopes to improve the conditions of the working classes, and "making their homes and surroundings more healthful and comfortable and their lives happier."³² In response to her concerns, the first objective listed was the provision of "tenements in the city and small houses in the suburbs--for the working classes on a business basis, or for semi-dependent families on a semi-charitable basis."³³ The underlying emphasis of the other nine objectives was on self-help, rather than direct charity. It was apparent the Foundation would act as a profit-making organization.

The newly-formed Board of Trustees met for the first time in April of 1907 in New York. They were given the task

of formulating their ideas regarding the direction of the Foundation.³⁴ The level of public interest in the Foundation remained high due to the amount of publicity it received. Mrs. Sage herself, was overwhelmed by response, receiving as many as nine hundred letters a day from the United States and Europe.³⁵

Beseiged by these requests, Mrs. Sage announced to the public in the New York Times that:

Whatever be the personal or family needs of poor people in Chicago, Boston, Baltimore, and Washington, I cannot be looked to to supply them. I have at my doors, in my own city of 4,000,000 inhabitants, plenty of such cases which have a nearer claim upon me in so far as I may desire to recognize it. ³⁶

It was difficult to escape public attention, however, for in 1907 Mrs. Sage surpassed Andrew Carnegie as the largest individual taxpayer in the country.³⁷ As Arthur Huntington Gleason stated in The World's Work, "The world is looking for startling benefactions from Mrs. Sage, in new and untried directions."³⁸

Gleason's observation was especially true for the growing community of sociologists, academicians, and social workers, who expressed their opinions regarding the Foundation's goals in the reform journal, Charities and the Commons. The opinions of this group reflected the attitudes of Progressive reformers. They believed the Foundation was responsible to operate in society as a wealthy individual. They asked the Foundation to develop expertise and professionalism in social and scientific research. Such research, they believed,

could collect new data and provide a basis for standardizing conditions in the environment. It was hoped that the Foundation would serve as an institutional 'clearinghouse' of this information.³⁹

The Foundation's solicitation of support from reformers and educators meant that it would be endorsed by the key constituents of Progressivism. This was a significant step towards improving the relationship between academicians and philanthropists, as the former group was often critical of the manner in which the latter distributed its money. According to Richard Hofstadter, "The professors had their intimate experience with and resentment of the plutocracy... the benefactions of the millionaires aroused almost as much hostility as their evil works."⁴⁰ The Foundation's interest in the viewpoints of economists, sociologists, and political scientists, implied "a new respect for their specialized knowledge,"⁴¹ The Foundation also sponsored Charities and the Commons after 1907.⁴²

In March, 1909, the Charities ran its first article on the Foundation entitled "The Russell Sage Foundation; Social Value and Importance--Views of some of those actually engaged in social work." Edward T. Devine, editor of Charities, claimed that, "what we really have in the Sage Foundation is a new and perhaps better type of university, an institution for research and education." This was followed by statements from nine individuals prominent in the field of social work and charities.⁴³

There was consensus among the ten in support of the Foundation's broadly delineated goals, enabling it to respond to the elastic conditions of society. A second area of agreement was the desire to bring scientific methods to philanthropy; in order to investigate the conditions of society, and also to determine the effects of philanthropy in mitigating those conditions. To that end, research and publications were necessary. Lee Frankel, manager of the United Hebrew Charities of New York, stated that "special laboratory studies need to be made in the field of philanthropy."⁴⁴

All agreed that transformation of the environment was a necessary step in ameliorating society's troubles; troubles which originated in urban dwellings. Many emphasized that scientific research of home conditions and the realization of a new standard of living were of major importance. Contributor Jacob Riis spoke out in defense of the domestic environment in this and a subsequent article for Charities, (April, 1907), entitled "One Thing the Sage Foundation can do for New York." He lamented the fact that the tenement population was increasing. Rents had risen, but wages had not done so proportionately. Riis suggested the Foundation make an inquiry into the causes and conditions of tenement overpopulation, further stating, "let it be ascertained in the inquiry too, what are the obstacles in the way of manufacturers moving into suburban sites and taking their employees with them."⁴⁵

The second article in Charities and the Commons, "What University Men Think of the Russell Sage Foundation," appeared in May, 1907. It included the viewpoints of fifteen educators in the fields of sociology and political economy, representing east coast and midwestern universities. The latter group was composed of spokesmen from the intellectual circle at the University of Chicago and the University of Wisconsin at Madison, both sources of influential Progressivist ideology.⁴⁶

Richard T. Ely, then Professor of Political Economy at the University of Wisconsin, characterized the overall sentiment of the group, "the time has come to pass over from general exhortation to the careful scientific study of specific problems."⁴⁷ More so than social workers, academicians were hoping to gain empirical understanding of the environment. This would be realized, in part, by the collection of raw data and material which they needed to compose their own curriculum. If the Foundation were able to do this, it would be, according to Simon N. Patten, "an engine of power in modifying higher instruction and forcing it into useful channels."⁴⁸

The educators envisioned the Sage Foundation as a potential 'school' of official information on social work and philanthropy. With its substantial financial backing and influential trustees, it might be a strong political and social institution, much in the way they conceived of their own universities. The advantage of the Foundation,

according to Edwin R.A. Seligman, "is that of having ready to hand an institution which can at once and without delay, cope with sudden exigencies such as result from the periodical oscillations in our economic prosperity."⁴⁹

The Trustees met for the first time in May, 1907, when they were given a booklet containing the Charities articles, De Forest's letters, newspaper commentary, and the charter and constitution of the Foundation. De Forest advised the group that they proceed slowly in formulating their objectives, in order to assimilate the variety of opinions represented in the material and amongst themselves. Some feared that the goals would become too diffuse and that the public would continue to ask for money. For this reason, the incorporation of distinct subsidiary companies, such as the one formed at Forest Hills Gardens, was considered the best method for using the Sage Foundation monies.

Until the October, 1907 meeting, no official actions had been taken in the area of housing. At this meeting, "philanthropic investments" such as housing were discussed. Considered in terms of a business investment, the Trustees discussed the possibility of construction of cheap suburban homes for New York wage-earners. Specifics of the proposal were not discussed during the meeting, but it is likely they were underway at the time.

The Foundation was organized into separate departments which were initially operated from scattered offices in New York. This proved to be difficult logistically, and also

meant that the Foundation had no public visibility. Mrs. Sage wanted a building to memorialize her husband's name. In 1912, Grosvenor Atterbury was chosen to design a nine-story building for the southwest corner of Twenty-Second Street and Lexington Avenue. Atterbury's design was derived from a Florentine palazzo. It was a tri-partite arrangement with a heavily rusticated base, prominent belt courses and a bold cornice (fig. 5). Panels and medallions carved in the stone, symbolizing the Foundation's goals, circled the building's facade at street level. In the lobby an inscription read, "Russell Sage Foundation. For the Improvement of Social and Living Conditions."⁵⁰

The Foundation had become involved with the Pittsburgh Survey, which was initially begun by the Charities Publication Committee in 1906. The Survey was organized to broadly investigate the industrial working population of Pittsburgh. The forty member committee published its results in six volumes. In their prospectus they claimed that "as an investigation we are attempting to clamp our facts in so that they cannot be shaken off and so that they will have national interest, and, within the limits we consciously set for them, scientific value."⁵¹ The Survey was a notable effort on the part of the Foundation to respond to the concerns of Progressive reformers.

Beginning in 1908, the Foundation gave financial support to the architect Grosvenor Atterbury for building experiments. Atterbury had begun experiments in precast concrete construc-

tion at Sewaren, New Jersey in 1904, under the auspices of Henry Phipps. The Foundation's involvement at this time in housing research was a preliminary step towards a larger-scaled housing development.⁵²

In March of 1909, Mrs. Sage and "other capitalists" purchased forty-eight acres of land in Jamaica, Long Island, with the intention of developing a community of model tenements. The triangular-shaped property, known as the Kokenhaven Farm, was located at the intersection of Rockaway Road and Lincoln Avenue. This site was approximately three miles from the present site of Forest Hills Gardens.⁵³

Mrs. Sage and the individuals involved in the land purchase attempted to conceal their purposes from the public. This was to prevent realtors and speculative builders from moving into the area, and erecting competitively-priced substandard dwellings. They had rapidly invested in and developed rural property in Queens and other boroughs; land which was highly marketable due to its proximity to New York City.⁵⁴

Chapter 3

Forest Hills Gardens in the Early Stages

In 1909, the Foundation purchased land in Queensborough for a suburban development and established the Sage Foundation Homes Company. In the following year, prior to planning and construction, the Foundation and its representatives attempted to make their intentions clear regarding the Gardens, in order to prevent the public from misinterpreting the true purpose of Forest Hills Gardens. That purpose was to develop a model suburb which would be both educational and profitable.

The selection of the site of Forest Hills Gardens was contingent upon the extension of the Long Island Railroad, which opened up undeveloped land in the outlying borough of Queens (fig. 6). The electrification of the Long Island System between 1905 and 1910, promised more efficient running times and more comfortable commuting for the suburban dweller.

The Long Island electrification program (1905-1910), and the completion of Pennsylvania Station in 1910, assured residential growth in Brooklyn and Queensborough. They were made boroughs of New York City in 1898. The Long Island Railroad was a passenger-carrying line, with heavy commuting and excursion traffic, which served New York's suburbs and Long Island. As part of the first large-scale electrification program, railroad engineers made extensive studies and

tests of working systems, considering factors of traffic load and density, traveling speed, and layover time at terminals. Their objective was to match, if not improve existing motive power.⁵⁵

Forest Hills Garden's accessibility to a modern, electrified rail system was the strongest selling point for those buyers who wanted a suburban home convenient to Manhattan. Prospective buyers were told that twenty or more trains a day made the circuit between the city and Forest Hills. The idea of commuting daily by train had become less horrendous and could even be described as comfortable:

...the appointed schedules are maintained with great regularity; with negligible exceptions, the running time is from thirteen to fifteen minutes; the ride is an agreeable one, consisting of four minutes through a cool, well-ventilated tunnel, and about ten minutes through pleasant open country; trains run at intervals through the nights, and the schedule is so arranged as to make it reasonably convenient to return home after an evening in town. With the growth of population at this station, the frequency of the train service will tend to constantly increase. 56

The Sage Foundation Homes Company was incorporated in the summer of 1909. Robert de Forest was appointed president, and trustees of the Sage Foundation, Alfred T. White and John M. Glenn, were appointed the directors of the newly-formed company. Grosvenor Atterbury was named the head architect and Frederick Law Olmsted, Jr., the landscape architect.

William E. Harmon (1862-1928), of the real estate firm Wood Harmon and Company, was made the unofficial business director for his experience in real estate finance. The

Foundation wanted the company to be competitive with speculative builders and real estate developers.⁵⁷ Edward H. Bouton (1858-c.1944) was made administrative director and vice president of the Homes Company. Bouton, like Harmon, had a good deal of experience in suburban development. He had been in charge of development at Roland Park in Baltimore beginning in 1891. He also founded the Lake Roland Elevated Railway in 1893, an electric street car which served the city of Baltimore and its suburbs.⁵⁸

The Sage Foundation supplied capital to its subsidiary the Homes Company, for the purchase of the land and the architectural development. The Company then assumed complete responsibility for the plan's enactment. It was repeatedly emphasized in this early stage, that the suburb was a business investment of the Sage Foundation. Consequently, it was to be conducted according to business principles and expected to make a profit.

The fact that the Gardens was a profit-making venture was often overlooked or misinterpreted by the public. Many assumed that activities funded or associated with the Foundation were necessarily of a charitable nature. Indeed, the early publicity of the Foundation had helped lead to this conclusion. One of their initial objectives had been the provision of housing for the New York wage-earner. This was a category which incorporated a vast number of economically and ethnically disparate people.

Some of the public's misconceptions regarding the pro-

posed model suburb was revealed in the New York Times. An editorial written in August of 1909, was headed "Suburban Homes for Fifteen-Dollar Clerks." The writer stated that the suburb was designed for the "better educated clerk upon a small salary," as well as "the respectable working-man."⁵⁹

Writing to the Editor two days later, A.C. Pleydell questioned the likelihood of the scheme's success, and whether it would do anything to solve the problem of population congestion. He stated:

Enterprising men have already acquired property in the vicinity of the proposed development, so that even the architectural beauties of which the Sage Fund will spend some of its money, are going to enhance the profit of the adjacent land owners and increase the difficulty which the \$15-a-week clerk will have in acquiring lots outside of the Sage Fund property. ⁶⁰

The Editor responded to Pleydell's letter the same day. Why, he asked, "if they [Sage Homes Company] can build homes artistically, healthfully and cheaply--and they may command the world's experts on city planning in this endeavor, shouldn't the homes be sold at the highest obtainable prices, higher even than clerks or workmen can afford to pay." He went on to say the margin of profit would be incentive for other real estate dealers, and competition would then force the prices down within the reach of the small-salaried man."⁶¹ For the '\$15-a-week- clerk, referred to by Pleydell, waiting for the forces of the market to provide affordable, well-designed

houses in a suburb such as Forest Hills, was not likely. The cost of daily commuting would quickly absorb a significant share of a clerk's salary.⁶²

In November, 1910, Robert de Forest made a statement to The Survey to dispel the rumors which implied Mrs. Sage's purpose had been to house the lower class worker. He said that:

In its business purpose Forest Hills Gardens does not differ materially from other Long Island real estate enterprises. It is not a charity. It will not be managed as a charity. Whoever deals with it whether as a tenant or purchaser, will be expected to pay fair value for everything received.⁶³

Forest Hills Gardens was intended for those who could pay from twenty-five dollars a month and upward in the purchase of a home. Monthly payments of twenty-five dollars or more, thus precluded the individual on a clerk's salary from renting or owning a home in the Gardens.

De Forest's statement revealed the discrepancies between public expectations and the plans of the Sage Homes Company. In 1909, the Times editorial suggested the plots and dwellings would be sold for \$1,200 to \$1,500 each.⁶⁴ One year later, the press reported the property was "too valuable to use for anything except fairly highclass development." House costs were estimated to be from \$7,000 to \$15,000, with the possibility that homes ranging in cost from two to five thousand dollars would be available at a later date. The article reiterated the Foundation's position:

This tells the truth plainly and at once disposes of all doubts and false impressions regarding the practical workings of the Sage Foundation in its home-supplying work. A mistaken idea has obtained a certain amount of credence that in some way this land development was to provide peculiar advantages for the laboring man, permitting him to secure homes on a most reasonable basis. 65

Mrs. Sage's sponsorship of the suburban community was not strictly charitable or paternalistic in nature, as was often the case with the nineteenth century suburb or industrial village.⁶⁶ The Foundation feared that such a role would lend the Gardens a "slightly sanctimonious atmosphere... [which] is debilitating rather than stimulative of success."⁶⁷ Rather, the Foundation believed that philanthropy should be practical in helping the individual to help himself.

Atterbury was apprehensive about the term 'model town,' fearing that it might gain a reputation similar to the City Beautiful; that is emphasizing ideal architectural beauty at the expense of practicality. Furthermore, clarification of the term was necessary to prevent the negative associations made between Forest Hills and earlier 'company towns' and religious communities. "The word 'model,'" according to Atterbury, "is now taking a new and special meaning, following the beginning of organized attempts to apply scientific, aesthetic, and economic principles and methods to the problem of housing civilized humanity."⁶⁸

The Foundation did not expect that the Gardens itself would solve the housing problem, but they were optimistic about its potential as a prototype for suburban planning.

In the words of the Sage Homes Company, Forest Hills was to be a:

...community that would exemplify some of the possibilities of intelligent town planning, with the hope of encouraging similar ventures elsewhere. The specific aims were to provide healthful, attractive, and solidly built homes, and demonstrate that convenient thoroughfares, quiet domestic streets, and ample public open spaces are economically practical as well as beneficial in a suburban development. 69

The Foundation and its members felt the Gardens was invested with a higher purpose than the average, speculative built suburb. Although it was, in part, profit motivated, Forest Hills was representative of Progressive ideals, "Ideals," which were, according to Atterbury, "higher than those of its inhabitants; for it is nothing more or less than a department of that most powerful of all educational institutions, 'the school of environment.'"70

Chapter 4

Planning the Development at Forest Hills Gardens

The individuals behind the planning of Forest Hills Gardens were intent upon providing an environment and quality of life superior to that which typified the suburb of the speculative builder or company town. They hoped that the Gardens would stand as a democratic community wherein homes were individually owned and of a harmonious aesthetic. The Sage Homes Company enacted a set of eighteen restrictions to control all of the buildings and the space between them. This was believed to be the best means of dealing with the vicissitudes of real estate economics and contemporary architectural taste, which the Company thought could undermine their objectives.

The restrictions were part of the attempt to be efficient and practical. Atterbury and Olmsted wanted to address circulation and housing needs with a single, comprehensive plan. Atterbury described this approach as "collective planning" or "collectivism," which was "the essential element [applying to] purchase, design, and development and control."⁷¹ He referred to the collaboration of disciplines represented by the Homes Company's members. It also expressed their underlying hope that the Gardens would become a cohesive, self-managed suburban community, where the importance of the

residents as a group was greater than the individual alone.

Mrs. Russell Sage and the trustees of the Foundation were impressed by the homes in England's garden cities, and believed that similar homes should be built in America. Such homes would ideally be "buildings of tasteful design, constructed of brick, cement, or other permanent material, even though of somewhat greater initial cost...than the cheaper structures which are too often the type of New York's out-lying districts." The homes would then be set in the appropriate garden city environment, with "greenery and flowers around them, and accessible playgrounds and recreation facilities."⁷² The garden city appealed to Mrs. Sage in terms of its accompanying aesthetic improvement of the domestic environment, as well as its compatibility with her moral and social commitments.

The significant amount of money available from the Foundation enabled the directors to employ both an architect and landscape architect who were familiar with the garden city. Atterbury liked the English Garden City for its practical aspects of planning and population control.⁷³ The growth of a metropolitan area could be directed by placing garden cities or suburbs in the outer fringes, thus defining the city's future form. For Atterbury, this was the main rationale for accepting the garden city in America, particularly when one considered the volatile nature of real estate economics which lead to chaotic growth. Atterbury said that:

...it is perhaps not out of place to point out in

this connection that probably the most important function of the European 'Model Town' or 'Garden City' usually in some kind of cooperative basis is purely an economic one, practically a matter of commercial self defense while the medieval walled town was a refuge from marauding barons, the so-called model town or 'Garden City' of today is primarily a means of protection against our modern land speculators. 74

The new image for Forest Hills Gardens was intended to counter-act that of the profit-motivated speculative built suburb. Such suburbs were criticized for their unimaginative planning, cheap construction, and unkempt appearance due to rural pursuits--vegetable gardening, orchards, and poultry raising. One observer described the suburb as the "old-time American backyard, with its flapping clothesline, prominent garbage can, and deplorable ash heap, [it] is an ugly sordid feature of both suburban and country living..."⁷⁵ Charles May saw the suburban realm in the same light, "...encircling walls and dread of attack might have saved us from the universal aspect of these outskirts--the regions of squatter huts, of corrugated iron architecture, and of scavenging goats--such a region, by the way, as some of that neighboring Forest Hills itself."⁷⁶

The Homes Company wanted to ensure the residential qualities. They completed all water and sewer drains, the paving of roads and sidewalks, and installed underground electric conduits prior to construction. The company controlled the development of public and private space in the Gardens through conservative marketing and extensive restrictions.

In June 1911, a declaration of eighteen restrictions was approved by the Sage Homes Company.⁷⁷ Although called restrictions, these measures were ultimately designed to provide protection for the residents. That is, there would be reasonable "safeguards" for the homebuyer, according to business director Harmon, against the speculative builder and "accidents of fortune." "Thousands of individuals," Harmon claimed, "are engaged in marketing suburban real estate along more or less scientific lines."⁷⁸

Restriction #3 was an example of a land-use regulation which prohibited the erection of "nuisances," which consisted of non-residential structures such as "a brewery, distillery, ...hospital...stable of any kind...any noxious, dangerous or offensive thing, trade, or business..."⁷⁹ This restriction reflected the influence of zoning, which protected the residential suburb against incompatible land use. Station Square was the only area in the Gardens where business would be permitted.

Restriction #9 stated that a minimum cost for each house would be written in the deed between the buyer and the Company. Rather than specifying an amount, the Sage Company based the minimum cost on a multiple value of the lot.⁸⁰ In this way, the minimum cost was a relative figure rather than fixed, allowing for more expensive construction on more valuable lots, as well as changing market value of the land.

Restriction #12 pertained to a general maintenance fee, the amount of which was determined by the property owner's

lot size, and collected annually. The money was applied to the maintenance of sewer and rubbish facilities, and the upkeep of unimproved land.⁸¹ In the same manner, the resident of Howard's garden city was expected to pay an annual "rate-rent" which was partially returned to the community in the form of public improvements.⁸² For those living adjacent to a private park or lane in Forest Hills, restriction #13 stated that an additional charge would be assessed for upkeep, based on the amount of property owned abutting the park or lane.

The Sage Group-Building Plan was another device for insuring economic security, although it was not included in the restrictions. The plan dealt with collectively designed houses (attached and semi-detached arrangements), which were to be built with group payments. In the normal payment plan, ten percent of the combined cost of houses and plots would be realized in four years. If that amount were paid by one-half of the purchasers prior to the four year limit, construction would begin.⁸³ Intended for buyers of small houses, the plan benefited the Company as well as the buyers. It gave the buyer incentive to pay quickly, so that construction could begin on his home, and the Sage Company the necessary capital for the early stages of construction.

Architectural restrictions were geared towards establishing harmonious architecture in the Gardens, as directed by the Homes Company. Atterbury was in favor of a uniform architectural aesthetic which would function to "demonstrate

the advantages to the individual of a reasonable self restraint in the subordination of his own architectural impulses to a general aesthetic." A general aesthetic would act as a leavening element to control "lawless bad taste," as well as give "misguided architectural efforts," a chance to be redeemed. Although this seemed to counteract ideals the Company held regarding the rights of the individual, Atterbury was of the opinion that the mission of democracy in the Gardens was a leveling of extravagant architectural taste which was often associated with the suburb. "To show the mob the effectiveness of discipline may seem dangerously like giving them arms," Atterbury claimed, "but the truth is that with any kind of control anarchy ceases."⁸⁴

The restriction regarding architecture was #5, which stated that plans for any "building, fence, wall or other structure," as well as alterations, had to be approved by the Sage Homes Company.⁸⁵ This included plans by other architects, all of which were reviewed by Atterbury as the representative architect of the Company. House plans were further controlled by restriction #7 which set forth the amount of space devoted to each house in relation to its lot, and the height and width of porches, steps, and bay windows.

The Sage Company offered free house plans to the first one hundred potential buyers who applied for homes. Building was contingent upon the approval of the plans by the Company. This measure was to encourage people who might be

apprehensive about architects' fees. The Company felt they could in this way assure a "high standard of design and construction". They could also control the rate of construction on the unimproved lots, as the houses were required to be built between July and November of 1912.⁸⁶

Atterbury's system of pre-cast concrete made rapid and efficient construction possible. The Company considered his building system one of their "greatest opportunities" in terms of architecture, for the "novel uses of materials and methods of construction."⁸⁷ It could potentially replace the typical wood and brick suburban dwelling, and would satisfy Mrs. Sage's hope that homes in the Gardens were of permanent fireproof materials.

Atterbury and Olmsted upheld the notion of a comprehensive plan for Forest Hills Gardens. They felt the suburban plan necessitated the same foresight and flexibility to allow growth, as did the city plan. "Foresight," Atterbury claimed, was "the main wrapper that metaphorically holds its [city] various contents together."⁸⁸ Olmsted observed that:

...in the suburban zone of every city...the housing conditions of the future are being determined at an astonishing rate of speed, and here the application of intelligence and energy will accomplish great results for little cost. ⁸⁹

Planning restrictions were aimed at monitoring the rate and distribution of new construction and the boundaries of the suburb. The restrictions established standards for the amount of space to be allotted around each dwelling. For

example, restriction #6 provided that each house be sited on the lot to allow sunlight and air on all sides. A minimum number of feet was given for the setback of each facade.⁹⁰ The careful spacing of houses introduced interesting street perspectives, avoiding the monotony often associated with the suburb and row housing. Serried house arrangements--alternating front to back on the lot--was one solution to this problem. Parker and Unwin had successfully employed serried planning at Hampstead Garden Suburb, which might have influenced its application at Forest Hills Gardens.⁹¹

The planning measures outlined for Forest Hills Gardens embodied the objectives of the Progressive reformers who made up the Homes Company. They made concerted efforts to improve the quality of the typical suburb based on their experience with practical and so-called scientific methods in city planning and housing. As implied by the Company's promotional pamphlet "A Forward Movement in Suburban Development," their measures were aimed at creating a model which would advance beyond the speculative built suburb. They described the model suburb as a 'garden suburb along garden city lines.' This term reflected the importance of the garden city as a reform model in planning, which was widely accepted by Progressives.⁹²

In real estate, the Company's methods proceeded along scientific lines, unlike "present day companies" who built for "a quick sale and a safe 'get away.'"⁹³ In architecture, a uniform aesthetic symbolized the collective spirit, while

eliminating the eccentricities of past Victorian styles, considered inappropriate for the modern suburb.⁹⁴ Atterbury's pre-cast concrete system represented the Company's efforts to standardize a process of inexpensive and efficient construction. The conservation of materials and labor were central tenets of Progressivism.

The members of the Homes Company believed that they could provide a social atmosphere in the Gardens which would succeed in balancing the rights of the individual with those of the community. The comprehensive plan was seen as a physical manifestation of the community idea. Everything contained within the Garden's boundaries symbolized the community as a whole. The equitable allotment of space to each homeowner for a house and garden, expressed the rights of the individual, although the individual had to comply to many restrictions. The Company claimed that, "This plan accords with the desire of the company's officers that the management of the property shall become as democratic as possible,..."⁹⁵ A community of like-minded people would result from the Company's plans to "accept only persons who will...maintain its standards and to carry out its aims in creating a homogenous and congenial community."⁹⁶ Ultimately, they took an ambivalent position as advocates of both individual and community rights. In their statements and actions, however, the Company's members exposed their leanings towards Progressivist ideals, stressing the community over the individual. "Each one," the Company claimed, "will be independent as far

as may be compatible with the welfare of his neighbors..."⁹⁷

Chapter 5

Frederick Law Olmsted, Jr.:

Landscape Architecture and Town Planning

In the spring of 1909, the Sage Foundation purchased 142 acres of rural land from the Cord Meyer Development Company in Queens, northwest of the property purchased earlier that year.⁹⁸ The property was easily accessible to New York City, located nine miles from Pennsylvania Station. Residents would have the benefit of nearby Forest Park, a 536 acre wooded reservation and golf course which was separated from the site by Union Turnpike. Forming the southern boundary, the park provided the residents with a large nature area, and acted as a permanent barrier against other housing developments.

The eastern boundary of the Gardens was determined by the embankment of the Long Island Railroad. This also provided a natural, although unattractive barrier against the commercial development towards the north, in the area of Queens Boulevard. The western and northwestern boundaries followed the irregular property lines of the original Cord Meyer Farm. In this case, there were no restrictions or natural barriers to prevent these boundaries from becoming submerged in the subsequent grid-plan (fig. 7).

Frederick Law Olmsted, Jr., representing the firm Olmsted

Brothers was responsible for the preparation of an overall plan which would incorporate both the streets and the house sites within the 142 acres. His main objective was to provide a landscape plan which would define the suburb while distinguishing it from the residential and commercial neighborhood surrounding the development. Although Forest Hills would be primarily residential, Olmsted's plan was to include a centrally-located area for public buildings such as shops and a hotel/apartment complex located adjacent to the railroad embankment. This major space would be Station Square providing an access point to the Long Island Railroad and a formal entrance-way to the suburb.

Olmsted based his design for Forest Hills Gardens on three major principles which reflected his interests in European and American city planning. In theory, these principles represented a departure from a completely aesthetic rationale for landscape design typical of the nineteenth century, towards a more functional and practical response to the requirements of planning. Having established such a pragmatic basis for his design, Olmsted went on to create a suburb which in appearance, was derived from prototypical romantic suburbs in England and America (fig. 8).

Frederick Law Olmsted, Jr. (1870-1957), born on Staten Island, N.Y., decided at an early age that he would enter landscape architecture as a profession (fig. 9). His decision was largely influenced by his father, Olmsted, Sr., who was the eminent landscape architect of the late nineteenth

century. His designs for New York's Central Park and the Boston Park System were well known and emulated throughout the country. The younger Olmsted apprenticed with his father during a number of important commissions, and traveled with him to Europe in 1892 and 1895. After receiving his B.A. from Harvard University in 1894, Olmsted entered his father's firm with his half brother John Charles Olmsted, the firm was thereafter named Olmsted Brothers.⁹⁹

Olmsted's interests ranged from landscape design to housing, but his career was mainly devoted to landscape architecture and city planning. His major commissions were for the Boston Park System, (1898-1920); the McMillan Commission of 1901 for the plan of Washington, D.C.; and other urban studies. He worked as a private consultant in the development of residential suburbs, including Roland Park, Baltimore; Palos Verdes Estates, California; and Forest Hills Gardens.

Olmsted shared the hope of others involved in the City Beautiful Movement that landscape architecture and city planning would become professionalized. In 1900 he was appointed to organize the first curriculum in landscape architecture at Harvard. His membership in the National Housing Association and involvement with the National Conference on City Planning reflected his belief that city planning should be multidisciplinary. The shift in planning thought from the City Beautiful to a more functional organized discipline, was enthusiastically supported by Olmsted, although he continued to emphasize the importance of landscape beauty in urban design,

clearly following in the tradition of his father.

The notion that the natural environment had a rejuvenative effect on the individual was central to the thinking of Progressivists such as Olmsted, Jr., but had also influenced Olmsted, Sr., and others who advocated large urban parks to relieve the stress of city life in the mid-nineteenth century. This notion was established, in fact, in the late eighteenth century by the English Landscape School which was influenced by Romantic literature and contemporary artistic thought. William Gilpin and Uvedale Price were among those who believed that nature effected man's emotions. Architecture should not dominate the landscape, they believed, but merge into its natural surroundings. Styles such as the Gothic, which was asymmetrical and picturesque, were thought to be most conducive to nature, which shared the same characteristics. Proponents of landscape theory believed that the natural landscape could be enhanced and improved upon, and ultimately have a positive effect on the individual.¹⁰⁰

By the mid-nineteenth century, these principles had become the theoretical basis for American and English residential suburban designers. This was greatly influenced by the writings of John Claudius Loudon, Andrew Jackson Downing, and Calvert Vaux. Their discussions centered on the relationship between the house and the landscape, for, according to Downing, "architectural beauty must be considered conjointly with the beauty of the landscape."¹⁰¹ In suburban design, the appearance of smoothly curving roads, and large open

green spaces denoted the influence of the English landscape tradition. This tradition was successfully adapted by Olmsted, Sr., in his design for the residential suburb at Riverside, outside of Chicago.

In 1869, E.E. Childs and the Riverside Development Company commissioned Frederick Law Olmsted and architect Calvert Vaux to prepare a landscape design for a suburban village. The site on the Des Plaines River was nine miles from Chicago on the Burlington line. Olmsted transformed the 1,600 acres of flat farmland into a park-like residential development. The plan was unique for its loose network of winding roads which Olmsted explained were designed for "comfort and convenience of movement...with gracefully-curved lines, generous spaces and the absence of sharp corners, the idea being to suggest and imply leisure, contemplativeness and happy tranquility."¹⁰² Nearly one-quarter of Riverside was devoted to open space, (e.g. boulevards, small parks, river's edge), in order to give residents the opportunity to experience nature in the manner Olmsted described (fig. 10).

A variety of public spaces were incorporated into the plan of Riverside. The Promenade Ground, the shelter, Pic-Nic Island, and the town center were unique places for community interaction. As in the design for Central Park, each spot was part of a spatial sequence wherein different activities would occur. The importance of these spaces was made clear by their location in the overall plan and the

visibility of the buildings. The water tower, for example, was a major landmark located near the railroad depot, the commuter's entrance to the suburb. After it was constructed in 1870, the water tower in fact, became a symbol of the Riverside community.¹⁰³

Riverside was one among many suburbs begun in America during the second half of the nineteenth century which developed along similar lines. In these, the influence of the English landscape tradition was evident in curving, picturesque roads, which conformed to the landscape, and open space for recreation. A centrally located space for social and civic activities served to bring an urban atmosphere to the suburb, the orientation of which was determined by its convenience to the railroad. This formula characterized some of the best known suburbs such as Llewellyn Park, designed by Alexander Jackson Davis in 1853 (fig. 11); and Roland Park, Baltimore, designed by George E. Kessler in 1891; and Lake Forest, Illinois designed by Jed Hotchkiss in 1857.

American planners and landscape architects who traveled to England, such as Olmsted, Sr., and his son, were able to observe town planning developments first hand, including the garden city, suburb, and estate planning. Foremost among them were the designs of John Nash at Blaise Hamlet and Regent's Park (1811 and 1812, respectively). Especially influential was the handful of cottages Nash designed for Blaise Hamlet which were examples of the picturesque, vernacular aesthetic which became standard in English and American sub-

urbs (fig. 12).

Olmsted, Jr., was acquainted with the work of English town planners such as Raymond Unwin, Barry Parker, and Thomas Mawson. Connections were established amongst them through travel, international conferences, and publications (fig. 13). Raymond Unwin was perhaps the best known--through his book Town Planning in Practice, (1901), and his design with Barry Parker for Letchworth Garden City of 1903, and Hampstead Garden Suburb of 1908-1910.¹⁰⁴

Town Planning combined Unwin's two major interests, the garden city and the theories of German town planner Camillo Sitte. Unwin attributed the basis of Hampstead's design to Sitte's medieval-inspired 'school' of planning, as defined by Sitte in his book Der Stadtebau of 1898. Sitte had proposed that the picturesque irregularities of the Gothic town resulted from a conscious system of artistic planning principles. Unwin attempted to recreate the spatial complexity and free plan of the medieval German town, according to Sitte's principles.

Parker and Unwin blended Arts and Crafts architecture with Sittesque planning in Hampstead Garden to produce a picturesque townscape. The atmosphere of a medieval village was exemplified by the arrangement of shops at Hampstead's entrance. This cluster of buildings was similar, in style and form, to the monumental gates of German medieval towns such as Rothenburg, which Unwin illustrated in his book (fig. 14). Neither Olmsted nor Atterbury claimed to be influenced by Hampstead's

design, but the similarities are striking (fig. 15). Charles C. May commented on the likeness of Forest Hill's Station Square to that of Hampstead, and its possible origin:

Indeed, it is not too much to say that the entire method in German street and site planning of the present day is molded upon his [Camillo Sitte's] reasoning. In many respects the plan of Forest Hills is akin to those of the Modern German School. There is the same picturesque variety, the same variety of street width and set back. There is breadth without monumentality; balance without symmetry. 105

Olmsted studied European city planning with an eye not so much for aesthetics but for features which were primarily practical. He admired towns which merged old street systems with new ones as well as German city zoning which regulated the type of construction in the city.¹⁰⁶ Olmsted's three principles for the planning of Forest Hills Gardens reflected such interests as well as his attempts to systematize the planning process for future developers.

The first principle was concerned with main thoroughfares which were to be "direct, ample, and convenient no matter how they cut the land." The second principle stated that "streets not needed as thoroughfares be planned as quiet, attractive residence streets." The third principle provided for the "deliberate setting apart of certain areas for the common use of residents." Olmsted's intention was to establish a system of streets based on a functional hierarchy which considered the type and amount of traffic, the relation of public space, and the desired mood of that space.¹⁰⁷

The two main thoroughfares in the Gardens were Continental and Ascan Avenues, chosen as such because they intersected the site as part of the pre-existing street plan. Oriented nearly north-south, they were the widest streets in the Gardens (eighty feet wide), and served to connect through traffic to circumventing roads around the Gardens, (Union Turnpike on the southern boundary to Brooklyn, and Queens Boulevard on the northern boundary to Queensborough Bridge). In this way, Olmsted hoped to maintain the quiet residential character in the Gardens. It was expected that the suburb would only need to accommodate light automobile traffic and some horse-drawn carriages, since most of the residents would be commuting by train. Olmsted could not foresee the dramatic increase in the popularity of the automobile.

Greenway North and Greenway South were designed as major streets for internal traffic. The avenues were seventy feet wide, and ran in a southeast-northeast direction. Olmsted described them as radiating from Station Square "on direct but gently curving lines, so located as to secure the best grades and the most agreeable settings, through the midst of the property..."¹⁰⁸ Slightly narrower than Continental and Ascan Avenues, the 'Greenways' lead one on a slower, meandering course from the focus of activity in Station Square, to the more private avenues within. The dense architectural character of Station Square was continued in the attached dwellings along the length of the Greenways eventually giving way to the detached houses (fig. 16).

Secondary streets sixty feet in width were also included in the category of main thoroughfares. Burns Street and Puritan Avenue are examples of secondary streets as Olmsted described them, for they conformed to the topography as well as connected with streets in the outer grid plan. The second principle applied to the planning of residential streets. Because they were not intended for major circulation, residential streets could be more freely designed, and later altered without interfering with the overall circulation pattern. Olmsted wrote that in designing local streets for the Gardens:

Straight lines have been avoided as far as possible, particularly in the localities which will be chiefly devoted to homes. While not fantastically crooked, the streets will not be absolutely straight for long stretches, and will be narrow to permit additional space for the development of the front garden. 109

The bends and curves of local streets created particular and unique spaces which were private and identifiable as smaller neighborhoods within the larger community (figs. 17-19). Olmsted claimed that:

Probably one of the most notable characteristics of Forest Hills Gardens will be the cosy domestic character of these local streets where the monotony of endless, straight, wind-swept thoroughfares, which are the New York conception of streets, will give place to short, quiet, self-contained and garden-like neighborhoods, each having distinctive character. 110

Footpaths which passed through the interior of the blocks and were accessible to individual homes, afforded the resident

the most private means of circulation within the Gardens (fig. 20).

Communal spaces were set aside for the residents as a result of the third planning principle. Originally, six enclosed private parks were planned, made up of space which resulted from reducing the size of the house lots, however, the demand for housing space ultimately absorbed three of the park sites. The remaining three--the Green, Olivia Park, and Hawthorne Park--were very small spaces each being only one to three acres.¹¹¹ Hawthorne and Olivia Parks were irregularly-shaped spaces which were sandwiched into the overall street plan. Hawthorne Park (fig. 21) was an empty block criss-crossed by pedestrian walks, and Olivia Park was a small bowl-like space which served as an amphitheater. These parks were set aside for passive and private recreation and, according to Olmsted, for the light and air they afforded the houses around them.

The Green had a more active and public role within the community. Set between Greenway North and South, the triangular space was formally arranged with sections of lawn, shrubbery, and ornamental planting. Fronted by homes on either side it was the "residential focus" of the Gardens as opposed to the "business focus" of Station Square. The importance of the Green was indicated by the amount of central space devoted to it, the specific shape, and its strong central axis which culminated in the site designated for the public school.

In addition to Olmsted's principles for planning, the design of Forest Hills Gardens was composed of features which were drawn from the vocabulary of formal landscape and urban design. These elements were concentrated in the area surrounding Station Square, between Ascan and Continental Avenues. The streets were more tightly arranged in this area, and nearly symmetrical on either side of the Greenways. Slocum Crescent intersected the Greenways, forming a major cross-axis which was emphasized by the circular island at their junction. The arms of Slocum Crescent extended outward to Bow Place on the north and Holder Circle on the south, where the latter served as ronds-points to redirect traffic and provide secondary sight-lines. Olmsted's inclusion of this formal scheme reflected his long association with the City Beautiful Movement and his admiration for European city planning, thereby preventing him from being totally comfortable with a completely freeform suburban plan such as Riverside.¹¹²

Olmsted located these formal features in close proximity to Station Square to create a sense of urban life. By contrast, the distribution of population and design complexity decreased as one moved outward in the Gardens. A sense of containment and inwardness was maintained throughout the plan. The resident was meant to see a variety of street pictures composed of houses and gardens, rather than views of the open countryside. Houses were clustered in quadrangles and closes, as at Ivy Close and Fairway Close, to entice the viewer to look further (figs. 23-25). The views down streets were closed

by a house or a bend in the road.

The streets and street fixtures in Forest Hills Gardens were designed to enhance the landscape as well as to distinguish the Gardens from its surroundings. The streets were paved with bituminous macadam, believed to provide a smoother and harder traveling surface. Concrete sidewalks and curbs were treated in order to expose the gravel aggregate.¹¹³ Entrances to the Gardens were marked by tall brick piers. The piers had narrow, semi-circular arched openings and were attached to arched passages, which suggested an imaginary wall encircling the suburb (fig. 26). All of the street signs in the Gardens were painted the blue-green color used for architectural details. Ornamental iron signs, designed by Atterbury, identified important spaces such as "The Green" and "Tea Garden." Atterbury also designed the whimsical lamp standards in Station Square which depicted suburban motifs such as a sprinting commuter and chirping birds (fig. 27).

Olmsted's landscaping plan for Forest Hills was to enhance the buildings with plantings, by filling in the spaces between them. An extensive planting program was adopted for the Gardens by the Olmsted Brothers; designed to ensure "'a succession of blooming' block by block in spring and summer."¹¹⁴ According to the Preliminary Study, every street of the Gardens was to be lined with rows of elms, maples, English hawthorne, and pine oaks. Large trees which were already on the site were preserved and incorporated into the plan.

The planting of shrubbery and small plants was a central

concern in the early years of development due to the immediate effects which could be obtained. The firm placed nearly seventy-five varieties of plants in the Gardens, according to a planting scheme which was followed for over ten years by the resident gardeners.¹¹⁵ Plants such as wisteria, trumpet vine, wild grape, and rambler rose were chosen for their rapid growth and ability to cover buildings, thus merging architecture with the landscape (fig. 28).¹¹⁶

Olmsted's design for the Tea Garden represented the garden of intimate scale and informal planting which was meant for the Gardens (fig. 29). Intended for residents and guests at the Inn, the Tea Garden was enclosed by a stone wall and located to the rear of the Inn. There, one was cut off from the noise and movement of the Square by the wall, the cascade fountain, and the lush vegetation. The garden was a semi-private outdoor room providing a very naturalistic, but refined setting for afternoon tea.

Olmsted's landscape plan for the suburb at Forest Hills was more controlled than its nineteenth-century predecessors in America. Forest Hills had a close, urban-like character which reflected America's changing attitude towards nature in the twentieth century (figs. 30-31). Americans seemed to want a more civilized experience with nature than had been the case, for example, at Riverside. The suburban environment there was geared towards nature with more open space, woods, and water. The serpentine roads in Riverside were completely tamed by the time of Olmsted, Jr.'s design for Forest Hills. Despite

the many ways in which the latter departed from nineteenth century design, there remained similarities. This was especially true of the treatment of vegetation (trees, shrubs, climbing plants) and its relation to architecture. According to the tradition of the romantic suburb, Olmsted strove for a picturesque, garden-like environment. This was facilitated by the careful planting schemes and arrangement of houses with open space.

Chapter 6

Architecture in the Gardens

The Work of Grosvenor Atterbury and Others

The supervising architect chosen by the Sage Foundation to design the first group of homes for Forest Hills Gardens was Grosvenor Atterbury. Grosvenor Atterbury (fig. 32) was born in Detroit, Michigan on July 7, 1867, the only child of Charles Larned Atterbury and Katherine Mitchell Dow. Grosvenor was raised in New York City, where he received his early education at the Berkely School. He later attended Yale University, becoming editor of the Yale Record and the Yale Literary Magazine. He received his B.A., in 1891. The Atterbury family owned a summer home in Southampton, Long Island where Grosvenor spent his summers working at the nearby Shinnecock Hills Railroad Station as postmaster and stationmaster. During the summers from 1891 to 1893, he studied painting with William Merritt Chase, who had established the well-known Shinnecock Hills Art School.¹¹⁷ Atterbury's affection for the region was evident in his designs for country houses which frequently drew from the bare, wooden building tradition of the area.

Atterbury traveled to Europe and Egypt during this period, which inspired his decision to study architecture.¹¹⁸ When he returned to the United States, he entered the Columbia

School of Architecture as a special student in construction, (1892-1893), working also as a draughtsman for McKim, Mead, and White. In the following two years, Atterbury attended the Ecole des Beaux-Arts as a student of the Atelier Blondel. He returned to New York in 1895 to begin his own architectural practice.

Atterbury quickly became established within the profession during his first decade of practice, mainly designing country houses for friends and acquaintances on Long Island. His designs from this time were eclectic, drawn from the range of styles considered appropriate for country houses, such as Colonial, Queen Anne, Shingle Style, Tudor, and French Norman. From the 1880's to the early twentieth century, eclecticism was de regueur for architects of Long Island country estates, many of whom were educated in the Beaux-Arts tradition in Europe or the United States.¹¹⁹ Atterbury was greatly influenced by McKim, Mead, and White throughout his career, beginning with his early designs for Shingle Style houses on Long Island. The Lucien Oudin House in Water Mills, Long Island (ca. 1897), (fig. 33) was dominated by a massive roof. The weathered shingle siding and casement windows were also hallmarks of the style.

Atterbury may be associated with the Arts and Crafts Movement for his attention to material; his employment of romantic themes and medieval motifs, both American and European; and his concern for the design of details such as hardware and furniture. Atterbury cultivated an artist's sensi-

tivity to the composition of the house in the landscape and the combination of materials and textures. "Materials," Atterbury stated, "...are the palette with which an architect paints."¹²⁰

Atterbury's work came to the attention of Arts and Crafts advocates, such as Gustav Stickley. Stickley included Atterbury's designs in Craftsman Homes and The Craftsman magazine, as examples of the Arts and Crafts aesthetic. The Alfred H. Swayne House in Shinnecock Hills of 1897 (fig. 33) combined stone and shingle in earthy tones, which blended well with the landscape. Stickley observed that "in the cottage standing at Shinnecock...the slow sweep of the roof and the lazy undulation of the pale grass could hardly escape the attention of even the unobservant."¹²¹

Less well known was Atterbury's 1898 design for Robert de Forest's house "Wawapek" in Cold Spring Harbor, where he combined elements of the Shingle Style with Adirondack Camp log construction. This possibly originated from an 1893 trip Atterbury made to the Adirondacks with De Forest. While visiting Camp Pine Knot, Atterbury collaborated with William Durant in the design of Camp Uncas (1893-1895), and was probably responsible for the Manor House design. A two story log building with a broad shingle roof, shed dormers, and verandah, the Manor House reflected an Arts and Crafts feeling. The rooms had casement windows and beamed ceilings. Space was divided into smaller nooks and alcoves by huge log posts and beams. Atterbury and Durant

executed a watercolor design for a cabinet and desk intended for Camp Uncas (fig. 34). The simple wooden structure and screen recall furniture designed by English Arts and Crafts architects, or the Mission furniture of Gustav Stickley.¹²²

Atterbury designed large country houses during much of his career, although his penchant was for smaller, more intimately-scaled buildings. On his parent's estate in Shinnecock Hills, he built a small stone lodge and dovecote, resembling a Cotswold cottage (ca. 1905).¹²³ Atterbury's designs for a chapel in Seal Harbor, Maine (fig. 35), and the Church of All Angels in Shinnecock Hills (fig. 36), maintained a domestic scale and organic quality found in his house designs. The Tudor Revival Byrne House at Locust Valley, Long Island (fig. 37) is large, but was scaled down by breaking the mass of the house into smaller, unique parts, and the picturesque massing of its roofs. The free form and long plan were trademarks of English Arts and Crafts country house design, qualities which connoted the accretionary and irregular nature of medieval building.¹²⁴ These same qualities would characterize Atterbury's work in Forest Hills Gardens.

After 1905, Atterbury's architectural career was increasingly devoted to the goals of Progressive reform. As a member of the Tenement House Commission and the National Housing Association, he was concerned with the improvement of workingmen's housing. Model tenements and model houses, which he called "bread-line architecture" could be made widely available and affordable if based on a standardized system

of construction.¹²⁵ Atterbury developed his precast concrete system with the hope that mass-production would do for the housing industry what Henry Ford had done for the automobile industry (see Appendix I).

Atterbury believed that architecture did have a reforming and moralizing potential, an idea which gained ascendancy through John Ruskin and the Arts and Crafts Movement. Contrary to the English Arts and Crafts designer who idealized hand craftsmanship, Atterbury like other American architects, accepted the role of the machine in architecture as a positive reality.¹²⁶ In fact, he hoped to reduce hand labor to the absolute minimum.

Atterbury believed that a machine-based system of standardized construction had an inherent beauty which did not detract from the architectural aesthetic. It was not important to express the concrete construction as directed, for example, by structural expressionists in the manner of Viollet-le-Duc, but merely to acknowledge the essential nature of the underlying components. As far as Atterbury was concerned, honest construction did not mean the frank expression of structure, but was considered in terms of reform whereby it stood for the integrity and honesty of the builders and the laws which regulated them.

American Progressives, architects and otherwise, emphasized practical reforms within the suburban home, supporting the incorporation of technological developments in 'household appliances' and 'domestic science.' Arts and Crafts

architects concentrated on the moral and health benefits brought to society by simple and artistically designed homes. Thus, the suburban house was a model of aesthetic and socio-political reform for many. According to Samuel Howe:

It pays to own a home. The payment is character. The payment is a stimulating impulse of self-education, of self-expression and of self-reliance... The spirit of America will be better, stronger for fostering the love of home. 127

American architects approached the design of the suburban house also with the intent to reform architectural taste. Simplicity, honesty, and homeliness characterized suburban architecture, all qualities they believed were missing from the large, country houses they were frequently commissioned to design, and preferable to the highly-ornamented examples of the Victorian styles. Other architects who contributed to the Gardens such as Lewis Colt Albro, Harrie T. Lindeberg, and Aymar Embury composed guidelines for the design of the small house. The guidelines were loosely defined, in order that they might draw freely from a variety of traditional eclectic styles which they were familiar with.

English Domestic was a widely accepted style for the suburban house. The work of the English Arts and Crafts architects M.H. Baillie Scott and C.F.A. Voysey became prototypical of the English Domestic Style. Such designs captured the quintessence of the small house--a picturesque combination of local building materials, asymmetrical form, and a human scale. The notion that the English style was

more appropriate than others was reinforced by the rationalization that the American landscape was similar to the English landscape. Some architects felt that, due to their English ancestry, they shared an English psyche. English architects themselves, were intensely interested in reviving traditional regional styles, which lead to a similar response among American architects.

In light of this, Atterbury chose a style through which he sought to inspire associations with a medieval European village or an English country house. The first buildings constructed in Forest Hills, including those most important to the Garden's image, were the hotel/apartment complex and the surrounding attached dwellings. In all, ten groups of attached, semi-detached, and detached buildings were put up between 1911 and 1913.¹²⁸ Atterbury was the primary architect of these buildings, although he worked with his two associates, John Almy Tompkins, and Stowe Phelps.¹²⁹ Their style can best be described as one which synthesized elements of English Domestic, Norman French, and German-Tudor. The groups, concentrated in the suburb's center and dispersed outward, set the architectural theme in the Gardens. Atterbury consistently employed a set vocabulary of architectural motifs and decorative techniques which were variously arranged in the ten groups.

The manipulation of roof forms was a dominant feature among the original groups. Atterbury combined an assortment of roof and dormer types such as hipped, gable, and gherkin-head. In addition, tall slender chimneys and octagonal cor-

ner towers, inspired by the Queen Anne Revival, produced picturesque rooflines (fig. 38). Building facades were frequently symmetrical and arranged in tripartite schemes. This was emphasized by the balanced placement of windows, and matched gable ends which were pulled forward from the facade. Second story overhangs and enclosed arcades were features commonly found in the attached dwellings.

Decorative finishes were made from concrete and excess materials in order to conserve time and money. Exterior walls were finished with a technique devised by Atterbury. Concrete walls were worked with a wire brush and weak solution of acid to expose the texture and color of the gravel aggregate. An aggregate mixture for wall surfaces was made from the waste of roof or floor tile, with the darker color used for stucco bands and cornices. The panels of the hotel balconies, for example, were faced with broken vitrified green and blue floor tile.¹³⁰

Architectural details were also rendered in concrete, the most interesting being the half-timbering effect. This was done by alternating bands of solid constructive concrete faced with crushed tile, with bands of tapestry brick. The result was a subtle impression of half-timbering. Another detail repeated in the thematic buildings was the concrete grille. This was often set in garden walls, dormers, and gable ends. The grilles were cast in wooden forms of uniform size and could be altered by the addition of filler pieces. Concrete "chimney houses" were also mass-produced

in the temporary Forest Hills Gardens factory.

The Garden's rich sense of color was achieved, in part, through the use of "lammie" or tapestry brick. To avoid monotony in the brickwork, the lammie bricks were purchased from a variety of dealers. Ranging in color from brown to red to purple, the brick produced a tapestry-like surface of irregular and deep color. Decorative brickwork such as corbelling, dentillation, and alternating light with dark, made building surfaces more interesting.

All of the roofs in Forest Hills were laid with flat shingle tile, in shades of red and brown which blended well with the brick surfaces.¹³¹ Atterbury was no doubt inspired by Hampstead Garden Suburb, where red tile was used on all of the houses to recreate the appearance of a medieval village. Atterbury used a contrasting blue-green color throughout the Gardens on features such as lamp standards, wooden fences, and street signs. The uniformity of color and material highlighted the similarities of the group buildings.¹³²

Construction on Group One began in November, 1911 (figs. 39-46). This group included all the buildings in Station Square, as well as the railroad depot.¹³³ The Square incorporated offices, shops, a restaurant and apartments for 300-400 people (fig. 47). Atterbury's design for Station Square was a painterly composition of romantic architectural motifs which became the representational picture of the Gardens. Those who visited, described the Square's atmosphere as that of a "college or cathedral city", which gave "the

stranger the feeling that he has suddenly been transplanted in the old world."¹³⁴

Facing the central square, the buildings were connected by four arched walkways which spanned the only streets entering the Gardens. An enclosed arcade at street level encircled the square, as well as extending into the Gardens, thus providing a semi-private passage for shoppers and residents. These buildings were dominated by a nine story octagonal tower which was crowned with a conical roof, featuring a slim flèche, and wrought iron weather vane. The faces of the tower were articulated with full length half-hipped dormers, with alternating fan windows and grille-work balconies. The tower was a focal point, visible from almost everywhere in the Gardens (fig. 48).

An asymmetrical arrangement of buildings on the east side of the square centered around a stout five story octagonal tower, with an adjacent clock tower, and lower hipped roof building (fig. 49). The remaining buildings on the southern and western sides of the square were long, gable-roofed structures. The building on the south side was symmetrical with matched half-hipped gable ends. This was the main building of the complex containing the hotel lobby, restaurant, and Tea Garden. The building on the west side was similar except for a square, corner entrance tower which was linked by a bridge to the building on the south (fig. 50).

Station Square was a monumental gate for those entering the suburb, and the communal center for those within. The

picturesque roofline of the hotel buildings ran parallel to the station platform and depot on the north side of the Square. The space was enclosed, and in a sense, unified by the presence of the railroad buildings (fig. 51). The integral relationship of the station buildings with the square was emblematic of a railroad suburb such as Forest Hills Gardens (fig. 52).

Group II was a block of small, attached single-family houses built on Burns Street, near Station Square. The semi-circular plan of the group allowed for a small green space in front, a selling point for the homes which faced the railroad embankment. Atterbury's tripartite scheme connected three clusters of front-to-back plans with larger, asymmetrically planned houses placed at the angles (fig. 53).¹³⁵ Entrances to the individual dwellings were articulated by small porches and octagonal towers. Constructed in pre-cast concrete, the decorative details were similar to those of the Square--half-timbering effect, pediments with inset grilles, shed dormers, and aggregate stucco (fig. 54). Group II was unique in the Gardens as one of the few attached dwellings that was semi-circular in plan.

Atterbury's design for Group III, located on Slocum Crescent was an example of the typical block of attached single-family houses (fig. 55). Groups IV and V were similar aesthetically, but differed in the number of rooms. Group III was symmetrical; a tripartite arrangement of matching gable ends framing a central block. A variety of roofs and dormers added the interest to a straightforward design. The

arched openings leading to a covered loggia and palladian windows echoed similar features found in Station Square (fig. 56). Atterbury's careful division of the facade succeeded in giving the impression of ten individual dwellings.¹³⁶

Groups VI-A and VI-B were located adjacent to Station Square on Greenway Terrace North and South, respectively.¹³⁷ Both groups consisted of a block of ten houses based on three different plans (fig. 57). In this varied arrangement, the houses were encompassed under a large gable roof which made the group appear as a single dwelling. At the street level, however, each house was defined by an arched entranceway along the stone wall and a two story window bay. Each bay was capped with a dormer punctuating the roofline, creating a regular rhythm with the tall, slender chimneys and small shed dormers.(fig. 58).

Offsetting this rhythm in Group VI-A was a four story gabled section placed slightly right of center. This spanned a narrow street called Archway which passed through and connected with Continental Avenue in the rear. The gabled block was framed by small polygonal turrets and had an overhanging pergola (fig. 59). This block was designed to house two families on three floors, thus space was distributed horizontally in the plan. The end houses were based on a typical row house plan wherein the circulation space was attached to one wall. These two houses were pulled forward from the facade, thereby providing more floor space. The left-hand tower had a two story polygonal bay window and gherkin-head roof. Both houses were approached by paved terraces with profusely

planted gardens.

The quadrangle and row house arrangements of the first ten groups became the basic planning types for subsequent group buildings. This was true of Atterbury's designs for Groups XI through XX.¹³⁸ They slightly resembled the stylistic features of the first ten groups. For instance, they had banded windows, shed roof dormers, covered entrance porches, terraces, and were constructed of brick and concrete. Overall, they were plainer, borrowing less from the medieval and picturesque aesthetic of the original groups. Indeed, the constrained and uniform style of these houses was characteristic of the majority of houses designed by Atterbury and the Sage Homes Company.

Groups XI and XV were representative of the simple style. The two story houses were small, symmetrical in both plan and facade, and had few details (figs. 60 & 61). More elaborately designed, Groups XVII and XVIII-B recalled the verticality and expansive roofs of the earlier groups, as well as introducing Jacobean elements in the two story bay window of Group XVIII-B (figs. 62 & 63). Groups XVI-B, XIX, and XX were row houses which followed the basic planning types (figs. 64-66). Despite variations in the depth of the facade, uniformity was emphasized by the matching gable ends and symmetrical details (Groups XIX and XX), such as the entrance porches and dormers.

Atterbury's design for Group XII was a notable exception to the straightforward plans of the other groups (fig. 67). He employed a 'butterfly' type plan for the triangular-shaped

site, at the juncture of Markwood Road and Greenway North. M.H. Baillie Scott chose a similar plan for the design of multiple corner houses at Hampstead Garden Suburb, (1908-1909).¹³⁹ Group XII included four houses--two semi-detached houses located in the angled 'wings' of the plan, and two detached houses placed at their ends. This arrangement provided an effective visual termination of Greenway North, as well as creating semi-private space within the group houses.

In his designs for detached dwellings, Atterbury concentrated on the relationship between the house and landscape. He recreated the informal and cottage-like ambience of his earlier country house designs. For example, his design for the Robert Harris House at Forest Hills, House I-F-52, (fig. 68), was closely patterned after his design for a country house in Sebago Lake, Maine (fig. 69). The scale of the Harris House was increased by the hilly corner site. The length of the house was accentuated by a cross-axial plan with the major axis running parallel to the street. Terraces and loggias extended outward on all sides.¹⁴⁰ The steeply-pitched gherkin-head roof, concrete details, and half-timbering were similar to the Gardens' thematic buildings.

House I-F-51 was a fairly large detached dwelling which was integrally related to the landscape (fig. 70). The main entrance was on the second floor which one approached by narrow steps set to one side of the house within the trees. The ground floor combined enclosed living spaces as well as a kitchen courtyard, piazza, porch, and a walled garden. The

house was oriented to take advantage of sunlight, and planned to incorporate outdoor space. Mary Eastwood Knevels wrote that:

There is no point in building more important than this question of the orientation of the house, and none on which the 'Gardens' has taken a more progressive and definite stand. That the entrance to the house need not necessarily be from the street is indeed a new thought in house-planning. At the 'Gardens' the conventional theory has been disregarded again and again.¹⁴¹

Many of the houses in the Gardens were designed at the compact scale of the Mary E. Taylor House (House I-F-240) (fig. 71). One of Atterbury's Colonial Revival designs, the Taylor House is an example of the plain, mail-order aesthetic which characterized the least expensive houses. On the other hand, the H.H. Buckley House (ca. 1915-1918), located at the intersection of Greenway North and Markwood Road, was an elaborately detailed Tudor Revival country estate (fig. 72). Atterbury's design relied on the decorative features of the thematic buildings, thus relating it to the Gardens overall (fig. 73). Its grand scale, however, seems out of proportion in relation to the moderately-sized houses which are most common in the Gardens.

The preoccupation with housing found amongst Progressive reformers such as Atterbury and the Sage Foundation, may in part explain the absence of a major church in the Gardens. Improved housing was considered the means to moral reform, rather than the church. In developments such as Port Sunlight and Hampstead Garden Suburb, the church was a focal point both

in the physical plan and the community's existence.

The secular nature of Forest Hills Gardens reflects the social concerns of Mrs. Sage, who, although religious, gave far more money to schools and universities than any other type of institution.¹⁴² The plan of Forest Hills therefore incorporated a site for a school at the southern end of the Green, but no site for a church. More of an afterthought, the Church-in-the-Gardens was not designed until about 1914, and then according to a diminutive, domestic scale.

The Church-in-the-Gardens recapitulated Atterbury's theme buildings, especially the square towered entrance with a gherkin-head roof, and a small flèche topped with a weather vane (figs. 74 & 75). The non-denominational church was plainly designed and akin more to the domestic nature of Station Square than to ecclesiastical Gothic. It was meant to be a village church. The walls were roughly textured, constructed of random course Connecticut field stone.

Atterbury's decoration of the interior was an essay in the Arts and Crafts aesthetic. The sanctuary was dominated by a massive, wooden arch-braced roof, the timbers of which were charred and treated to give an aged appearance.¹⁴³ Heavy stone walls, and small blue and green stained glass windows in the chancel, created a cool dark atmosphere within. Atterbury designed a wrought iron rood screen with figures of horses, roses, and birds. This was one of the few truly ornamental features in the church (fig. 76). The unpolished aesthetic was evocative of a humble village chapel rather than

a high style church. That was the image that Atterbury and the church's sponsor, Mrs. Sage, wanted the building to convey. The Church-in-the-Gardens was built for the intimate community contained within Forest Hills Gardens.

* * *

Some of the earliest and most distinctive English Domestic and Colonial Revival houses in the Gardens were designed by the firm of Albro and Lindeberg. Lewis Colt Albro (1876-1924) and Harrie T. Lindeberg (1880-1959) were both draughtsmen in the office of McKim, Mead & White from 1900-1906, where they met and formed a partnership which lasted from 1906 to 1914.¹⁴⁴

Albro and Lindeberg were known for their country house designs in New York State and Long Island. They drew from English Domestic and Colonial Revival styles, producing grandly-scaled houses which were finely detailed. They applied equal rigor to the design of dependencies such as superintendents' and gardeners' cottages, entrance lodges, and play houses, which were impressive buildings in and of themselves. Both wanted to upgrade the design standards of the small house, bringing it to an aesthetic level commensurate with the large country house. "Many capable architects are unwilling," they wrote, "to give consideration and time from their more important commissions to these smaller problems (modest homes), which is undoubtedly the cause of the lamentable work scattered throughout our countrysides and suburbs."¹⁴⁵ They felt the small house should be based on the following principles:

it should be simple; have an attractive form; provide a study of solids and voids; be low; and most important, have a roof "which is both sheltering and home-like."¹⁴⁶

Albro and Lindeberg contributed a number of designs to the Gardens, four of which will be considered here. The Boardman Robinson House (fig. 77) is relatively large, owing to its site on Continental Avenue, the major artery passing through the Gardens where many of the largest houses are located. An example of English Domestic work, the house is plaster with a large offset chimney and asymmetrical facade. The house's casement windows with batten shutters were often used in the firm's large country houses. A massive gable roof on the Robinson House sweeps down over the rear facade, defining the form and creating a 'sheltering and home-like quality'.¹⁴⁷

The Robert A. Pope House (fig. 78) located directly across the street was designed by Albro and Lindeberg. Facing Continental Avenue, the Pope House is tall and imposing in comparison to the Robinson House. With English Domestic detailing, the front elevation consists of matching half-timbered gable ends between which is a deeply-recessed entrance. A two story bay with diamond paned windows of pastel-colored lights is at the side of the house. The exterior of the house was finished with hand-trowelled stucco.¹⁴⁸

An example of Colonial Revival work by the firm is the Hugh Mullen House on Greenway South (fig. 79). The house occupies a prominent site at the point where Groton Street

enters Greenway South. The facade is symmetrical with three bays and flanking one story enclosed porches. Details are simple and confined to the Doric portico, fan window, and brickwork. Its substantial size is due to the extended wings which incorporate an enclosed garage and service area.

The William J. Leonard House, House I-F-237 (fig. 80), is more typical of homes in the Gardens, because it is smaller and its stylistic reference less direct. Its accuracy within a given style was not as important as conveying the sense of home, an important theme in Arts and Crafts thinking. The form is composed of a central block which is a steeply pitched gable structure. Two flanking porches, which act as pavilions, are located tangentially at the front of the house. The form of the Leonard House was repeated by the firm in other detached and semi-detached dwellings of moderate cost built by the Homes Company, as is seen in the center dwelling of Group XXVIII (fig. 81).

Another architect working in the Gardens was Aymar Embury, II (1880-1966), who published his ideas for domestic design in One Hundred Country Houses in 1909. Therein he described eleven historical styles upon which all contemporary design was premised. All were considered appropriate for domestic design, providing they were not copied, but "modified and modernized."¹⁴⁹

Embury made his strongest case in favor of the Dutch Colonial, claiming that:

In the modern adaptation of Dutch architecture more

freedom has been used than with any other of the early American styles...much of the country-house work that is most truly modern and most truly American, is unquestionably of Dutch genesis. 150

This belief was based on extant examples of Dutch Colonial building found in the New York region. They were "the old farmhouses--so many of which have fortunately been preserved in the early Dutch settlements of Flatbush and Flushing on Long Island."¹⁵¹ The most notable feature of the style was the gambrel roof which lent "quaintness" and picturesqueness to any house. Like the English Domestic Style, the Dutch Colonial relied on materials at hand, emphasizing its native expression and builder's ingenuity.¹⁵²

The W.P. Beazell House (fig. 82), at the corner of Puritan and Greenway South, is an example of Embury's Dutch Colonial gambrel-roofed house. The facade is symmetrical with gabled dormers, and end chimneys. The one story porches which flank the central block were typical of Colonial Revival designs in the Gardens. These sun porches, sometimes enclosed by glass or open to the garden, served to bring a more healthful and sunlit environment within the house.

Architects such as Embury carefully balanced their desire, on one hand, to work in the English Domestic Style, with the caution that it also reflect an American spirit. A writer for the Architectural Record claimed that Americans were free of the Englishman's constraints and "provincial prejudice". Thus, the American architect "enjoys...the greatest natural freedom."¹⁵³ Embury persisted, however, stating

that "perhaps even our minds, reflect England more than any other country, and it is therefore only natural that in architecture as well we should turn to England for inspiration."¹⁵⁴ Embury's design for Group XIV (fig. 83) employed the plaster finish and half-timbering which were trademarks of English domestic design.

The Philadelphia architect Wilson Eyre (1858-1944), produced one design for the Sage Homes Company. Eyre was a thoroughgoing advocate of the English Domestic Style. He felt that the style was as appropriate to the United States as it was to England. Eyre observed that:

The source from which American builders have borrowed most extensively has of course been England...in many of our suburban and rural districts, especially in the East, the nature of the landscape, the formation of the soil, the building materials available, and--above all--the mode of living, are very similar to English conditions. 155

Eyre's design for Group XIII was based on a quadrangle plan. Three semi-detached buildings were arranged in a U-shape around a common space (fig. 84). Alike in their simple detailing, their inspiration is English in the white plaster finish and varied window arrangement. The houses were particularized by small hipped-roof entrance porches which afforded a sense of privacy to each dwelling. Full story windows light up the interior stairways. Eyre's charcoal rendering of Group XIII presents an ideal image of the small community (fig. 85). The houses are surrounded by a wild and lush lawn, yet separated from the street by a neat privet hedge. As built, however,

the houses were conservative in form and appearance which might have been a factor of economy.¹⁵⁶

Other architects who designed houses for the Gardens in the English Domestic Style were Frederick J. Sterner and Eugene Schoen. Sterner (1876-1931) was born in England and practiced in the United States. House I-F-218 is an example of his work (fig. 86). He labeled the house a "cottage", yet it appears more substantial with its stone walls and crenelated entrance tower. Eugene Schoen (1880-1957) was born in Germany and was a successful interior designer in New York City, whose work was influenced by the Viennese Secession. The Howard Duff House (fig. 87) bears some resemblance to the architecture of Peter Behrens, a German proponent of the Arts and Crafts in that country. Many of Schoen's house designs, including his own house on Olive Circle, were characterized by the steeply-pitched roof, smooth plaster walls, small paned windows, and a somewhat curvilinear form.¹⁵⁷ J.T. Tubby's design for two semi-detached dwellings, (Group XXIX), was a long rectangular block with a tall gabled roof (fig. 88). Tubby applied panels of tiles beneath the second story windows and details at the gable end which were unusual.

* * *

The Foundation purposely solicited the work of professionally-trained architects who had had experience in domestic design. This gained the Foundation exposure for the suburb and a surer sense that the houses would be well-built and aesthetically pleasing. One of their main objectives was that they

would make a noteable improvement upon the quality of speculative-built suburban architecture.

The architects were equally aware of the improvements that needed to be made in the average dwelling. They set forth principles to guide the design of the small house of "modest pretensions and moderate cost."¹⁵⁸ This heightened consciousness may, in part, be attributed to the reform spirit of the Arts and Crafts Movement which caused architects to re-evaluate the basic elements of domestic design and led them to explore the roots of their native architectural styles as well as styles in Europe.

These architects did consider themselves progressive insofar as they attempted to revise their approach to domestic architecture in answer to the priorities of reformers and the needs of homeowners. Their revisions did not materially alter the outward form of the house, however, which was still based on conservative historical styles. The conscious change existed in the writing of new principles, reflecting an attitude which seemed more ordered and rational than Victorian eclecticism.

Conclusion

The suburb begun in 1911 at Forest Hills Gardens was only one of many projects sponsored by the Russell Sage Foundation intended to "improve the social and living conditions of men."¹⁵⁹ This was Mrs. Russell Sage's primary goal in establishing the Foundation in 1907, a goal which reflected the strong reform spirit of the early twentieth century. The separation of the Foundation into departments as wide-ranging as recreation, surveys and exhibits, and remedial loans, was indicative of the broad-based concerns of Progressive reformers. The subject of housing, however, dominated the attention of reformers beginning in the nineteenth century and continuing well into the twentieth.

The investment in a suburb was one of the Foundation's first actions. With this decision, the trustees of the Foundation sought to prove that they were concerned about housing reform and were working for solutions. Although the suburb as an alternative to urban life was not a new idea, the Foundation described their plan for a "model suburb" as a novel approach to an old idea. The model suburb would exceed other suburbs by virtue of its controlled real estate economics, practical planning, and uniform architecture. Forest Hills Gardens was to be a test case of this model, the assumption being that if it succeeded in that location, it would succeed

elsewhere. Such assumptions on the part of the Foundation obviously disregarded the possibility that, although the model might succeed in one geographical location, other places would provide entirely different physical and economic conditions. If the trustees were to a certain extent myopic, it was perhaps due to the overwhelming optimism endemic in the Progressivist Movement which placed great faith in supposed empirically-based solutions. The model suburb represented such a solution--a controlled environment from which the negative elements of industrial society were extracted. Most reformers, in fact, believed that their restructuring of the environment according to such a model would lead to the improved health and morality of its citizens. Indeed, Grosvenor Atterbury, the primary architect of Forest Hills Gardens, stated that:

...the model town, whether it serves to retard still further centralization in vast cities or to draw some portion of city dwellers back into purer environments, as have the garden suburbs of London, has for its supreme function the making of healthier, happier, and better citizens. 160

Developments in European housing reform, especially in Great Britain, were carefully observed and emulated by American reformers beginning in the mid-nineteenth century. Great Britain provided many successful examples of tenement reform, worker's housing, and garden suburbs, yet the most compelling source of ideas was the Arts and Crafts Movement. Based on a vision of medieval utopianism, the movement inspired new images for the aesthetic reform of architecture.

The Arts and Crafts Movement arose as a reaction against the effects of industrialization on the environment. In this sense, it paralleled the Progressive Movement, and similar to Progressivism, Arts and Crafts practitioners sought to build a purer environment. In the realm of domestic architecture, such architects strove for simplicity, honesty, and advocated the use of traditional building materials and styles. Invariably, Arts and Crafts architects were faced with the irony that the houses they designed were too expensive for the working classes. Thus, the very class of people they hoped to serve never benefited from their aesthetic reform in architecture. Forest Hills Gardens was a case in point. Early on in the Garden's development, the Foundation realized their efforts to provide superior, well-crafted homes, designed by architects, precluded a large segment of the population from home ownership. Mrs. Sage's objective to improve the social and living conditions of man was therefore compromised by the realities of economics. Although the Foundation maintained from the beginning that the Gardens was to be a business proposition, there was a pervading sense that the Foundation had failed as a philanthropic organization.

Forest Hills Gardens was unquestionably a success according to the written objectives that were set forth in the Foundation's earliest publicity. The Gardens provided well-built, attractive homes for all its residents. In its first decade or so (1911-1922), 375 homes were built and an additional sixty-three acres of land was purchased for expansion.

By 1922, the community was prepared to take over the management of the suburb, forming the Forest Hills Gardens Corporation. The Corporation's Board of Directors was composed of fifteen residents who were delegated to maintain restrictions, collect money, and hold community property. They were also "to promote and to sustain in Forest Hills Gardens and vicinity in all suitable ways the living and aesthetic conditions for which the Gardens was founded."¹⁶¹ The fact the suburb became self-sufficient was an achievement for the Foundation. Their original intention was to limit their involvement in the suburb until such time as the community could be self-sustaining.

Much of the Garden's success stemmed from the resident's enthusiasm for the community life and their physical environment. They considered the civic and social events which took place in the Gardens to be essential to the identity of the new community. Theatrical productions, patriotic celebrations, and the design of a community center were just a few of those.¹⁶² The sense of unified purpose came from the fact, in part, that the Sage Homes Company screened the applications submitted by prospective buyers to determine "whether they would make congenial members of the colony."¹⁶³ The majority of the residents were well-educated professionals, who were seeking, in the words of one, an "accessible community of intelligent and companionable people."¹⁶⁴

People were attracted to Forest Hills because it appeared to exceed the aesthetic standards of the average suburb.

Residents repeatedly expressed their admiration for the artistic and beautiful effects achieved in the landscape and architecture. "We selected Forest Hills Gardens," claimed Israel A. Washburne, "chiefly through the love of beauty, in the desire to have aesthetic surroundings." "The sylvan and artistic lure of the Gardens in Forest Hills was too much for me," confessed A. Latham Baker. Visitors were also drawn to Forest Hills to experience its beauty and atmosphere, much as they would a public park or garden. As one visitor observed, "I spent the day at Forest Hills...The place is delightful. Greens and mysterious grays are everywhere. The houses are new--that you realize--but it has a sense of mellowness, of repose and quiet, of sunshine and pleasure, which is contagious."¹⁶⁵

Forest Hills Gardens was, and still is, most widely acclaimed for its architecture and landscape planning. The foresight of the Russell Sage Foundation in establishing architectural controls and land-use restrictions, assured the preservation of the original buildings and streetscape. The suburb appears today much the same as it did in 1914.

Under the guiding hand of the Russell Sage Foundation, Grosvenor Atterbury and Frederick Law Olmsted, Jr. brought together innovative construction techniques, current ideals in city planning, and Arts and Crafts architecture. Their consistent attention to details, both in the design of the buildings and the changing landscape, resulted in Forest Hills Garden's unqualified beauty.

Appendix I.

The Atterbury Precast Sectional System

Atterbury devoted nearly half a century (ca. 1904-1950), to the research and development of a precast concrete construction system. He became interested in economic construction because he believed that early twentieth century housing was technologically outdated, and controlled by inconsistent building codes. Atterbury studied building conditions in the United States and in England.^{1.1} His study was especially influenced by the work of Liverpool's city engineer, J.A. Brodie. In 1905, Brodie erected a three story apartment building based on his system of reinforced concrete panels.^{1.2}

Atterbury began to experiment with such a system on his own back in the United States. He received funding from the New York philanthropist Henry Phipps during the years 1904 to 1908. These early efforts were begun at Sewaren, New Jersey. From 1908 to 1916, the Russell Sage Foundation financed Atterbury's work, in part at Sewaren, and later at Forest Hills Gardens. There Atterbury constructed forty houses of prefabricated concrete sections between 1908 and 1919.

Atterbury's construction system, which later became known as the Atterbury Precast Sectional System, was based on hollow core concrete sections. A section was 60% void; each

nine inch thick section, for example, consisted of two one and one-half inch sections separated by a six inch void which was cross-braced. At Forest Hills Gardens, Atterbury produced about four to five thousand sections which were used for floors, walls, and roofs.

In Forest Hills, a temporary factory was established near the railroad embankment, where the three-ton panels were cast in reusable molds. They were transferred to the building site by carts on railroad tracks where large cranes lifted them into place. The panels were then put together with tongue and groove joints. The roof and dormer sections were put into place whole. The interior walls were done without lath, plaster, or wood trim. Aside from the plumbing and electricity, the only finishing touches were wood floors, picture rails, and concrete skirtings.^{1.3}

Atterbury stated that the shell of a thirteen foot house could be erected at the rate of a house a week, with each of the slabs handled only once.^{1.4} In addition, the house could be completed with less than one hundred machine units compared to hundreds of thousands of hand units which were necessary in masonry construction.^{1.5} A further advantage was the variety of effect which could be achieved by treating the surface of the concrete.

Atterbury continued to work on his construction system long after Forest Hills. In a report written thirty years later, he pointed to the forty houses in Forest Hills as living examples of the precast system's "stability, living and

aesthetic qualities, economy of maintenance, and reduction of fire hazard."^{1.6} His enthusiasm for the efficiency of the system was unrestrained. He compared a house built of his concrete panels to "a child's blocks raised to the Nth power," which were "assembled by giant fingers."^{1.7}

Throughout his career Atterbury was concerned with the broader implications of his prefabrication system. He sought to reduce the cost of labor and materials so that the poor man could afford a home. He opposed building laws which were not "rational and scientific", but arbitrarily determined. He wanted to standardize the production of housing in order to stimulate a healthy profit motive in the industry--a phenomenon which he observed in the standardization of the automobile. He therefore advocated the adoption of the "most efficient mechanical devices."^{1.8} He suggested the creation of a Research Institute of Economic Housing to serve as an objective and non-political organization for scientific research of housing construction.

Atterbury's system of prefabricated concrete did not succeed at Forest Hills Gardens to the degree envisioned by Atterbury. Production of the slabs was too slow, in part, due to the inefficiency of the on-site factory. At that time, it was less costly to pay bricklayers for the same job. It was not until 1951, at the age of 82, that Grosvenor Atterbury actually began to produce the concrete sections in a permanent factory. Featured in Fortune Magazine (March, 1951), the sections were produced under the company name

Precast Building Sections, Inc..^{1.9}

Appendix I.

Notes

1.¹ Gilbert Herbert, The Dream of the Factory-Made House, (Cambridge: MIT Press, 1984), p. 13.

1.² Ibid., p. 13.

1.³ David P. Handlin, The American Home; Architecture and Society, 1815-1915, (Boston: Little, Brown and Co., 1979), p. 287.

1.⁴ Grosvenor Atterbury, The Economic Production of Workingmen's Homes: An Outline of a Scientific Solution of the Housing Problem and its Relation to the Development of the City, (New York: Russell Sage Foundation, 1930), p. 25.

1.⁵ Atterbury, Corbett & Holden, Report on the Use of Prefabricated Fireproof Construction, (New York: New York Housing Authority, 1943), p. 10.

1.⁶ Ibid., p. 32.

1.⁷ Ibid., p. 10.

1.⁸ Grosvenor Atterbury, The Economic Production of Workingmen's Homes, p. 10.

1.⁹ "After Thirty Years and \$500,000...", Fortune Magazine, (March, 1951), p. 19.

NOTES

¹ John Glenn, Lilian Brandt, F. Emerson Andrews, Russell Sage Foundation 1907-1946 Volume 1, (New York: Russell Sage Foundation, 1947), p. 11.

² Arthur A. Ekirch, Jr., Progressivism in America: A Study of the Era from Theodore Roosevelt to Woodrow Wilson, (New York: New Viewpoints, 1974), p. 7.

³ Richard Hofstadter provides a profile of the Progressive reformer in The Age of Reform: From Bryan to F.D.R., (New York: Vintage Books, 1955), p. 144.

⁴ In the nineteenth century, wealthy philanthropists and volunteers, or "friendly visitors" dominated charity organizations. During the Progressive Movement, the field of social work evolved from volunteerism to a professionalization of the field. In 1898, for example, the New York Charity Organization Society began a six week summer school in philanthropy, which was later extended to a year-long course. From Roy Lubove, The Professional Altruist: The Emergence of Social Work as a Career, 1880-1913, (Cambridge: Harvard University Press, 1965), p. 140.

⁵ Jacob Riis, "Russell Sage Foundation," Charities and the Commons, Volume 17, number 15, (March 23, 1907), p. 1084.

⁶ Christine M. Boyer, Dreaming the Rational City, (Cambridge: MIT Press, 1983), p. 29.

⁷ Roy Lubove, Progressives and the Slums; Tenement House Reform in New York City 1890-1917, (Pittsburgh: University of Pittsburgh Press, 1962), p. 45.

⁸ Jacob Riis' photographs taken as a police journalist were published in books such as How the Other Half Lives in 1890.

⁹ Tenement legislation in the second half of the nineteenth century was spurred on by concerns for public health. The Tenement House Exhibit exposed the prevalence of disease and poverty in tenement districts. Models, photographs, maps, charts,

diagrams, and tables provided a statistical basis favoring tenement reform. Architectural plans of American and European tenement companies, suburban tenements, and working peoples' cottages were included. Lawrence Veiller & Robert de Forest, Editors, The Tenement House Problem, Volume 1, (New York: The MacMillan Company, 1903), pp. 112-115.

¹⁰The Tenement Commission became a satellite of the Charities Organization Society. Architects on the Commission included George B. Post, I.N. Phelps Stokes, and Ernest Flagg. Reformers on the Commission were E.R.L. Gould, Edward T. Devine, Jacob A. Riis, and Robert de Forest. The Commission proposed building codes which were endorsed by the New York Chapter of the A.I.A., and the Architectural League of New York. From Roy Lubove, Progressives and the Slums, p. 121.

¹¹Ibid., p. 134.

¹²E.R.L. Gould was President of the City and Suburban Homes Company from 1896 to 1915. The company built model tenements, but Gould was convinced that suburban homes provided the ideal home environment. In 1896, he began "Homewood" in Brooklyn, a suburban development of 250 cottages. Gould wanted to establish a well-ordered community with "rigid official control...of grading, paving, laying out sidewalks, and sewer construction." The suburb would counteract the "moral contamination of congested tenement life." From E.R.L. Gould, "Homewood--A Model Suburban Settlement," American Review of Reviews, Volume 16, (1897), pp. 45 & 51.

¹³Roy Lubove, "I.N. Phelps Stokes: Tenement Architect, Economist, Planner," Journal of the Society of Architectural Historians, Volume 23, no. 2. (May 1964), p. 80.

¹⁴Grosvenor Atterbury, "The Phipps Model Tenement Houses," Charities and the Commons, Volume 17, no. 1 (October 1906), p. 57.

¹⁵Roy Lubove, "I.N. Phelps Stokes," p. 82.

¹⁶At the 1904 Louisiana Purchase Exposition, a model street was designed to exemplify the possibilities of municipal improvement. The Philadelphia architect Albert Kelsey was responsible for the large neo-classical buildings facing the wide avenue. The focus of the street was on the network of street lamps, letter boxes, sign posts, fountains, and other street furniture.

¹⁷Mel Scott, American City Planning Since 1890, (Berkeley: University of California Press, 1971), p. 85.

¹⁸ Ebenezer Howard, Tomorrow: A Peaceful Path to Real Reform, (Cambridge: MIT Press, 1965), p. 128. Howard's book was reissued in 1902 under the title Garden Cities of Tomorrow.

¹⁹ Ibid., p. 128. Some of the individuals who influenced Howard were Thomas Spence, (land reform); James Silk Buckingham, (model industrial town); Edward Gibbon Wakefield; (systematic colonization); and Peter Kropotkin, (decentralized urban growth).

²⁰ Ebenezer Howard, p. 145, (emphasis mine).

²¹ An American Garden City Association was founded in 1906 by a group of churchmen and financiers, including Louis Childs; Ralph Peters, (head of the Long Island Railroad); E.R.L. Gould; Socialist ministers William D.P. Bliss and Josiah Strong; and Felix Adler of Columbia University. They endorsed the garden city in their journal The Village. They also hoped to oversee, if not plan, a number of garden cities in Long Island, Connecticut, New Jersey, Pennsylvania, and Virginia. They were never realized, and by 1921, the Association was dispersed.

American journals such as The American City and Scribners Magazine often featured European garden cities. English publications on garden suburbs and the progress of the garden city movement were widely available. International conferences on town planning introduced many to the garden city, (e.g. 1908 International Housing Congress in London, and 1910 Town Planning Conference in London). Visitors to these conferences toured Letchworth Garden City, Port Sunlight, and Bourneville. See Daniel Schaeffer, Garden Cities for America; The Radburn Experience, (Philadelphia: Temple University Press, 1982).

²² Pugin's book Contrasts of 1836 advocated Gothic as the only true Christian architecture. Pugin emphasized this point by contrasting the medieval townscape of 1440 with the industrial townscape of 1840. The latter provided a dismal picture of pollution and crime which had overtaken the churches and open space characteristic of the medieval town.

²³ William Morris, News From Nowhere, (London: Routledge & Kegan Paul, 1890), p. 6.

²⁴ Sinclair Lewis, Main Street; The Story of Carol Kennicott, (New York: Harcourt, Brace and Company, 1921), pp. 130-131.

²⁵Margaret Olivia Slocum Sage, "Opportunities and Responsibilities of Leisured Women," The North American Review, Volume 181 (November 1905), pp. 712-721 passim.

²⁶Ibid., p. 715.

²⁷Russell Sage had a reputation for parsimony. He was said to lend five to eight million dollars during the course of a business day, but in matters of charity, he was quite frugal, and would even "chaffer over the price of an apple." His wife convinced him to underwrite the education of forty American Indian children, pay for a dormitory at the Troy Seminary, (Emma Willard School), and donate \$50,000 to the Woman's Hospital of New York. From Noteable American Women, 1607-1950, Volume 3, 1971.

²⁸John Glenn, et. al., Russell Sage Foundation 1907-1946 Volume 1, p. 3.

²⁹Ibid., p. 8.

³⁰De Forest studied at Yale University in 1870 under William Graham Sumner, Professor of Political and Social Science. Sumner was a well-known proponent of Social Darwinism, believing that men had the capability to shape their environment. In 1872, De Forest received his law degree from Columbia University and began practice with his uncle, and later with his brother Henry. De Forest was counsel for a number of utility, railroad, and insurance companies. An active patron of the arts, De Forest and his wife gave two million dollars to the Metropolitan Museum of Art in 1922 for the construction of a wing for Early American Art. Grosvenor Atterbury designed the new wing. From an article in the New York Times, November 18, 1922, p. 1, col. 4.

³¹Glenn, et. al., Russell Sage Foundation, Volume 1, p. 5.

³²Ibid., p. 5.

³³Ibid., p. 7. The remaining nine objectives included lodging houses for women, neighborhood charity buildings, industrial insurance, tuberculosis, sanatoria, retail stores to sell "the necessities of life 'to the poorer classes'", convalescent homes, management maintenance, industrial education, and a great exhibition in New York City.

³⁴In an article for The Survey, Robert de Forest recorded the highly charged atmosphere of the first meeting, particularly Mrs. Sage's feelings. "I am nearly eighty years old and I

feel as if I were just beginning to live," she said after the meeting. He wrote that Mrs. Sage "...had opened the meeting with a characteristic prayer which brought tears to the eyes of all present, and had presided over the entire meeting with characteristic dignity." From Robert de Forest, "Margaret Olivia Sage, Philanthropist," The Survey, Volume 41 (November 1918), p. 151. De Forest also related the response of other trustees after the meeting, contained in letters he received. They felt "exhilarated", "excited", and "stunned". Mrs. William Rice wrote that she "...had not dreamed that anything so vital and interesting...could come into [her] life." From Russell Sage Foundation, Volume 1, p. 20.

³⁵De Forest commented on this "darker side of philanthropy" which was beleaguering Mrs. Sage. "Public expectation is well illustrated by the appearance at her last house of a clergyman from a far-off place with an empty carpetbag, who for a long time refused to leave the premises. When asked why he had brought the empty carpet bag he replied that it was so that he could 'take the stuff back with him.'" De Forest, "Margaret Olivia Sage," p. 151.

³⁶"Mrs. Sage creates \$10,000,000 Charity," New York Times, March 13, 1907, p. 1, col. 3.

³⁷"Mrs. Russell Sage Dies at her Home," New York Times, November 14, 1918, p. 13, col. 1-2.

³⁸Arthur Huntington Gleason, "Mrs. Russell Sage and her Interests," The World's Work; A History of Our Time, Volume 13 (November 1906), p. 8182.

³⁹"The Russell Sage Foundation: Its Social Value and Importance--Views of Some of Those Actually Engaged in Social Work," Charities and the Commons, Volume 17 (March 1907); "What University Men Think of the Russell Sage Foundation: Suggestions in Large Part from the Chairs of Sociology, Economics, and Political Economy," Charities, Volume 17 (May 1907); Jacob A. Riis, "One Thing the Sage Foundation can do for New York," Charities, Volume 18 (April 1907).

Charities and the Commons resulted from the 1905 merging of the New York City Charity Organization Society publication Charities, with Chicago's Commons.

⁴⁰Richard Hofstadter, The Age of Reform, p. 154.

⁴¹Ibid., p. 154.

⁴²The Sage Foundation gave \$222,700 to the Charities Publication Committee for the publication of Charities and the Commons in 1907, which was to be renewed annually. Charities became The Survey: A Journal of Constructive Philanthropy in April 1909. The title change came as a result of the Pittsburgh Survey undertaken by the Charities Publication Committee and the Russell Sage Foundation. Paul Kellogg edited the results of the Survey, published in six volumes.

⁴³"The Russell Sage Foundation: Its Social Value and Importance," Charities, p. 1083.

⁴⁴"The Russell Sage Foundation...Social Value,...," p. 1083.

⁴⁵Jacob A. Riis, "One Thing the Sage Foundation can do for New York," Charities, p. 70.

⁴⁶This circle of intellectuals originated the "Wisconsin Idea", as it became known. It arose from the establishment of the new School of Economics, Political Science, and History under the direction of Edward Alsworth Ross, Edwin R.A. Seligman, and Frederick Jackson Turner, among others. They formed a coalition during the governorship of Robert M. LaFollette. They lobbied to form a politically and intellectually effective source of information, advice, and training known as the "LaFollette Brain-Trust". Their intention was, in part, to increase the political status of the university, particularly on a statewide level.

⁴⁷"What University Men Think of the Russell Sage Foundation," Charities, p. 186.

⁴⁸Ibid., p. 190.

⁴⁹Ibid., p. 191.

⁵⁰Glenn, et. al., Russell Sage Foundation, Volume.1, p. 53.

⁵¹"The Pittsburgh Survey: An Announcement," Charities and the Commons, Volume 19, no. 23 (March 7, 1908), p. 1668. This was the first city-wide survey of social conditions, establishing the term 'survey' within social workers' methods. The survey attracted national interest and influenced the formation of the first National Conference on City Planning (1909), and the National Housing Organization (1910). The Russell Sage Foundation designated nearly three-thousand dollars to the Housing Organization (1910). New York's members

included Grosvenor Atterbury, Alfred T. White, I.N. Phelps Stokes, and honorary members Charles W. Eliot, E.R.L. Gould, Frederick Law Olmsted, Jr., Henry Phipps, Jacob A. Riis, Mrs. Russell Sage, Jane Addams, and Charles P. Taft. From Lawrence Veiller, "The National Housing Association," The Survey, Volume 23, (March 1910), p. 841.

⁵²Glenn, et. al., Russell Sage Foundation, Volume 1, p. 34. Atterbury initially received \$32,000 to continue his building experiments.

⁵³"Mrs. Russell Sage in Jamaica Project: Interested with Others in Creating Big Community of Model Tenements," New York Times, March 7, 1909, p. 13, col. 2. The Time's account of the land purchase did not include the names of the co-partners in the venture, nor were the details of the price and plans released. The article questioned whether it "would be strictly accurate to state positively that model tenements are to be erected." Spokesman for the group, Robert de Forest stated that he did not know the number or size of tenements to be built, but they were "not to be patterned after those in America,...but are to be like those seen abroad, in England." The article's mystery was furthered by the statement that it was believed that model tenements were a preliminary experiment towards the erection of many model houses in other districts.

⁵⁴"Between 1899 and 1913 in New York and its five boroughs, for example, the assessed value of real estate increased 207 percent. Rough estimates were that out of a total investment of \$150 million for the entire building construction activity in the city, \$100 million of this amount went into the construction of tenements and small houses." From M. Christine Boyer, Dreaming the Rational City, (Cambridge: MIT Press, 1983), p. 97

⁵⁵Carl W. Condit, The Pioneer Stage of Railroad Electrification, (Philadelphia: The American Philosophical Society, 1977), pp. 32-34. Additional factors in the growth of Queens were the opening of the Steinway Tunnel in 1907, the Queensboro Bridge in 1909, and the Long Island Railroad Tunnels in 1910.

⁵⁶Sage Foundation Homes Company, "Forest Hills Gardens; Preliminary Information for Buyers," No. 2 (New York: Homes Company, 1912), p. 4.

⁵⁷William E. Harmon was said to have originated the "first practical method of distributing real estate through small initial payments, by giving a bond for a deed instead of a deed with mortgage, thus, saving foreclosure costs in

case of default of payment. His company, Wood Harmon and Company, developed suburban property in 26 cities, concentrating in New York. Who Was Who in America, 1897, p. 521.

⁵⁸Robert Stern, "The Anglo-American Suburb," Architectural Design, Volume 51 (1981), p. 39.

⁵⁹"Suburban Homes for Fifteen-Dollar Clerks," Editorial New York Times, August 5, 1909, p. 6, col. 4.

⁶⁰A.C. Pleydell, "The Sage Model Suburb: Thinks it can do Nothing Toward Solving the Congestion Problem," New York Times, August 7, 1909, p. 6, col. 4.

⁶¹"Mrs. Sage's Model Suburb Again," Editorial New York Times, August 7, 1909, p. 6, col. 4.

⁶²The Sage Homes Company claimed in its early publicity that the commuter would pay \$6.80 per month, (a round-trip ticket being 45¢). Providing a clerk earned \$15 a week as the editorial suggested, such fares would use up a little over ten percent of his monthly income. From Sage Foundation Homes Company, "Forest Hills Gardens; Preliminary Information for Buyers", (New York: Homes Company), 1912, p. 4.

⁶³"Garden City Platted by Russell Sage Foundation," The Survey, Volume 25 (November 1910), p. 309.

⁶⁴"Suburban Homes for Fifteen-Dollar Clerks," p. 6, col. 4.

⁶⁵"Artistic Home Community at Forest Hills Gardens," New York Times, December 4, 1910, Section 6, p. 11, col. 3.

⁶⁶Noteable examples of company towns (or industrial villages) were Lowell, Massachusetts and Pullman, Illinois. Lowell was planned by Kirt Boott to house the textile workers of the Boston Manufacturing Company, on the banks of the Merrimack River (1822). The company wanted to provide an ideal environment for its female workers; including neat housing, religious facilities, and recreational space.

Pullman was designed by architect Solon Spencer Beman and landscape architect Nathan F. Barrett. It was also intended as an ideal working and living environment, with housing located around a green belt and the Pullman factory. The company monopolized the housing and commercial buildings through rent control, which stirred up a violent strike in 1894. The memory of this event was probably vivid enough in

⁷⁷Russell Sage Foundation, Regional Survey of New York, (New York: Russell Sage Foundation, 1929), pp. 132-136.

⁷⁸Atterbury, et. al., "Forest Hills Gardens," p. 580.

⁷⁹Sage Foundation, Regional Survey, p. 132. Zoning stemmed from the efforts of German municipalities, which after 1900 employed it as a means of coping with the expansion of the medieval town. Districts were divided into residential, industrial, commercial and mixed use. Zoning stabilized property values and protected against incompatible land use. It was a popular idea amongst American planners during the period of Progressivism, because it provided a logical and comprehensive control over the city plan. It allowed them to control building heights, lot widths, and the type of buildings erected.

⁸⁰Sage Foundation Homes Company, "Preliminary Information for Buyers," p. 17. For example, for a detached or semi-detached house, four to five times the value of a twenty foot lot in the immediate neighborhood; and for houses in blocks, from three to four times the value of a twenty foot lot.

⁸¹Russell Sage Foundation, Regional Survey, p. 134.

⁸²Ebenezer Howard, Garden Cities of Tomorrow, pp. 63-67.

⁸³Sage Foundation Homes Company, "Preliminary Information," pp. 14-15.

⁸⁴Grosvenor Atterbury, "Model Towns," p. 26.

⁸⁵Russell Sage Foundation, Regional Survey, p. 132. Restriction five also directed that a copy of the plans was to be retained by the Homes Company.

⁸⁶Sage Foundation Homes Company, "Preliminary Information," pp. 18-19.

⁸⁷Atterbury, et. al., "Forest Hills Gardens," p. 567.

⁸⁸Atterbury, "Model Towns," pp. 21-22.

⁸⁹Frederick Law Olmsted, Jr., "City Planning and Housing," Housing Problems in America, Proc. of the First National Conference on Housing, (New York, 1911), p. 38.

⁹⁰Russell Sage Foundation, Regional Survey, p. 133. Restrictions seven and eight dealt with the maximum space at the sides of dwellings, and the maximum width of a building, respectively.

⁹¹The English Arts and Crafts designers, Barry Parker and Raymond Unwin, began early in their careers to rearrange traditional planning schemes, as well as to reform architecture according to Arts and Crafts values. The Art of Building a Home, which they wrote in 1901, included a "Plan for a Hamlet" in which the houses were clustered and alternated (i.e. serried) on the lots, surrounding a village green. The scheme reflected their commitment to the Arts and Crafts, as they were attempting to create town plans which evoked the character of the medieval village. They wrote that:

The village was the expression of a small corporate life in which all the different units were personally in touch with each other, conscious of and frankly accepting their relations, and on the whole content with them. (p. 51)

"Artistically, the success of the plan," they wrote, "would depend largely on the clustering of the buildings, the avoidance of mere rows on one hand and of detached villas on the other." (p. 53).

One of the central reforms, they and other Arts and Crafts architects worked for was to make the house more healthful and sunny. The serried plan, was in this sense, designed to take full advantage of sunlight and air. In their 1902 essay "Cottage Plans and Common Sense", they wrote:

But a sufficiency of air may be regarded as an acknowledged first condition for every decent house. The necessity for sunshine has still to receive the same public recognition...The essential thing is that every house should turn its face to the sun, whence come light, sweetness, and health. (p. 55)

All quoted in The Legacy of Raymond Unwin, Walter L. Creese, Editor. (Cambridge: MIT Press, 1967).

⁹²Billerica Garden Suburb (1914), near Boston, was described by its planner and landscape architect Arthur Comey as "scientific planning along advanced garden suburb lines." From Arthur Comey, "Plans for an American Garden Suburb," The American City, Volume 2 (July 1914), p. 37.

⁹³"Sage Foundation Plans Disclosed," New York Times September 4, 1911, p. 7, col. 5.

⁹⁴According to architectural critics such as Montgomery Schuyler and Herbert Croly, uniform architecture and simpler ornamentation should be primary elements of the modern suburb. The styles of the Victorian period were no longer considered appropriate for the suburb because they were not pleasing en masse, and expressed what Croly called "rampant individualism." Croly wrote that:

From 1885 until 1895 the great majority of suburban houses were built in what was known as the 'Queen Anne' style; and surely no style was ever invented which lent itself more to the freakish and meaningless eccentricities which are as utterly out of place in rural as they are in every other kind of architecture.

Croly concluded that buildings were least successful when they were most original in design. From Herbert Croly, "The Contemporary Suburban Residence," The Architectural Record, Volume 11 (January 1902), pp. 79-80.

Montgomery Schuyler, writing about the New York suburb New Rochelle (1885), criticized both its grid plan and the nature of its architecture. In the business block, he said, "Instead of comity, we have disputatiousness, instead of sociability, rampant individualism, in a word, the height of unneighborliness substituted for the state of brethren dwelling in unity...Open contempt for the neighbors is what they all exhibit." From Montgomery Schuyler, "Study of a New York Suburb," Architectural Record, Volume 25 (April 1909), p. 237.

The Lawrence Park development in Bronxville (1892), received a favorable review from Theodore R. Tuttle, in part, because "...there was a strong element of uniformity of style amongst the houses." That stylistic uniformity reflected the fact that "the park is a colony, or self-contained community of artists, 'men of letter', and architects." Tuttle also admired Lawrence Park because of its ambience of the English village. From Theodore R. Tuttle, "A Picturesque American Suburb," Architectural Record, Volume 17 (September 1904), p. 174.

⁹⁵"Sage Foundation Plans Disclosed," Times, p. 7, col. 5.

⁹⁶Sage Foundation Homes Company, "Preliminary Information," p. 3.

⁹⁷"Sage Foundation Plans Disclosed," p. 7, col. 5.

⁹⁸"'Forest Hills' is Long Story; Frederick D. Backus Begins it with Homely Memoirs of 75 Years in this Neighborhood," Forest Hills-Kew Gardens Post, October 10, 1935, p. 1,

col. 2. The Cord Meyer Development was composed of three farms owned by Cord Meyer, Springsteen, and Ascan Backus, totalling a square mile of land. Cord Meyer (1854-1910) was a financier and industrialist who hoped to develop his Long Island property, then called "Newtown". Instead, he sold it to the Sage Foundation. Additional land was later acquired, making the Gardens a total of 175 acres.

Cord Meyer developed the nearby town of Elmhurst with his four sons. Meyer set forth three conditions in the sales agreement with the Sage Foundation for the land. They were: one, that Continental and Ascan Avenues be kept open perpetually to traffic; two, that Ascan Avenue be named after Backus' son Ascan; and three, that Roman Avenue be named after John D. Roman, a clerk in Meyer's office.

⁹⁹Frederick Law Olmsted, Sr., (1822-1903), was born in Hartford, Connecticut. His early career was devoted to farming, travel, and writing. In England, he was impressed with Birkenhead and other English residential parks. Olmsted's commitment to social and democratic reform of the urban environment, became the basis of his design work. Such was the case with Central Park, designed in collaboration with Calvert Vaux in 1858. Olmsted's later commissions were for the Boston Park System, (1870-1880's); Biltmore, (1888); the plan for the World's Columbian Exposition, (1893); and Riverside Suburb, (1869). Olmsted was forced to retire in 1895 due to his health. The firm continued under his stepson John Charles Olmsted, and in 1898 Frederick, Jr. joined the firm.

¹⁰⁰Eighteenth century interest in the landscape was manifested in poetry, literature, and painting. Individuals such as Joseph Addison highlighted the romantic beauty of nature and its emotional power. William Gilpin and Uvedale Price attempted to define the picturesque and the beautiful in their writings. Designs of the period such as William Kent's for Rousham, (ca. 1735), reflected the belief that the landscape could cultivate feeling and learning through classical allusions. Later, Capability Brown and Humphrey Repton established the English landscape tradition through their designs and writings. Both sought to recognize the inherent beauty, or 'genus loci' of a site, which they fully exploited in the design. Repton's work and books such as Sketches and Hints on Landscape Gardening (1795), were important in American landscape architecture. Andrew Jackson Downing and Frederick Law Olmsted, Sr., and Calvert Vaux were all influenced by Repton.

¹⁰¹Alexander Jackson Downing, Cottage Residences, Rural Architecture and Landscape Gardening, (Watkins Glen: Century House, 1967), p. 341.

¹⁰²Albert Fein, Frederick Law Olmsted and the American Tradition, (New York: George Braziller, 1972), p. 35.

¹⁰³The Chicago architect William Le Baron Jenny (1832-1907), was responsible for the design of the 108-foot water tower at Riverside, as well as the hotel and many of the houses. He lived in Riverside and was a stockholder.

¹⁰⁴Raymond Unwin was widely recognized as a supporter of the garden city because of his writings and design for Hampstead Garden Suburb and Letchworth Garden City. All of his works were published in America. Town Planning in Practice became a standard work for American students of town planning and was reprinted numerous times, as well as translated into German, French, and Russian. International exchange between advocates of garden city planning took place at Town Planning & Housing Conferences, and meetings of the Garden City Association. Unwin was close friends with the American planners John Nolen and Arthur Comey. He was probably acquainted with Olmsted and Atterbury as a result of attending the National Conference on City Planning in 1911. At the city planning conference the year before, Olmsted claimed in his introductory address that Unwin's book Town Planning was both "admirable and inspiring". (From Proc. of the Second National Conference on City Planning, Cambridge: University Press, 1910, p. 30).

Also attending the 1911 conference was the English landscape architect Thomas Mawson. He wrote a number of books on city planning including The Art and Craft of Garden Making, and Civic Art; Studies in Town Planning, Parks, Boulevards, and Open Spaces, (1911). Both gained him a following in America. In his 1927 autobiography, Mawson described his 1910 tour to America, where he lectured on landscape architecture and town planning. His topics included "recent model garden cities," "model suburbs and villages and housing of the industrial classes." During his visit he stayed with the Olmsted family in Brookline, Mass. He wrote of Olmsted:

I had long corresponded with Mr. Olmstead (sic) and his brother John, for whose attainments and traditions I had profound regard...The Professor Olmstead was popular with both students and tutors was very evident; and I do not wonder, for his is one of those rare personalities which carry with them an atmosphere of enthusiasm for whatever they espouse. In addition to a vast fund of practical experience, he combines great power of clarified expression and the direct initiative qualities which are always dear to the student.

From Thomas Mawson, The Life and Work of an English Landscape Architect, (New York: Charles Scribner's Sons, 1927), p. 163.

¹⁰⁵Charles C. May, "Forest Hills Gardens from a Town Planning Viewpoint," Architecture, Volume 34, (1916), p. 163.

¹⁰⁶Frederick Law Olmsted, "The Scope and Result of City Planning in Europe," The Survey, Volume 22 (1909), pp. 498-501.

¹⁰⁷Atterbury, et. al., "Forest Hills Gardens," p. 569.

¹⁰⁸Ibid., p. 569.

¹⁰⁹"Forest Hills Gardens the Settlement Established by the Foundation," Editorial New York Times, November 25, 1910, p. 10, col. 6.

¹¹⁰Atterbury, et. al., p. 569.

¹¹¹Clarence Arthur Perry, "Statement Before the Neighborhood Planning Committee for Forest Hills and Vicinity," Unpublished Material, March 10, 1936. Perry's statement gave the following figures:

Of the original 142 acres purchased by the Company, space was distributed in the following way:

2,000 lots	82 acres
6 1/4 miles streets	45 acres
Parks	<u>5 acres</u>
	142 acres

¹¹²The rond-point was a feature commonly used by the French Landscape Gardening School of Le Nôtre. In urban planning, it was employed in combination with the crescent, as seen in the design for the Circus (1743), and Royal Crescent (1767-1775) at Bath, England; designed by John Wood I and II.

¹¹³Sage Foundation Homes Company, Preliminary Information for Buyers, p. 7.

¹¹⁴No title, Long Island Press, May 22, 1968, p. 1, col. 1.

¹¹⁵Ibid., p. 1, col. 1. At one time there were fourteen gardeners retained by the Forest Hills Gardens Corporation. In addition, homeowners were given landscape plans for their lots which they were supposed to follow, thus complying with the overall landscaping plan in the Gardens.

¹¹⁶Olmsted, Sr. achieved the same effect at Riverside by planting ivy and wisteria. He felt buildings which were half overgrown with vines had a more pronounced rustic character. The Olmsted homestead in Brookline was similarly covered in vegetation to merge the house with nature.

¹¹⁷William Merritt Chase (1849-1916), began the Shinnecock Hills Art School in 1891, which attracted both artists and residents from the surrounding area. Many sat in on Chase's lectures and critiques. The students lived in an "Art Village" composed of small, architect-designed houses. Chase's shingle style house was probably designed by Stanford White (ca. 1892). The classes were loosely structured; students spent much of their time painting and sketching scenes in the landscape. Chase conveyed to his students his love for the flat and barren sanddunes, and the voluminous clouds which characterize his paintings. These qualities may be seen in some of Atterbury's architectural renderings, for example, the Shinnecock Hills Chapel (fig. 36). Among the graduates of the Art School were Joseph Stella and Rockwell Kent.

¹¹⁸Donald Harris Dwyer, Dictionary of American Biography 1956-1960, (New York: Scribner's Sons), p. 26.

¹¹⁹A study of Beaux-Arts trained architects who designed houses on Long Island is found in Liisa and Donald Scläre's Beaux-Arts Estates: A Guide to the Architecture of Long Island, (New York: Viking Press, 1980). The emphasis of the Beaux-Arts education was on abstract principles of design and planning, allowing for the free use of historical styles. The region of Southampton and Shinnecock Hills was developed in the 1880's and 90's, later than the west end of the island. For this reason, house styles reflect a later stage in the eclectic evolution. Shingle Style and Colonial Revival became the dominant styles in this area. McKim, Mead & White were eminent practitioners of both styles. They designed the Shinnecock Hills Golf Club (1895); the Colonial Revival James L. Breese Estate in Southampton (1891 & 1906), which incorporated the original farmhouse; and the Association Houses at Montauk Point (1882-84).

¹²⁰John Taylor Boyd, "Personality in Architecture; Eighth Interview in a Series with Grosvenor Atterbury," Arts and Decoration, Volume 32 (April 1930), p. 92.

¹²¹"The Theory of Grosvenor Atterbury, who bases all his work upon the principle that originality in architecture springs only from the direct meeting of material conditions," The Craftsman, Volume 16 (1909), p. 311.

¹²²Craig Gilborn, Durant: The Fortunes and Woodland Camps of a Family in the Adirondacks, (Sylvan Beach, New York: North Country Books, 1984), pp. 100-101.

¹²³The lodge was destroyed by fire in 1930.

¹²⁴C. Matlack Price compared the house to Compton Wingates in England, claiming that Atterbury,

...has done more to popularize the country house of this general type than any other contemporary architect, for the reason that his houses are not merely picturesque, but being designed primarily to meet certain conditions, are picturesque and liveable as well.

From C. Matlack Price, Arts and Decoration, Volume 14 (March 1912), p. 178.

¹²⁵Grosvenor Atterbury, Bricks Without Brains; A Challenge to Science and the Factory-Made House, (New York: Scribner, 1936), p. 193.

¹²⁶Those architects who supported the Arts and Crafts Movement and the role of the machine, did so with the hope that the machine would make their house and furniture designs available to the masses. Gustav Stickley's career was a case in point. He designed homes and furniture in a simplified and economic fashion which would lend itself to machine-based production. The California architect Irving Gill employed a system of tilt-slab concrete construction. This system was conducive to the flat, planar surfaces of the California Mission style, an aesthetic which Gill felt evoked historical and romantic meaning. The implications of the machine in design production were positive, according to Frank Lloyd Wright. His speech "The Art and Craft of the Machine," delivered in 1901, embodied the American version of the Arts and Crafts. The machine, wisely employed, could make well-designed objects widely available. Wright stated that,

What printing--the machine--has done for architecture --the fine art--will have been done in measure of time for all art immediately fashioned upon the early handicraft ideal.

From Frank Lloyd Wright, Writings and Buildings, Editor Edgar Kaufmann and Ben Raeburn, (New York: Meridian Books, 1960), p. 57.

Grosvenor Atterbury shared Wright's positive attitude towards the machine, believing that it was emblematic of a democracy. Atterbury, however, could not divorce himself from traditional

forms. In fact, he viewed Wright's Prairie School houses as the work of an "exhibitionist". (From Donald Harris Dwyer, Dictionary of American Biography 1956-1960, New York: Charles Scribner's Sons, p. 27).

¹²⁷Samuel Howe, "Town Planning on a Large Scale," The House Beautiful, Volume 36 (October 1914), p. 136.

¹²⁸A semi-detached house had one party wall and one detached wall. Not all of the ten groups were constructed with precast concrete. Some were built from a combination of hollow tile block and brick, and therefore, still fairly fireproof.

¹²⁹John Almy Tompkins II began practicing architecture in 1895. He was born in Baltimore and received his architectural training at Columbia University. Tompkins and Atterbury were members of the Architectural Society of Digressionists, an obscure club begun in 1906 by twenty-four men, predominantly architects. Its members included Henry Hornbostel, A.G. Trowbridge, and Howard Van B. Magonigle.) The club was intended to be social and to provide a forum for the architects to exhibit their painting, sketching, and other talents. Among the entries for the Sixth Exhibition Dinner of 1912, was a sketch by Tompkins. The subject was a large hall replete with Arts and Crafts details such as casement windows, plate rail, stone walls, and a low-beamed ceiling.

Tompkins seems to have lived the life of an Arts and Crafts aesthete. He lived in Forest Hills Gardens on Deepdene Road in a garage which he converted into a small house resembling an English cottage. He had intended to build a house overlooking Olivia Park on the same site, but never did. His house was filled with stained glass, small leaded windows, and his own wood carvings. His experience in watercolors suggests that he may have executed a number of the architectural renderings for the Gardens. From Forest Hills-Kew Gardens Post, Volume 7 (May 1931), pp. 1-5.

Stowe Phelps began architectural practice in New York in 1894, (his dates are unknown).

¹³⁰Other materials used for the aggregate mixture were spar, quartz, and crushed particles of mica. Louis Graves visited the Gardens during construction and commented on the process of making the aggregate:

For example the architects may decide upon a reddish stucco for a certain group of houses. Then follow a series of experiments to determine just what proportion of chipped tile ought to be used, how big the chips should be to give the most satisfying effect,

and to what extent the mixture ought to be treated with acid to bring out the rich coloring. The stucco is not used in a dwelling unit until it is just right.

From Louis Graves, "A 'Model Village' Under Way," Building Progress, Volume 2 (January 1912), p. 20.

¹³¹W.F. Anderson, "Forest Hills Gardens--Building Construction," The Brickbuilder, Volume 21 (December 1912), p. 320.

¹³²Atterbury's long friendship with the artist Albert Herter (1871-1950) might have influenced his use of color in the Gardens. Atterbury shared living quarters with Herter and his wife when they were students in Paris, and he later designed a house for them in East Hampton, L.I. (1899). The house was large and sprawling, based on a butterfly-type plan with octagonal shaped living and dining rooms. Herter gained an early reputation for his painting, but also designed magazine covers, stage settings, tapestries, curtains, furniture, coverings and rugs. Atterbury was said to have used some of 'Herter's very expensive materials in his work'. Herter was also a member of the New York Architectural League and was a frequent contributor to its yearbook. Herter was the creator of a bluish-green color called "Herter Blue" which might be that used in Forest Hills Gardens. From a letter from Astelle Atterbury, October 26, 1983.

¹³³All of the buildings in Station Square are fireproof, constructed of steel reinforcing rods, concrete foundation walls, terra cotta block, and brick facing. The tower has a steel skeleton. The two depots cost a total of \$50,000 to construct, \$10,000 of which was furnished by the Long Island Railroad Company. From a "Statement by Clarence Perry Before the Neighborhood Planning Committee," March 10, 1936, p. 2.

¹³⁴Samuel Howe, "Forest Hills Gardens," American Architect, Volume 102 (October 1912), p. 155. And from Louis Graves, "Model Village", p. 20.

¹³⁵The houses included in Group II were tightly planned. The corner houses incorporated the towers as parlor spaces within a scheme which was interesting but probably awkward. As a result, kitchen space has since been added to the rear of most of the units within the Group.

¹³⁶Group III was the first group of attached houses built in pre-cast concrete. The concrete is exposed on the first story up to the level of the belt-course. The homes in Group III each had seven to nine rooms, Group IV had five room

houses, and Group V, six to eight room houses.

¹³⁷The use of the term 'terrace' is interesting, for it might refer either to the architectural type of Group IV-A and B, or a type of landscape design which incorporates architecture. It is likely that the designers, especially Olmsted, used the term for its connotation of a traditional landscape form; considering the central role of landscape design in the Gardens, as well as his attempt to merge architecture with the landscape. The appropriate definition for terrace in this case, might be a narrow strip of landscape earth in the middle of a street which has a section of row houses on one or both sides. In addition, the end houses of the Group had terraces in front of them.

The broad meaning of this term was evident in the description of Groups VI-A and B found in the Forest Hills Gardens Bulletin, "The charm of the Terraces lies in the picturesque architectural detail and the beautiful foliage of of the terraced lawns." Forest Hills Gardens Bulletin, Volume 4, no. 19 (May 13, 1919), p. 1.

Defined in architectural terms, these buildings could be considered terrace houses because of their overall sense of unity, and accentuation of the ends and center. The terrace, however, is more commonly thought to be an urban building type, which was frequently designed in a classical vein and at a palatial scale. Particularly in England, identical plans and controlled facades characterized terrace houses. It is conceivable that Atterbury influenced the terminology, hoping to convey the idea that the Greenways would continue the semi-urban character of Station Square into the adjacent residential area. For a comprehensive treatment of the terrace house in England, see Stefan Muthesius, The English Terraced House, (New Haven: Yale University Press, 1982).

¹³⁸Quadrangles were composed of four and five houses. This planning type recalled the collegiate planning of Gothic England, where the quadrangle expressed the collectivity of the academic community. Raymond Unwin and M.H. Baillie-Scott employed the quadrangle in English garden suburbs to convey the same notion of enclosure and protection which they associated with medieval planning.

¹³⁹The 'butterfly plan' was frequently used by Arts and Crafts architects in the late nineteenth century and early twentieth century in England. Some examples of the butterfly plan were: C.F.A. Voysey, (C. Voysey House in Hampstead, 1895); Edwin Lutyens, (Papillon Court, 1903); and Herman Muthesius, (House at Nikolasse, Berlin, 1907). Atterbury might have been familiar with any of these, or with Baillie-Scott's designs which were published in a 1910 book Garden Suburbs,

Town Planning and Modern Architecture, (London: T. Fisher Unwin). Group XII was remarkably similar to Scott's design for multiple corner houses in Hampstead. Scott intended to place similar butterfly plans on both sides of Meadway. Atterbury's design is most like Scott's group for the right side, where one enters at the side of the house rather than the central axis (i.e. juncture). Also similar is the manner in which Atterbury pulled the hipped-roof entrance bays forward, on either side of a raised terrace. The three houses in Scott's design were connected and had common courtyards. Atterbury's design, however, reflected the American preference for separate spaces and mobility, as symbolized by four attached garages in the rear.

¹⁴⁰The Robert Harris House has a ground level garage which one entered on the east side. The design for this house was shown in the New York Architectural League Year-book, 1912.

¹⁴¹Mary Eastwood Knevels, "What the Suburban Dweller...", p. 41.

¹⁴²Under Mrs. Sage's direction, the Foundation made large donations to universities for the purpose of training teachers and initiating new programs--especially in the area of social research. Some of the recipients included New York University, the St. Louis School of Social Economy, the Manhattan Trade School, and the Boston School for Social Workers. Russell Sage Foundation, Volume 2, Appendix I.

¹⁴³"The Church-in-the-Gardens at Forest Hills, N.Y.," Architectural Review, Volume 9 (August 1919), p. 37.

¹⁴⁴Lewis Colt Albro (1876-1924) was born in Pittsfield, Massachusetts, and developed an early interest in architecture. He entered New York's Metropolitan Art School at the age of eighteen. The following year he began a nine year career with McKim, Mead & White, where he was associated with the design of the Columbia Library and the Charles Dana Gibson House.

Born in Bergen Point, New Jersey, Harrie T. Lindeberg (1880-1959), was the son of a Swedish-born shipbuilder. Lindeberg also received his architectural training in the office of McKim, Mead & White. After six years with the firm, Lindeberg joined Albro in a partnership. Their work reflected Lindeberg's Scandinavian roots and the strength of the Arts and Crafts Movement there. Lindeberg was the major creative force of the two. See Brian Lee Johnson, "Harrie T. Lindeberg, Architect," M.A. Thesis, Architectural History, 1985. University of Virginia.

¹⁴⁵Harrie T. Lindeberg, "Thatched Roof Effects with Shingles," The Brickbuilder, Volume 18, no. 7 (July 1909), p. 133.

¹⁴⁶Albro & Lindeberg, Domestic Architecture, Published for Private Distribution, New York, 1912, pp. 2-4.

¹⁴⁷The Robinson House was frequently published in conjunction with the Gardens because it successfully captured the ambience of the English house which was widely admired. In 1914, it was awarded second price for domestic design by Country Life in America.

¹⁴⁸The interior had a panelled living room with random-width white oak flooring. Window hardware was imported from England. From Forest Hills Gardens Bulletin, Volume 4 (August 1919), p. 1.

¹⁴⁹Aymar Embury, One Hundred Country Houses, (New York: Century Company, 1909), p. 9.

Embury was born in New York City and received his architectural education at Princeton University. He began practice in New York in 1901. He was known for his college buildings, engineering projects, and bridges, (he was involved in over seventy, including the Triborough, Whitestone, and Henry Hudson). He designed moderately-sized country houses in New York, New Jersey, and Long Island. His house design for a Garden City Competition was a gambrel-roofed house with large end porches. This was shown in the New York Architectural League Yearbook, 1907.

¹⁵⁰Ibid., p. 78.

¹⁵¹Ibid., p. 74.

¹⁵²Ibid., p. 74.

¹⁵³H.W. Frohne, "Recent English Domestic Architecture," Architectural Record, Volume 25 (March 1909), p. 259.

¹⁵⁴Aymar Embury, One Hundred Country Houses, p. 172.

¹⁵⁵Wilson Eyre, American Country Houses of Today, 1913, p. 21. Eyre was an enthusiastic advocate of the Arts and Crafts Movement. He founded the Philadelphia T-Square Club in 1883, and was editor of House and Gardens from 1901 to 1906, in which he frequently featured the work of C.F.A. Voysey.

¹⁵⁶ Eyre might have been influenced by Baillie-Scott's Waterlow Court at Hampstead Garden Suburb in his design for Group XIII. Waterlow was completed the year before and had the same simple, bare plaster finish. The design was published in The British Architect, (July 9, 1909), p. 19; as well as in The Craftsman, (December, 1909).

¹⁵⁷ I have been unable to obtain any further biographical information on Eugene Schoen and J.T. Tubby.

¹⁵⁸ Montgomery Schuyler, "Study of a New York Suburb, New Rochelle," Architectural Record, 25 (April, 1909), p. 246. That Schuyler actually wrote this article is conjecture on the part of Robert M. Stern, in Architectural Design, 51 (1981), p. 30.

¹⁵⁹ Glenn, et. al. Russell Sage Foundation 1907-1946 Volume 1, (New York: Russell Sage Foundation, 1947), p. 11.

¹⁶⁰ Grosvenor Atterbury, "Model Towns in America," p. 35.

¹⁶¹ "What is Forest Hills Gardens Corporation?" (Forest Hills Gardens: Forest Hills Gardens Corporation, 1957), p. 3.

¹⁶² Theatrical productions were often performed by the Garden Players, who put many of their plays on in Olivia Park. "The Happy Stranger: An Allegory of Forest Hills Gardens," was one such production which conveyed an important message to the residents. The play was a metaphorical journey through the Gardens, in which the Stranger encountered characters representing the best features of the Gardens--Station Square, the Inn, the Tea Garden, the Roadways, and the 'People'. These characters, dressed in classic drapes, stars and stripes, and medieval tunics, symbolized the Garden's mission. The suburb was, at once, a medieval village, a Pilgrim settlement, a patriotic community, and a nature reserve. From Forest Hills Gardens Bulletin, Volume.1, no. 22 (15 July, 1966), p. 5, col. 1.

¹⁶³ Russell Sage Foundation, Regional Survey of New York and its Environs, Volume VII: Neighborhood and Community Planning, (New York: Russell Sage Foundation, 1929), p. 94. Clarence Perry based his residential planning theories on his experience of living in Forest Hills Gardens, beginning in 1912. Perry found that the Gardens contained the "essential elements...[which] constituted the main principles of an ideal neighborhood." The provision of special structures (e.g. churches, community house, and parks), enabled close contact among residents, creating the 'face-to-face' neighborhood.

From Clarence Arthur Perry, Housing for the Machine Age,
(New York: Russell Sage Foundation, 1939), pp. 211-212.

¹⁶⁴Frederick Goudy, "Why We Have Chosen Forest Hills Gardens for our Home," (Forest Hills Gardens: Village Press, 1915), p. 2. Frederick William Goudy, (1865-1947) lived in Forest Hills Gardens where he set up the Village Press. He was especially inspired by books published by William Morris' Kelmscott Press. He designed more than one hundred typefaces.

¹⁶⁵Samuel Howe, "Town Planning on a Large Scale," House Beautiful, Volume 36 (October, 1914), p. 135.

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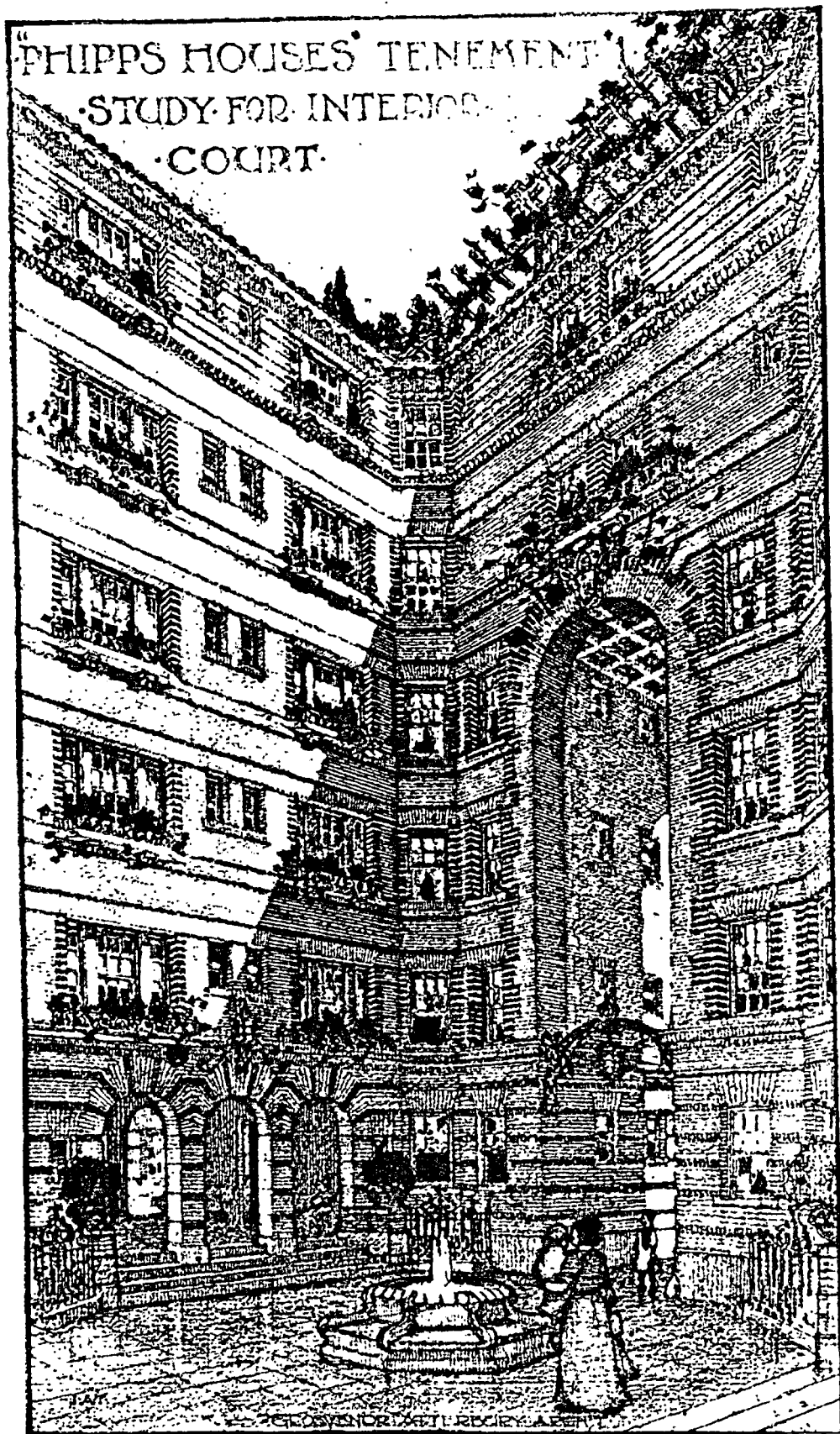


Fig. 2. Phipps Model Tenement, (1904-1906). Architectural rendering by Grosvenor Atterbury.



Fig. 3. Mrs. Margaret Olivia Slocum Sage. From a portrait by Cecilia Beaux.



Fig. 4. Robert Weeks de Forest.



Fig. 5. The Russell Sage Foundation Building. Grosvenor Atterbury, Architect, (1912). Rendering by Atterbury.

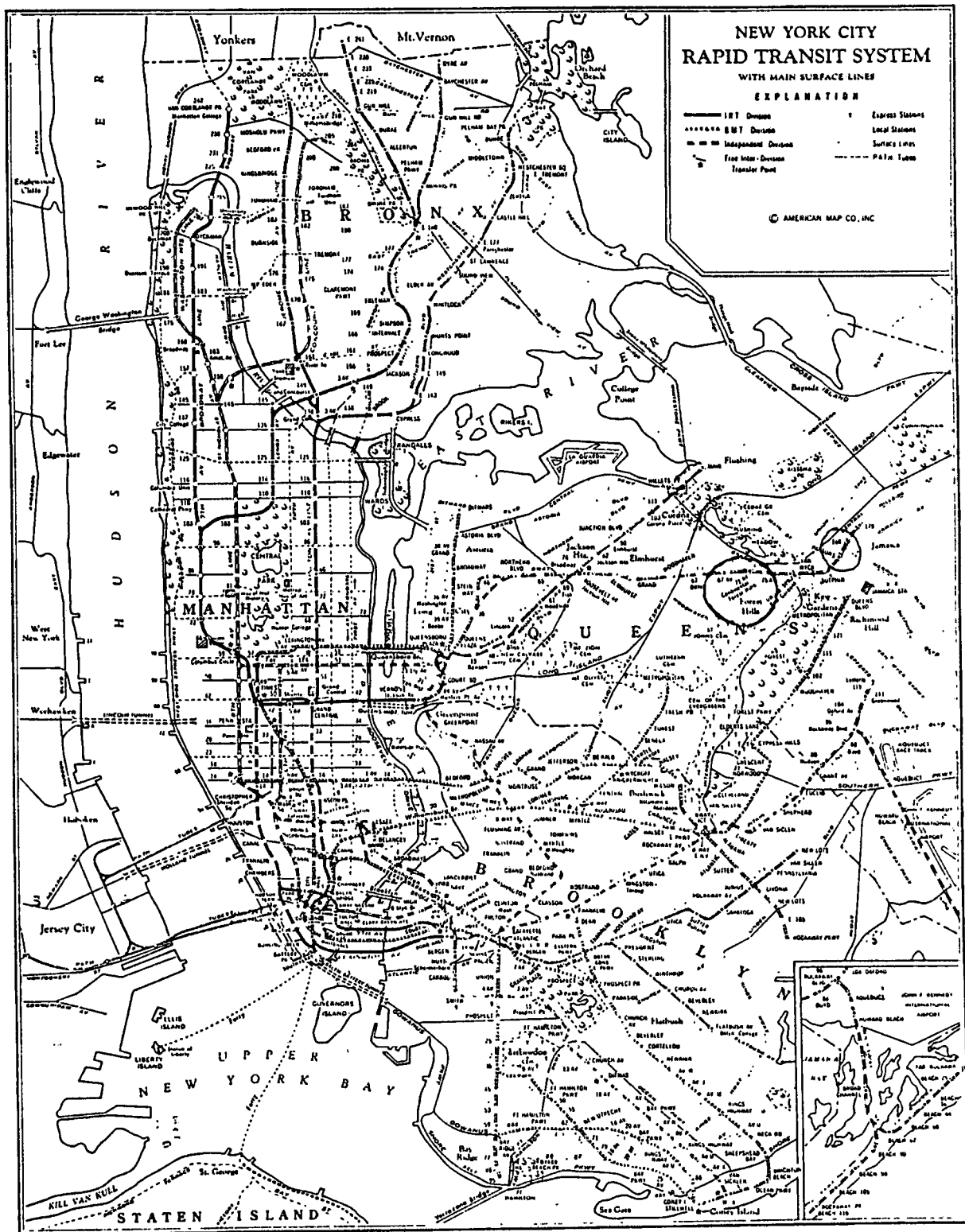


Fig. 6. Rapid Transit Map of New York City. The circled area is the general area of Forest Hills Gardens. The broken line represents the subway line, which has a stop at Forest Hills Gardens and continues on to Jamaica.

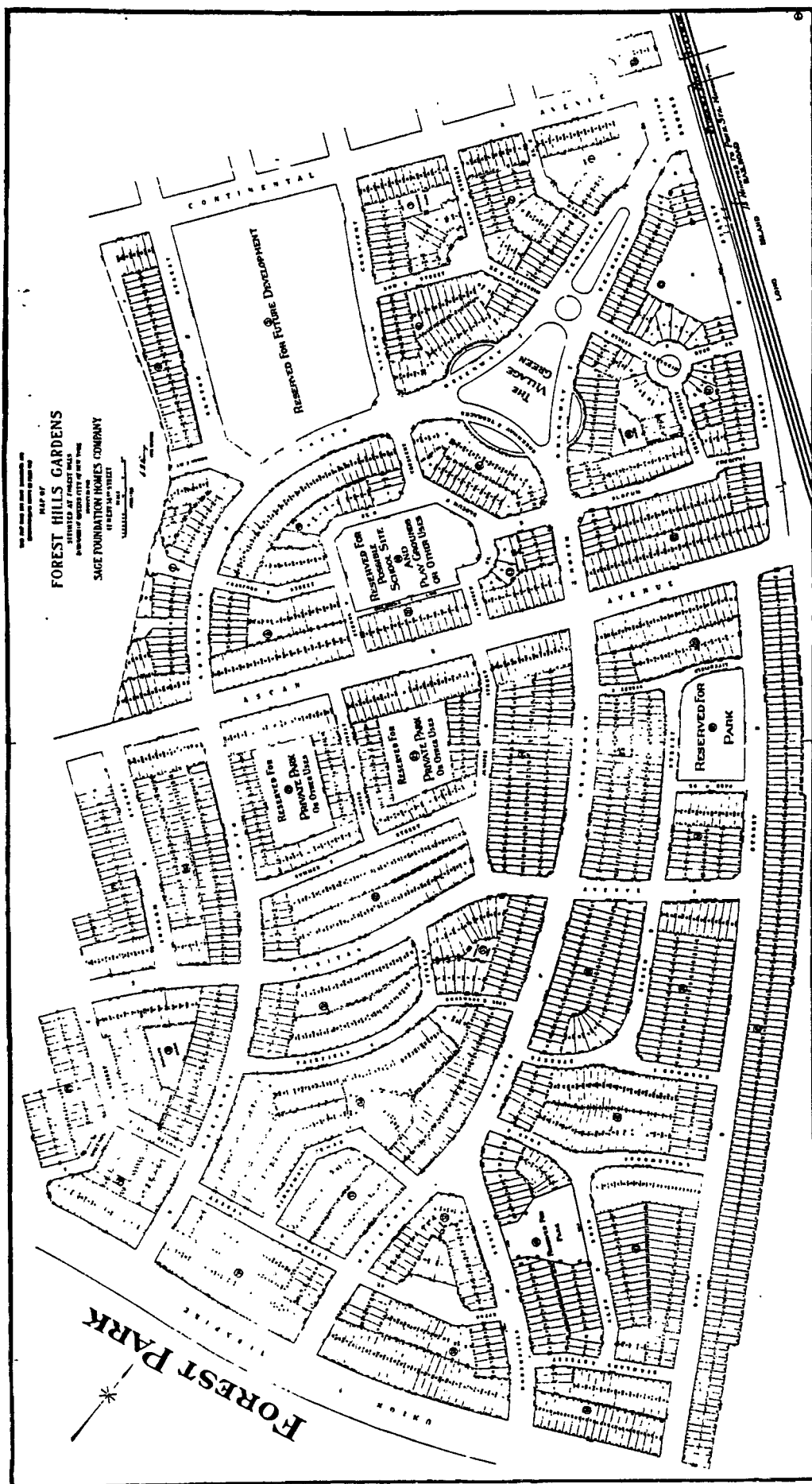


Fig. 7A. Map of Forest Hills Gardens, 1911. This map was provided to potential buyers along with the Sage Foundation's promotional pamphlets. Note in this early scheme the two blocks set aside for private parks (left of center). These were subsequently changed to become Ivy Close and Fairway Close.

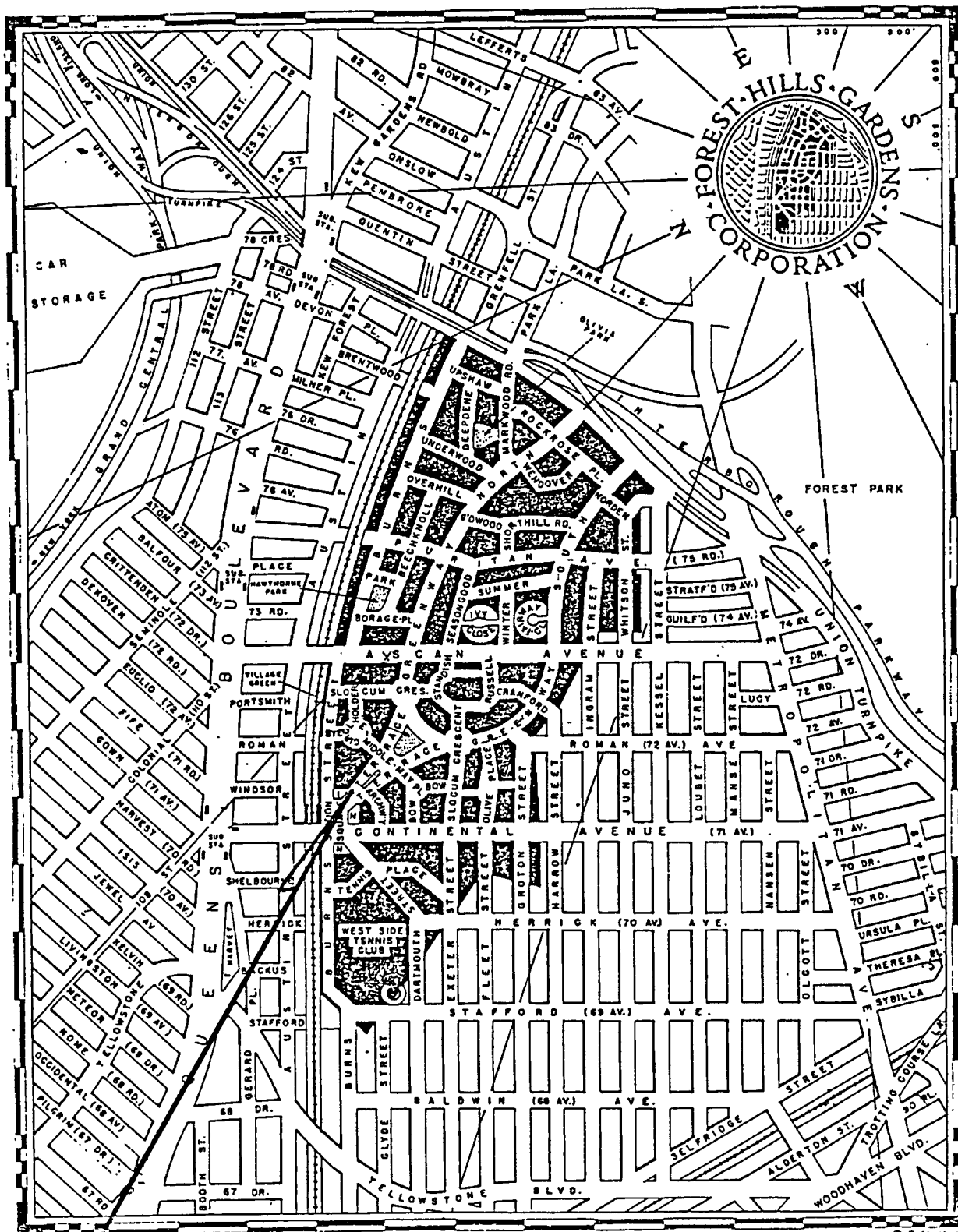


Fig. 7B. Map of Forest Hills Gardens (shaded area). Courtesy of Terrace Realty, Forest Hills Gardens. Note that many of the street names were changed from the 1911 street plan (7A). This also shows the land purchased west of Continental Avenue which is not shown on the 1911 map of the Gardens.

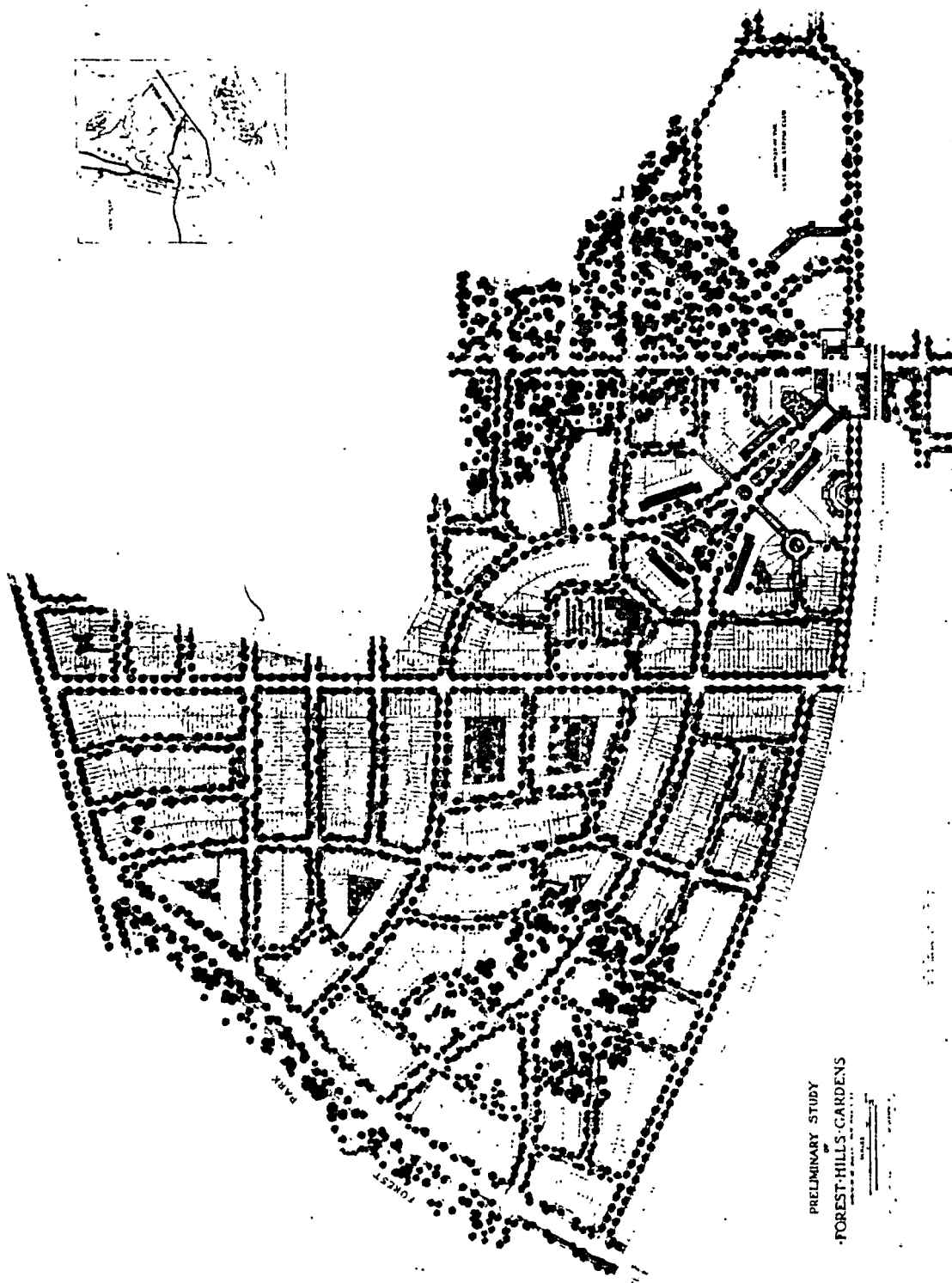


Fig. 8. "Study of the layout of Forest Hills Gardens."



Fig. 9. Frederick Law Olmsted, Jr.

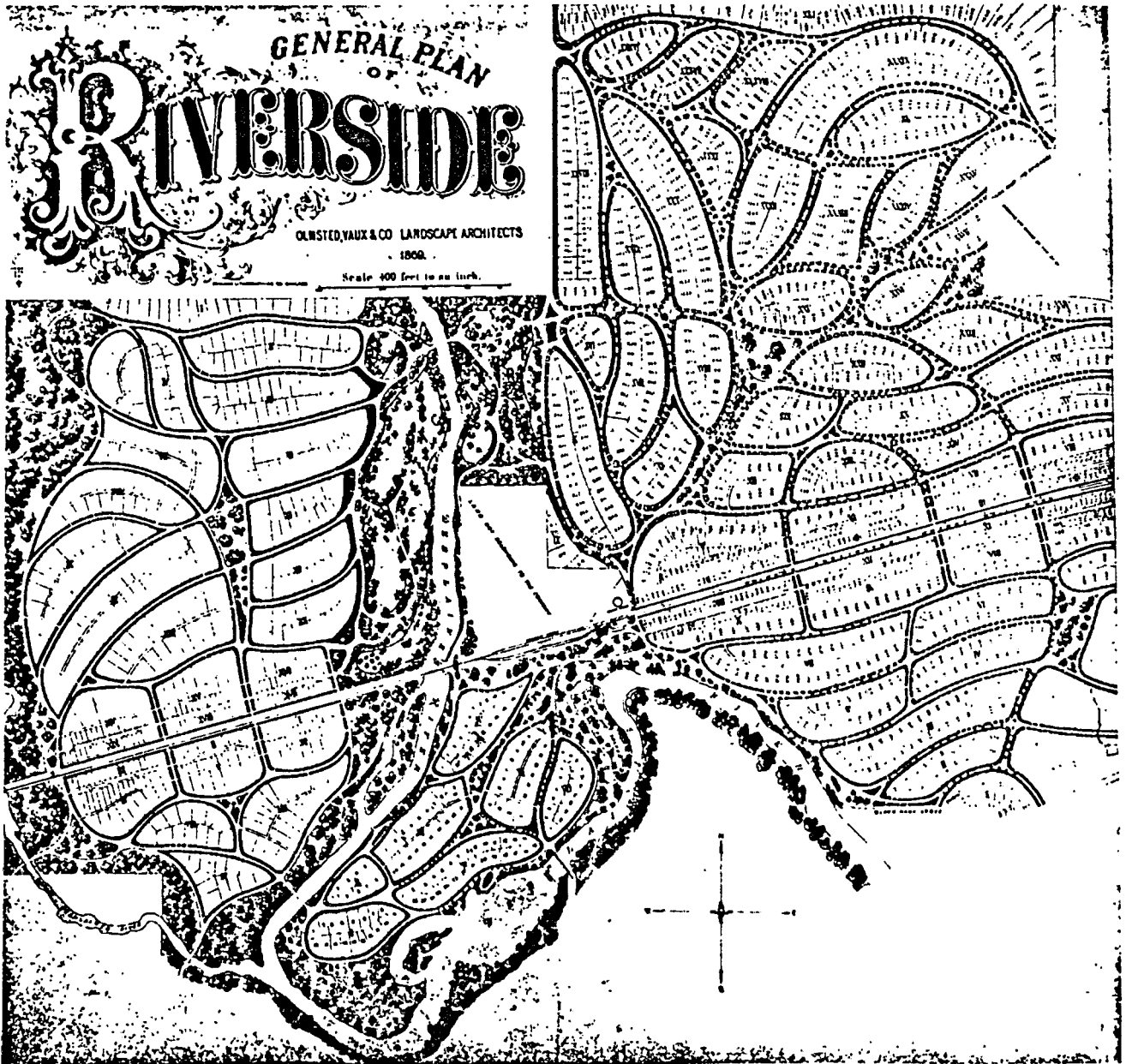


Fig. 10. General Plan of Riverside. Olmsted, Vaux & Company, Landscape Architects, 1869.

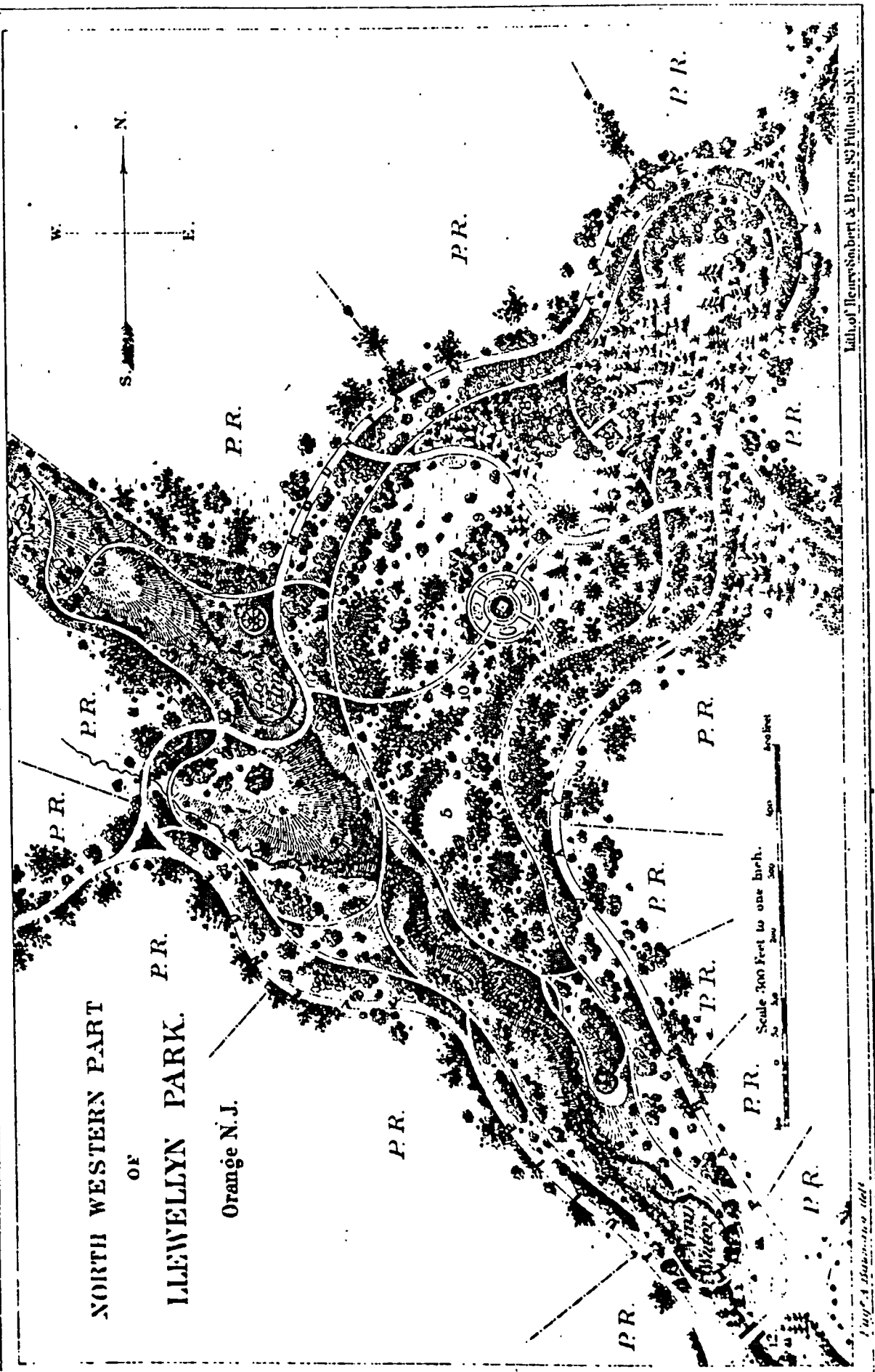


Fig. 11. "Plan of a Portion of Llewellyn Park in Orange, New Jersey: 1859."

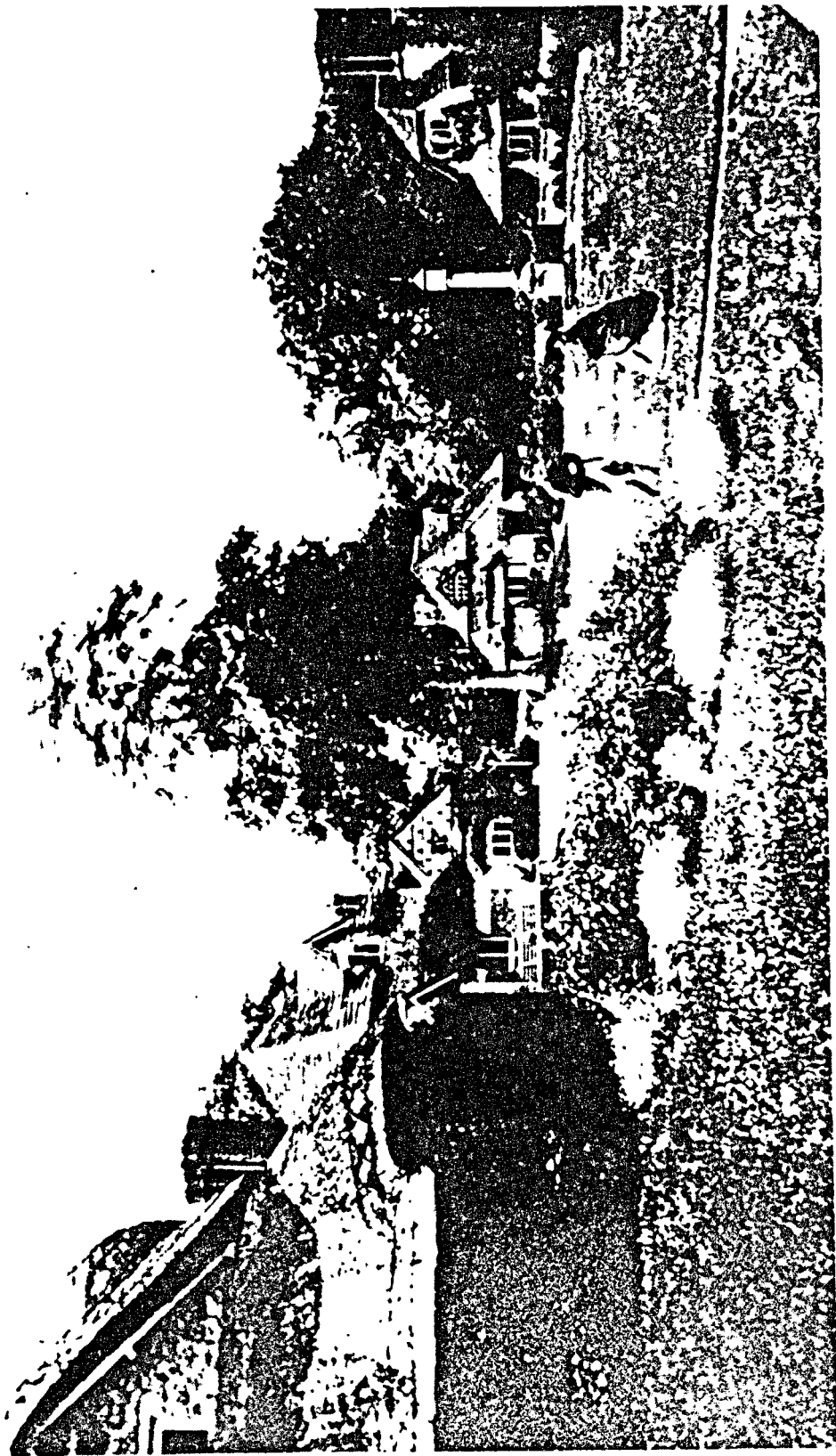


Fig. 12. "Henbury, Blaise Hamlet: an early photograph taken from inside the entrance, with Oak Cottage (left), and Dial Cottage (right). The pump, topped by a weather vane, can be seen. It existed in this form by 1826."

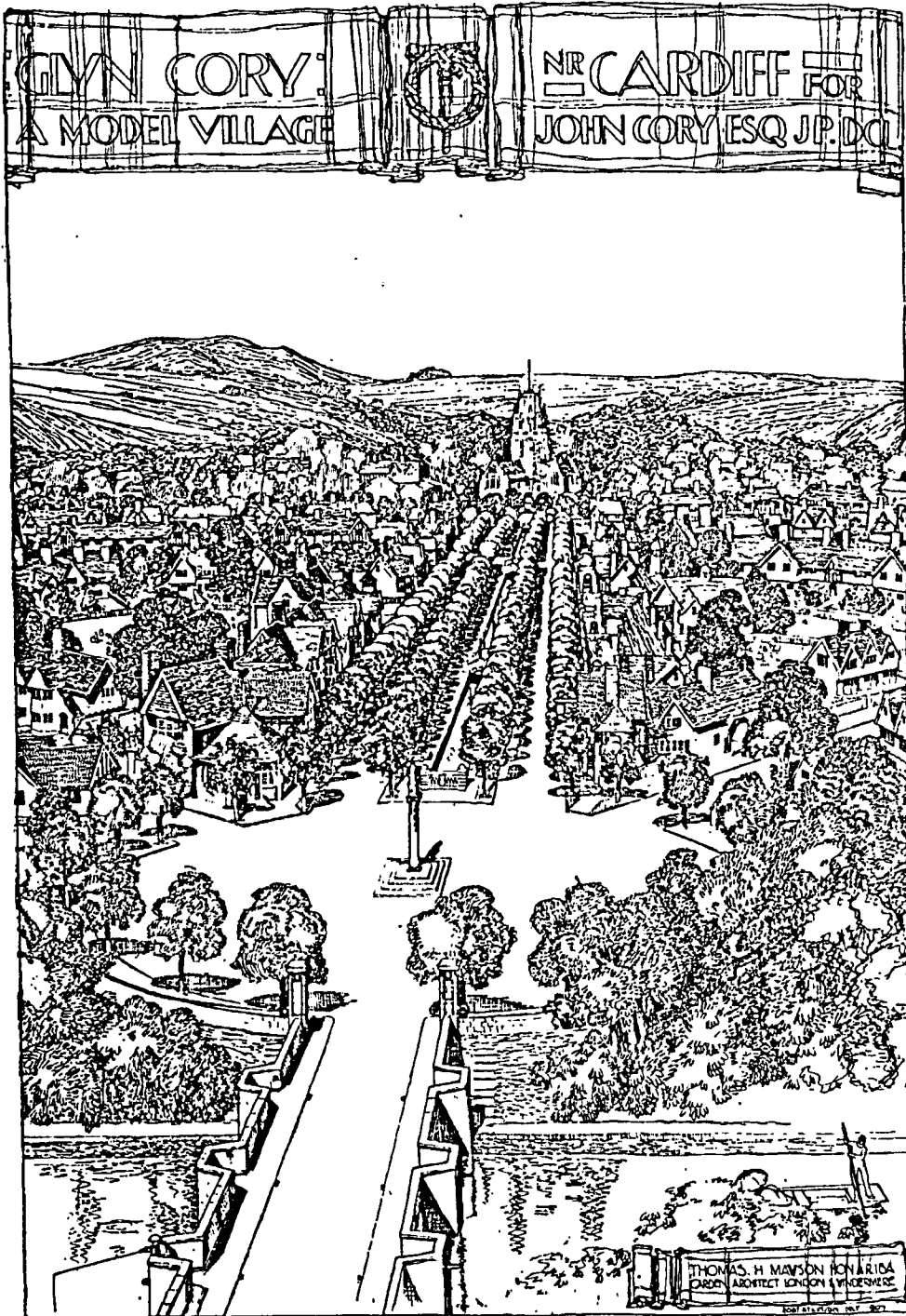


Fig. 13. Glyn Cory: A Model Village, 1907. Cardiff. Designed by Thomas H. Mawson for John Cory Esq. Mawson described Glyn Cory as a "residential rural suburb" rather than an industrial village. Mawson's strong geometrical plan is dominated by Church Avenue (center of the drawing going back to the church). The avenue is split in two by a canal, and provided carriage-ways, sidewalks, and green space on both sides.

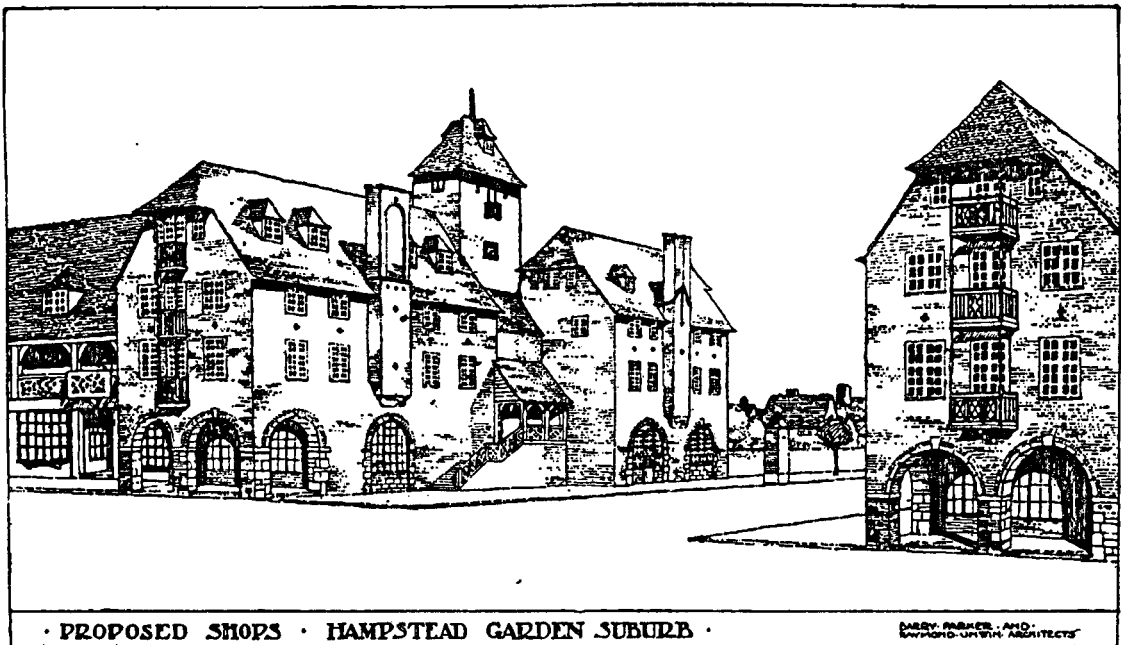


Fig. 14. Above-Sketch of Hampstead Garden Suburb shops.
Below-Photograph of Rothenburg...looking towards the
Markusturm on the inner ring of the early smaller town.

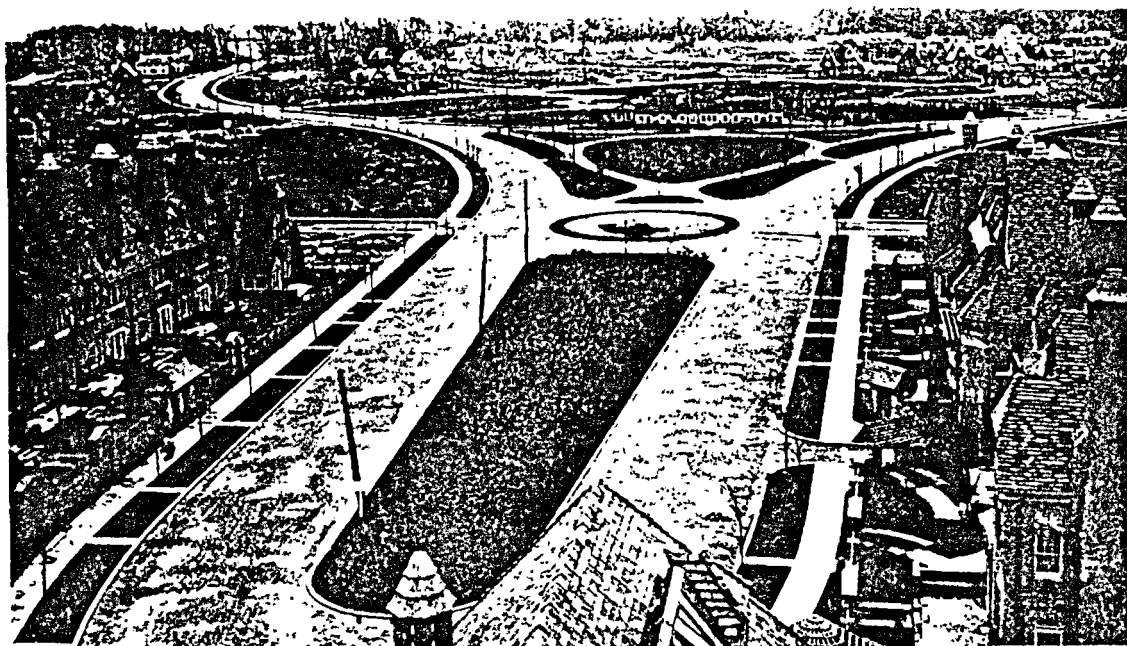
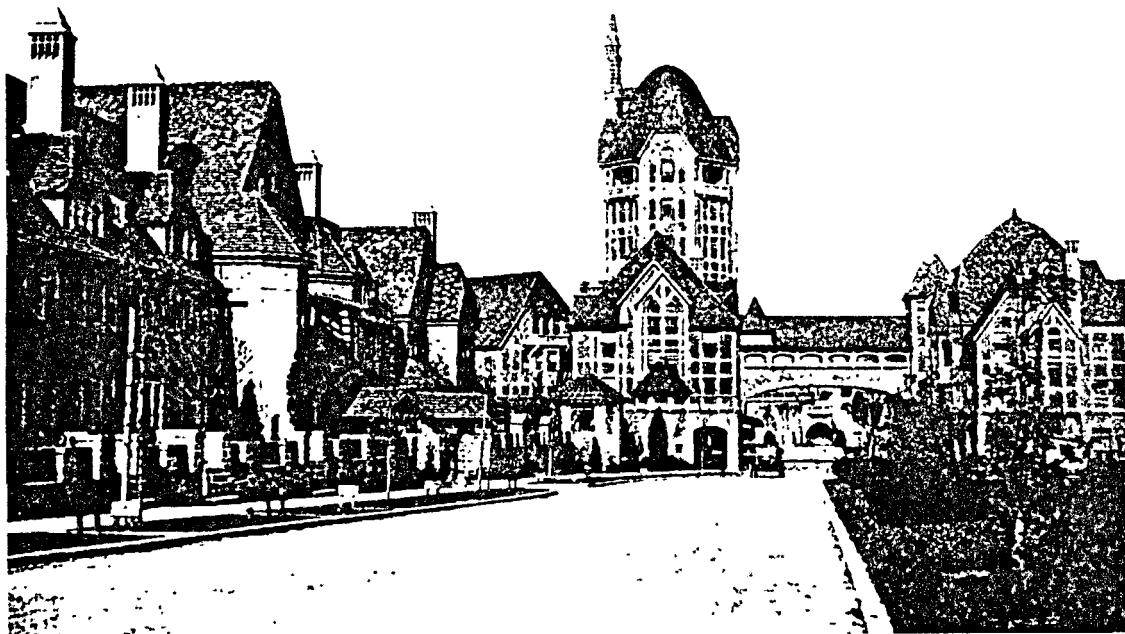


Fig. 15. Above-"Greenway Terrace looking towards the Inn." Below-"Looking east from the tower of the Inn." Note the formality and near symmetry of the plan which is especially apparent in this early view.

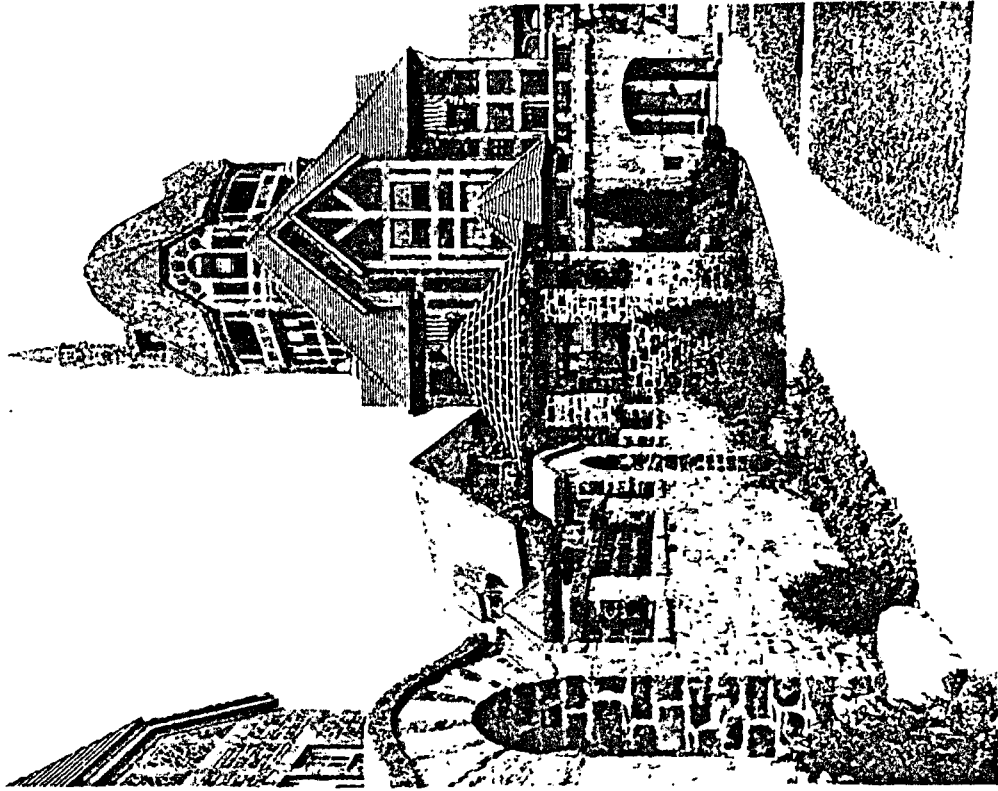
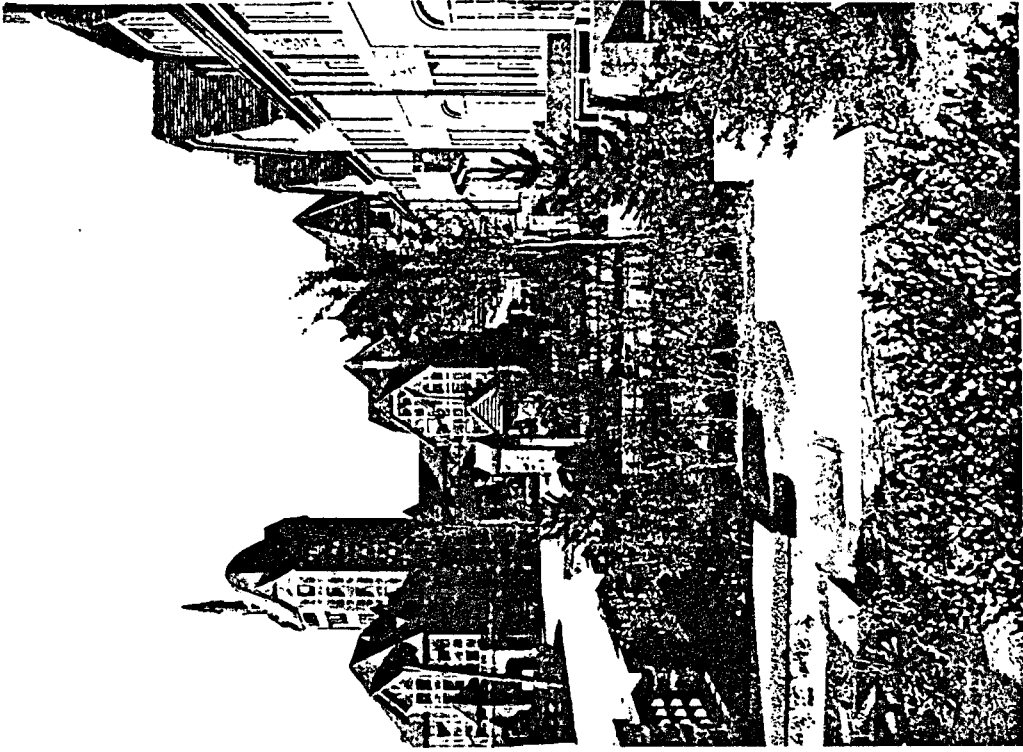


Fig. 16. Left-"Front wall of Group VI-A." Right-"Front Gardens of Group VI-B
The garden wall on both sides of Greenway Terrace, interrupted by arched passageways
and polygonal pavilions, connects the buildings to Station Square.



Fig. 17. Looking south at the juncture of Seasongood Avenue and Summer Avenue. Note the triangular piece of land at the center of the intersection which provides a bit of variety.



Fig. 18. One-way entrance to Olive Place heading southwest. The road splits in two in the center of Olive Place, forming a round island in the middle.



Fig. 19. Exit from Olive Place onto Continental Avenue.



Fig. 20. A private footpath intended for resident's use only connects Groton Street to Olive Place.



Fig. 22. Above-Vista down Rockrose Place. Below-Closed vista looking up Greenway North. By closing the view at the end of each street, Olmsted attempted to increase the sense of privacy for residents.



Fig. 23. Fairway Close. Entered from Greenway South.

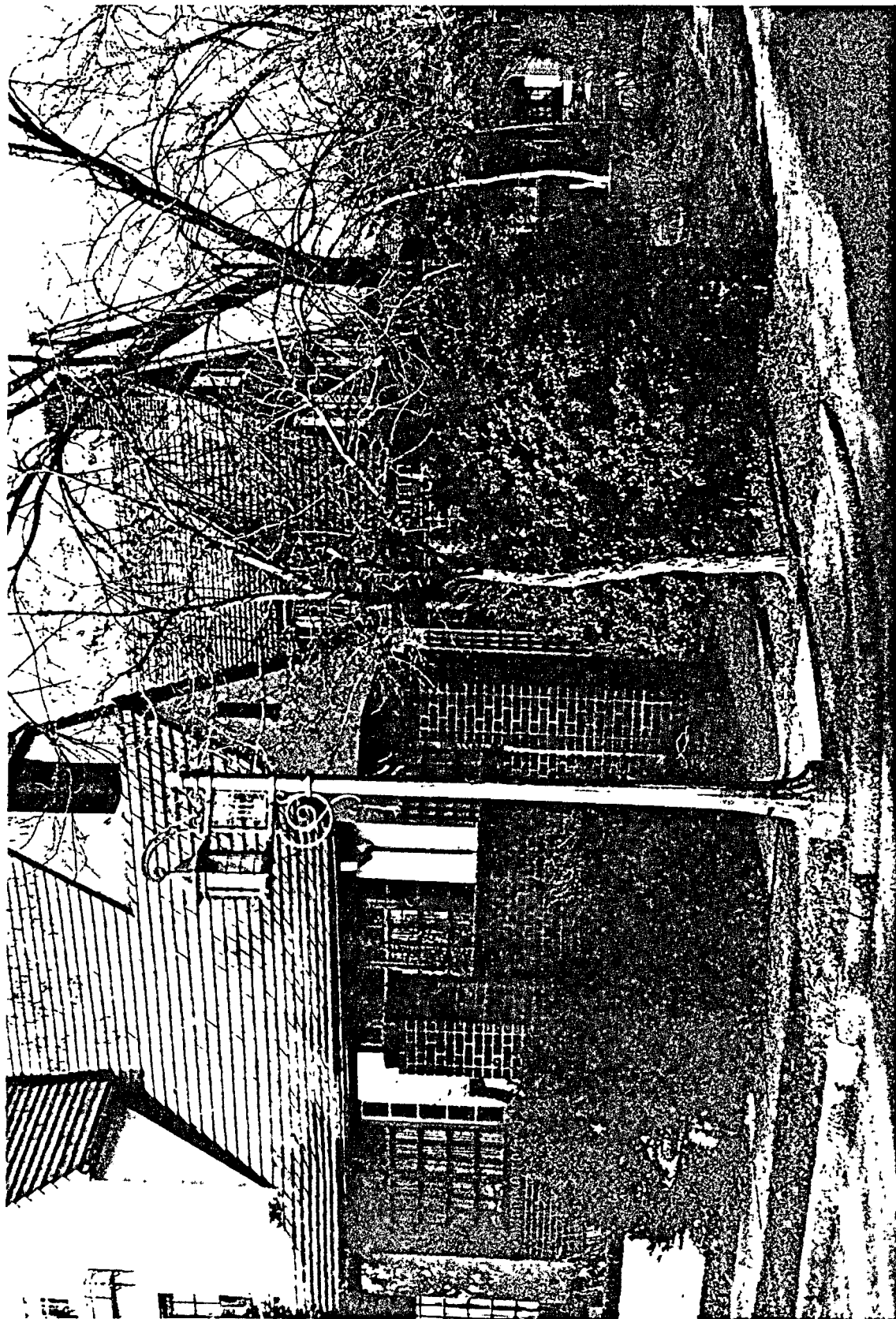


Fig. 24. Entrance to Ivy Close from Winter Avenue. Note lamp standard found throughout Gardens and the brick piers which mark the entrance and also screen out the street.

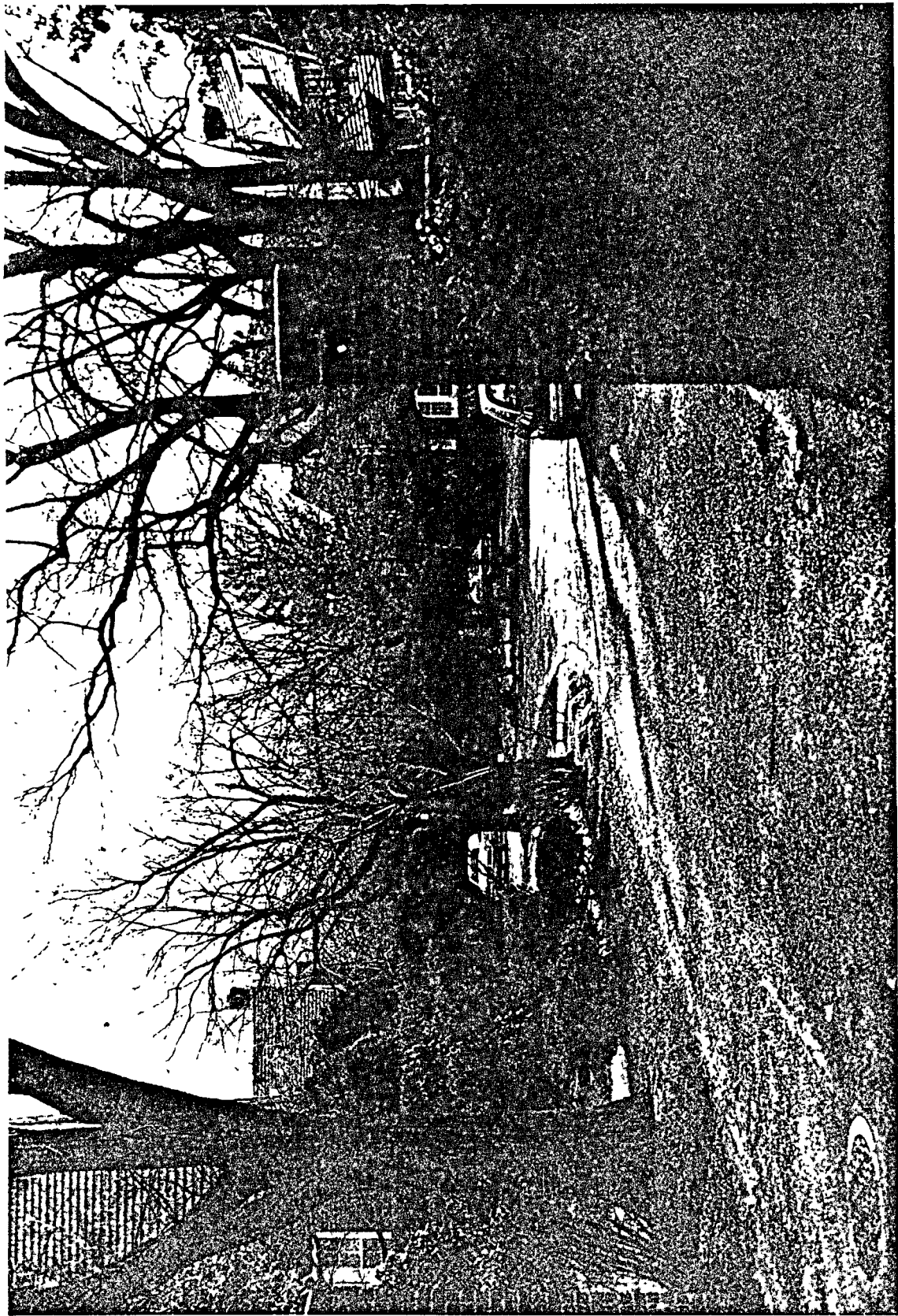


Fig. 25. Exit from Ivy Close onto Seasongood Avenue. Ivy Close is not an actual close as it has a road passing through it, rather than one road which serves as both entrance and exit.



Fig. 26. Narrow brick piers with buttresses flank the entrances to Forest Hills Gardens. This is the entrance to Greenway North from Union Turnpike, facing north.



Fig. 27. Lamp standards in the Gardens. The detail shown here is a sundial set between two small trees.



Fig. 28. Above-"The pool in the Tea Garden." Below-"A view of the Greenway Terraces." Note the thick planting on the lower photo.

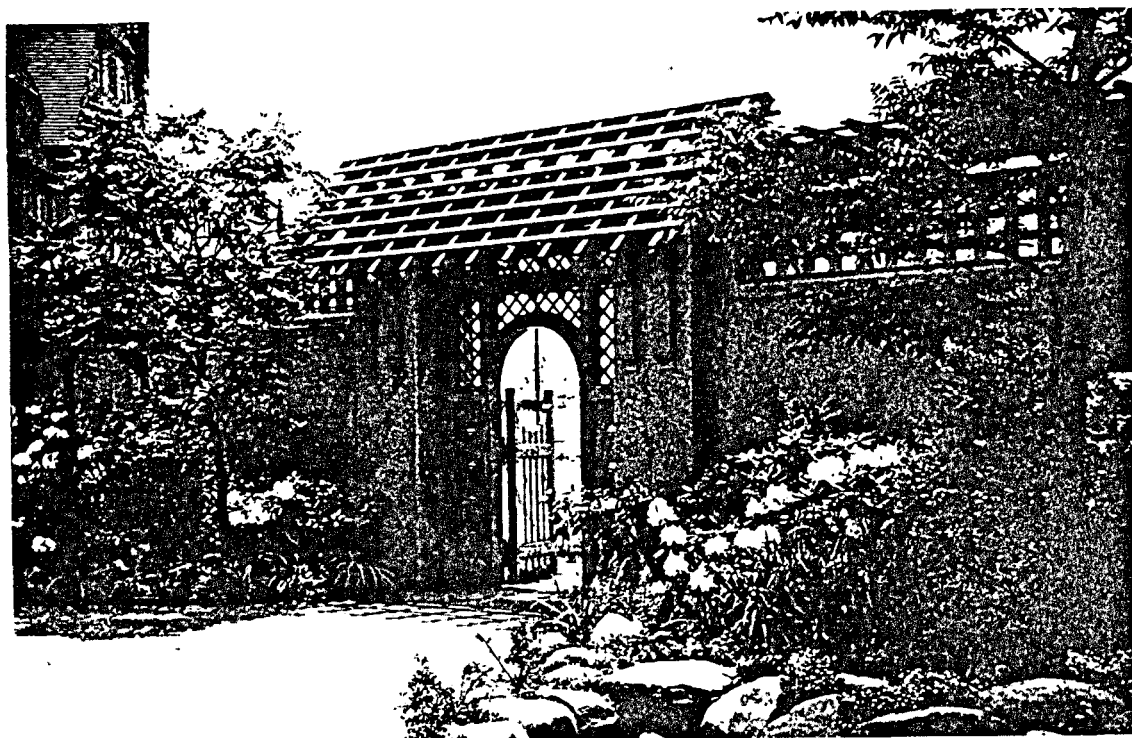
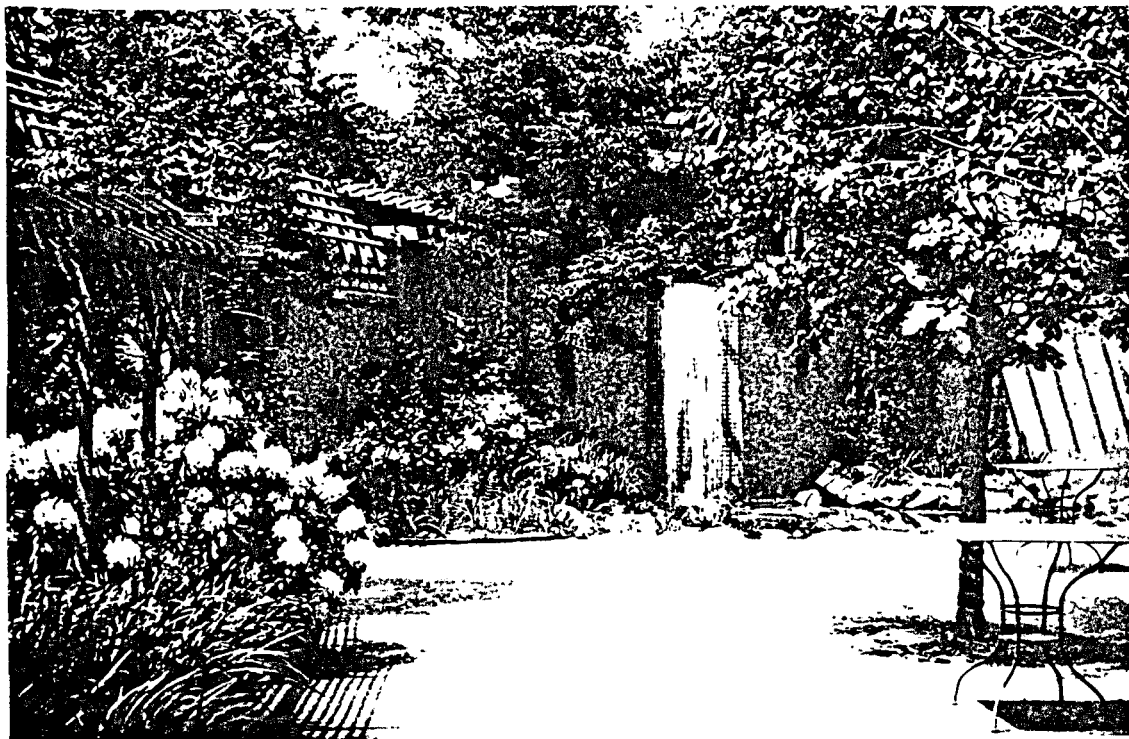


Fig. 29. Above-"Cascade Fountain in the Tea Garden."
Below-"Entrance to tennis court from Tea Garden."

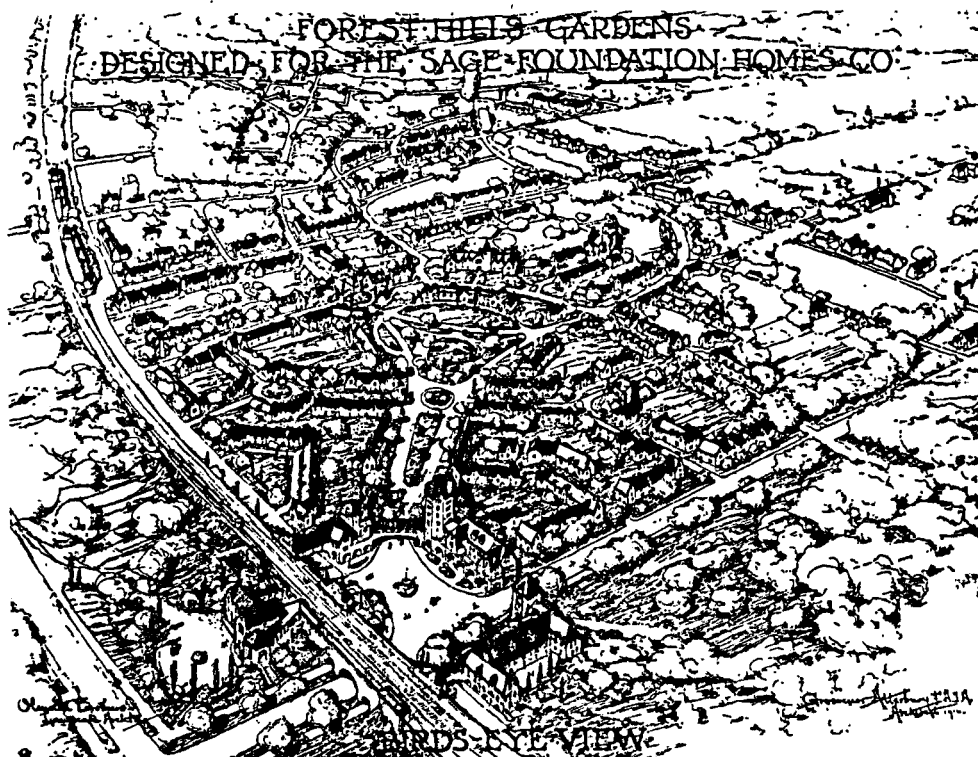


Fig. 30. "Bird's Eye View", Forest Hills Gardens, 1910.
By Grosvenor Atterbury, Architect & Olmsted, Bros. Landscape Architects

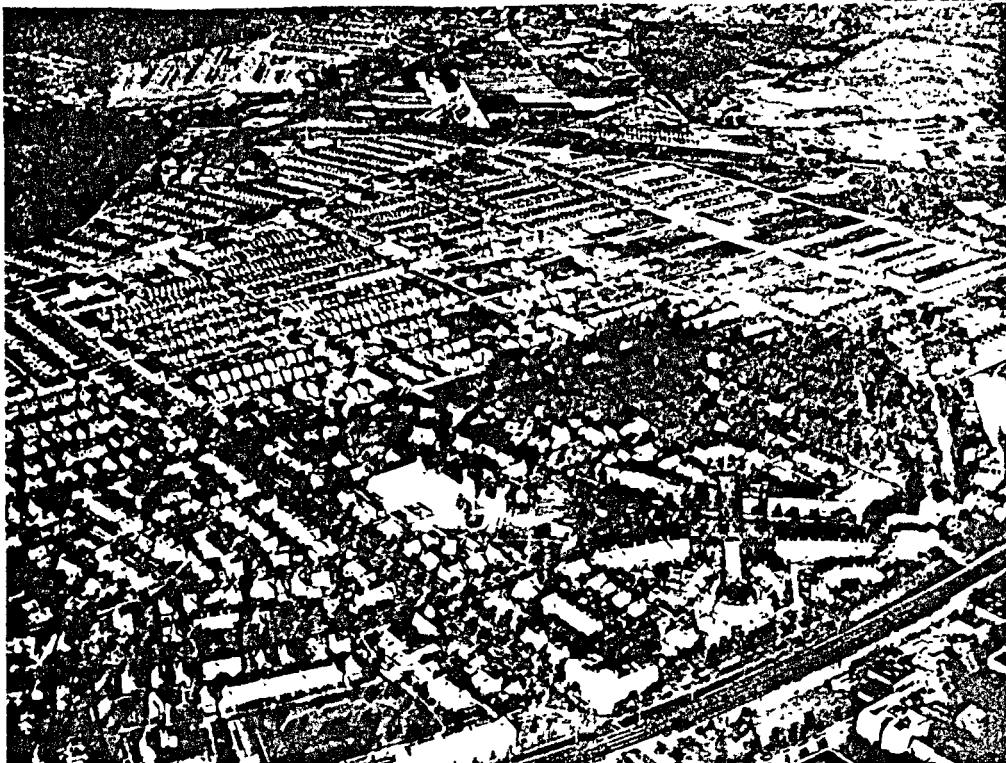


Fig. 31. Aerial photograph of Forest Hills Gardens. The suburb is enclosed by the perpendicular arms of Ascan Ave. (left), and the Long Island Railroad (lower right).



Fig. 32. Grosvenor Atterbury. (Photograph ca. 1910).



Lucien Oudin House, Water Mills, Long Island. 1897.



Fig. 33. Alfred H. Swayne House, Shinnecock Hills, Long Island. 1897.

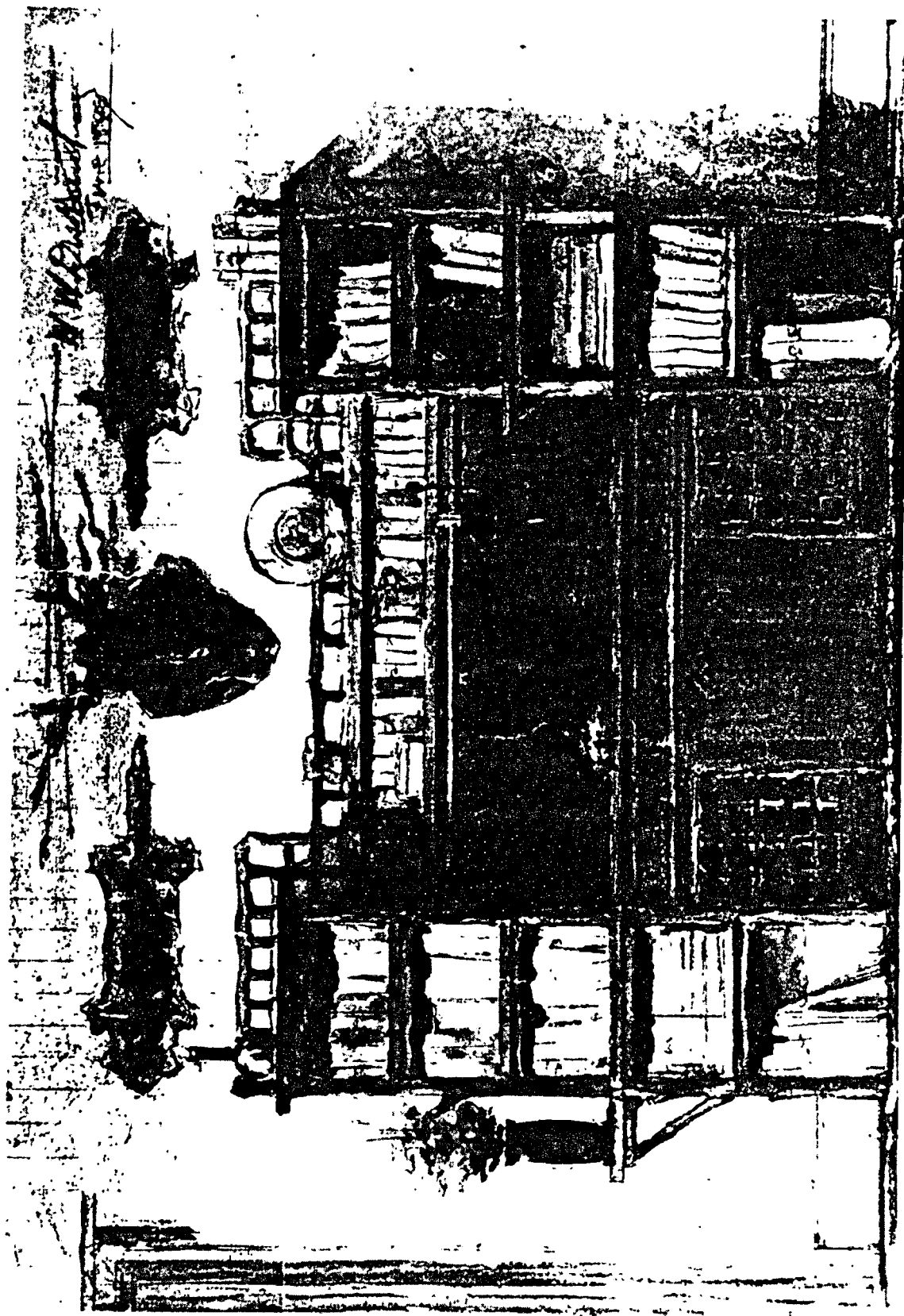


Fig. 34. Design for a cabinet and desk at Camp Uncas in the Adirondacks. Watercolor rendering probably by Grosvenor Atterbury, assisted by William Durant, ca. 1893.



Fig. 35. Chapel in Seal Harbor, Maine. Date unknown. Grosvenor Atterbury, Architect.

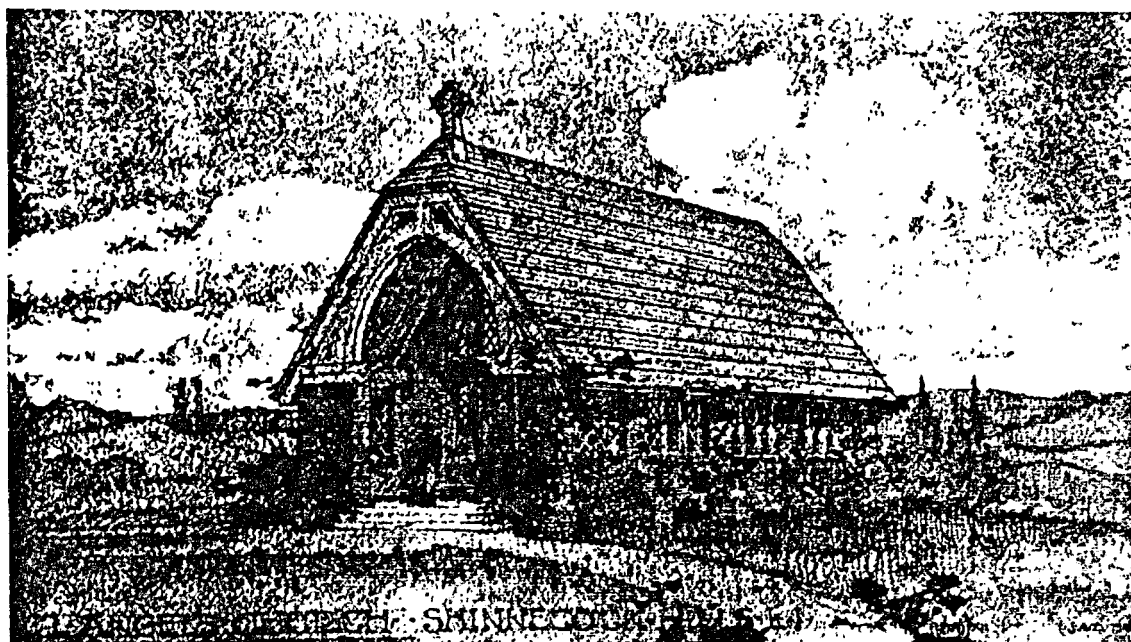


Fig. 36. Church of All Angels at Shinnecock Hills, Long Island. Date unknown. Design by Grosvenor Atterbury.



HOUSE AT LOCUST VALLEY, L. I.
GROSVENOR ATTERBURY, Architect, New York. JAMES L. GREENLEAF, Landscape Architect, New York



DETAILS OF HOUSE AT LOCUST VALLEY, L. I.
GROSVENOR ATTERBURY, Architect, New York

Fig. 37. House at Locust Valley, Long Island. Grosvenor Atterbury, Architect, ca. 1905.



Fig. 38. "A part of Forest Hills Gardens." Aerial view.

Fig. 40. Forest Hills Gardens Inn and Station Square,
June 1911.

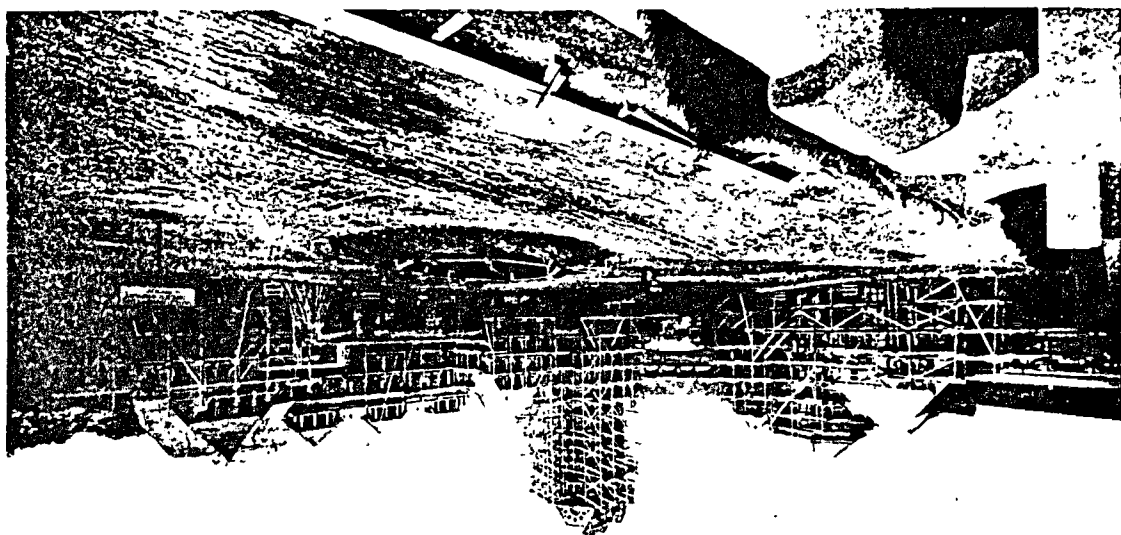


Fig. 39. Site of Forest Hills Gardens, 1910. Railroad
embankment at far left of photograph.

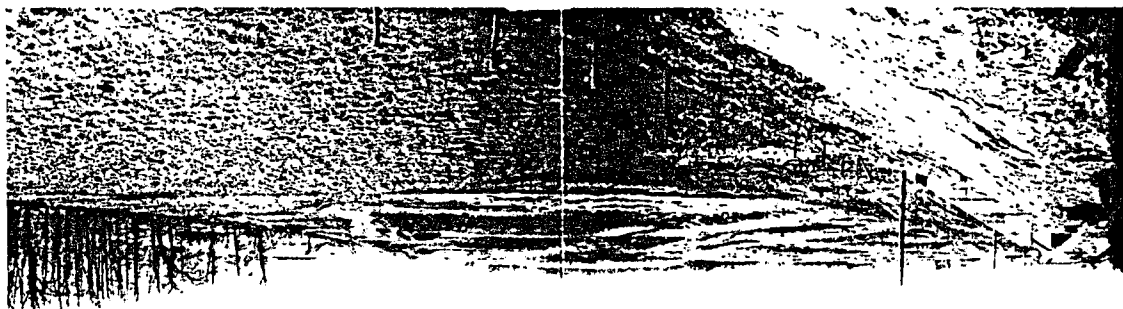




Fig. 41. Building operations, Forest Hills Inn, November 1910. The small building in the distance (above center), was probably the temporary factory established for construction of the concrete panels.

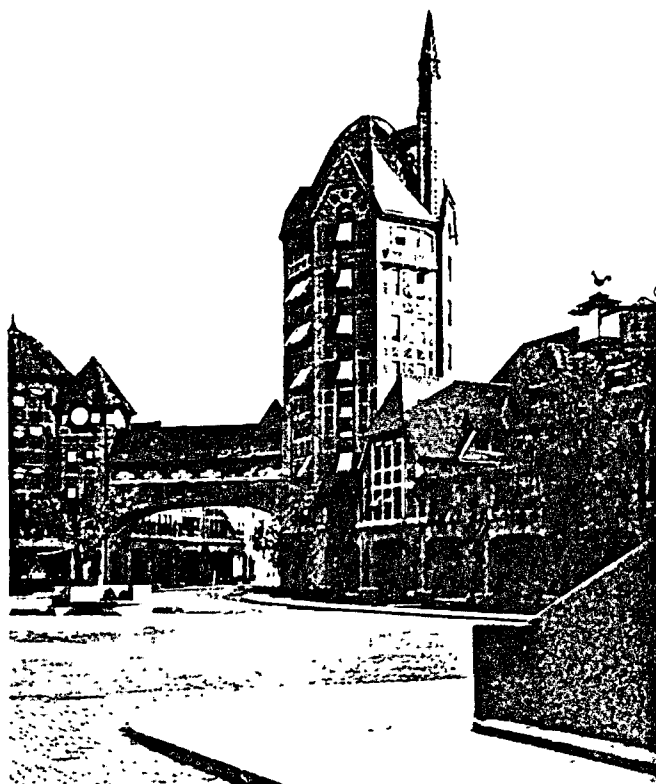


Fig. 42. "View showing bridge connecting the buildings of the Inn."

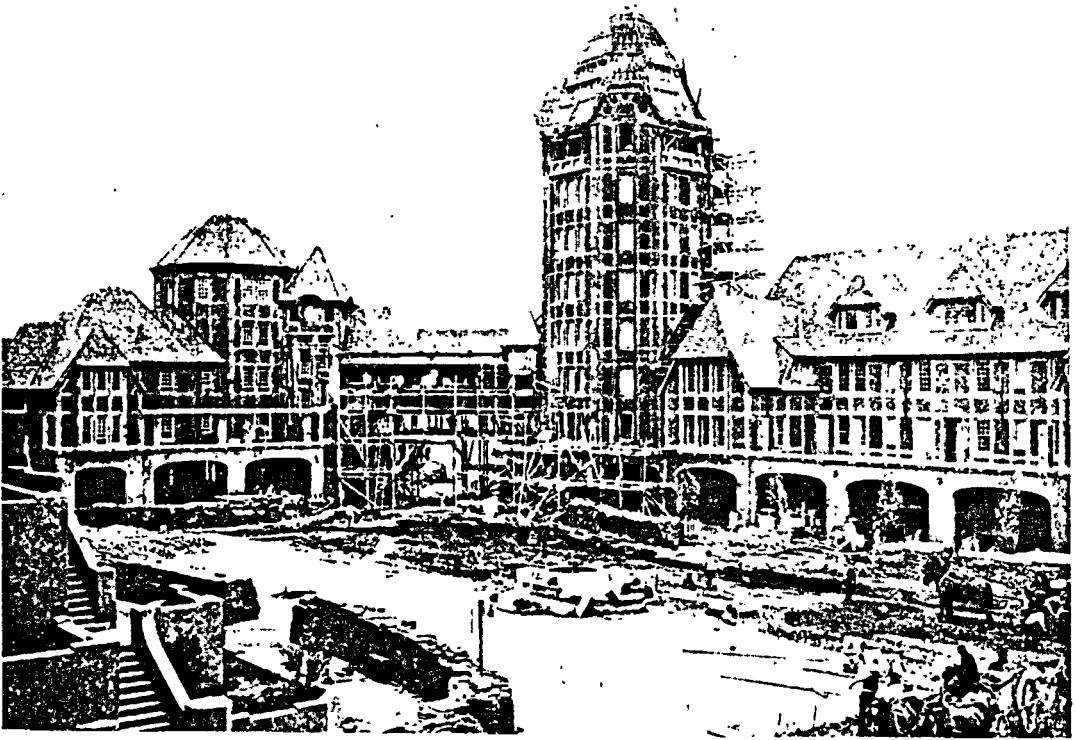


Fig. 43. "General view of Station Square." Photograph taken by Louis Graves when he visited the Gardens in 1912, during construction.



Fig. 44. "A Group of Dwellings." Photograph by Louis Graves.



Fig. 45. "One of the avenues radiating from Station Square." Looking east on Greenway Avenue at Station Square, before the erection of the Greenway Terrace buildings on both sides (Groups VIA & VIB).



Fig. 46. "Apartment House on Station Square." Looking east. The small, pyramidal-roofed building on the right is one of the Long Island depot buildings.

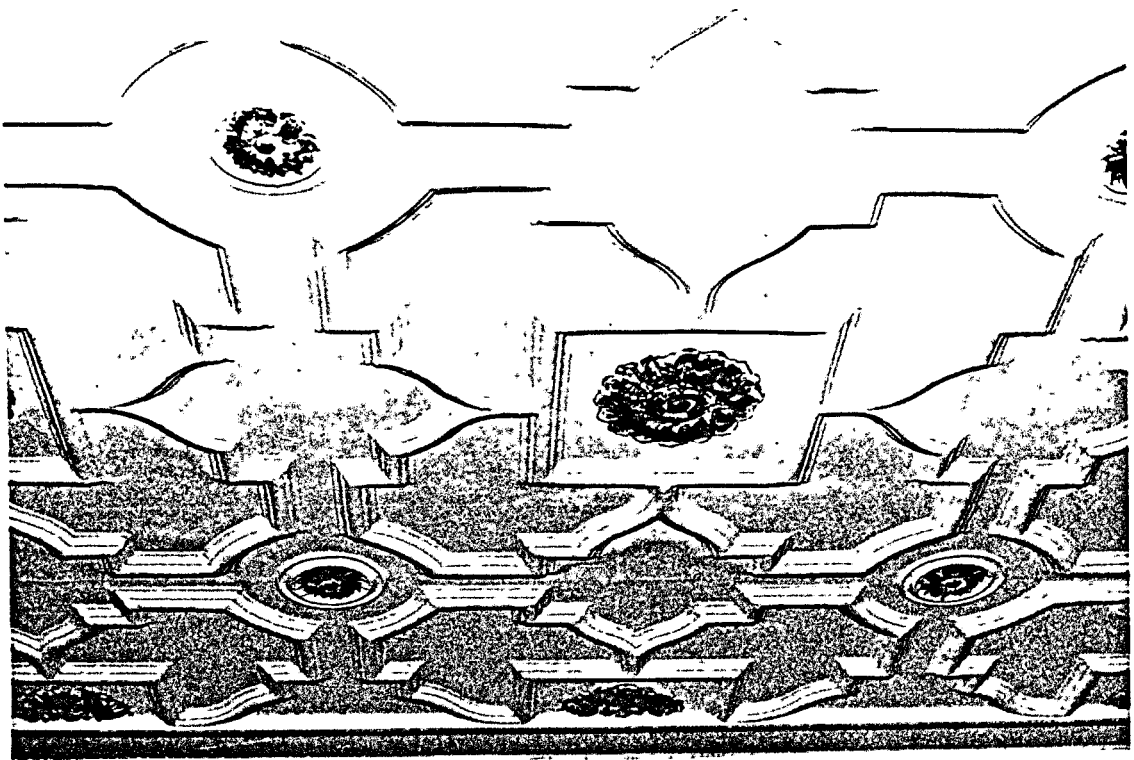
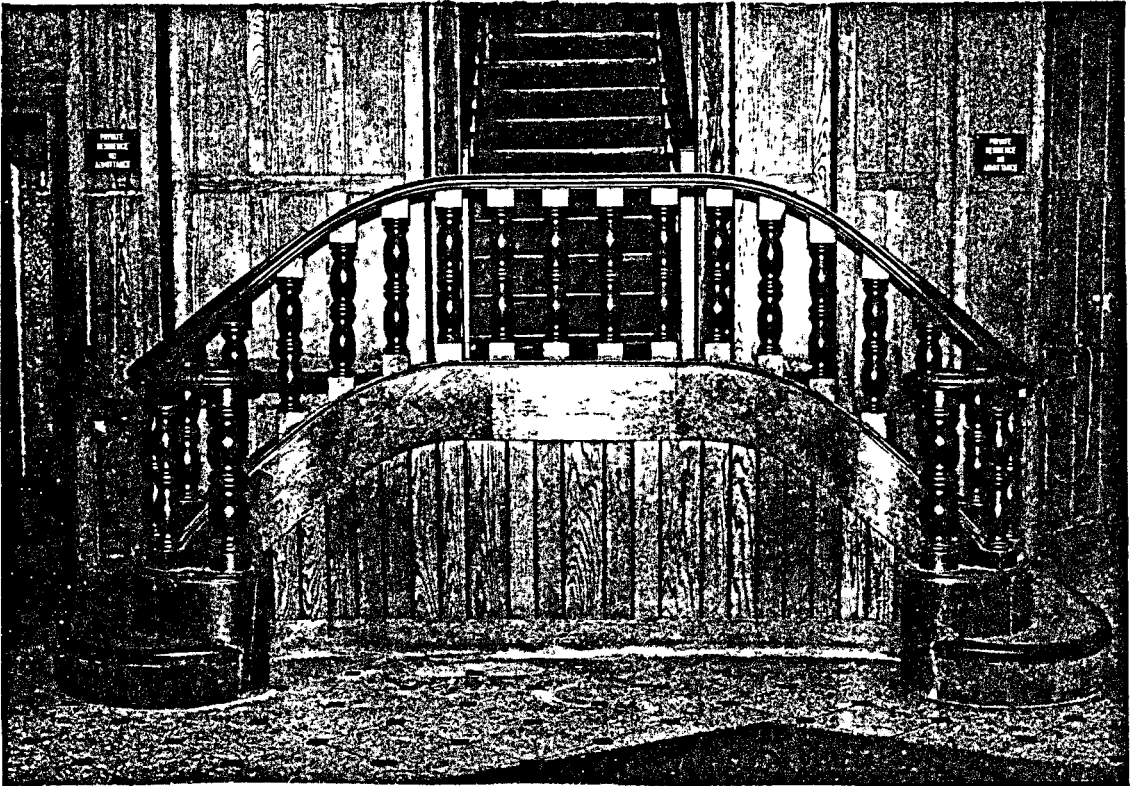


Fig. 47. Above-Double staircase in the lobby, Forest Hills Gardens Inn. Below-Detail of molded plaster ceiling with medallions.

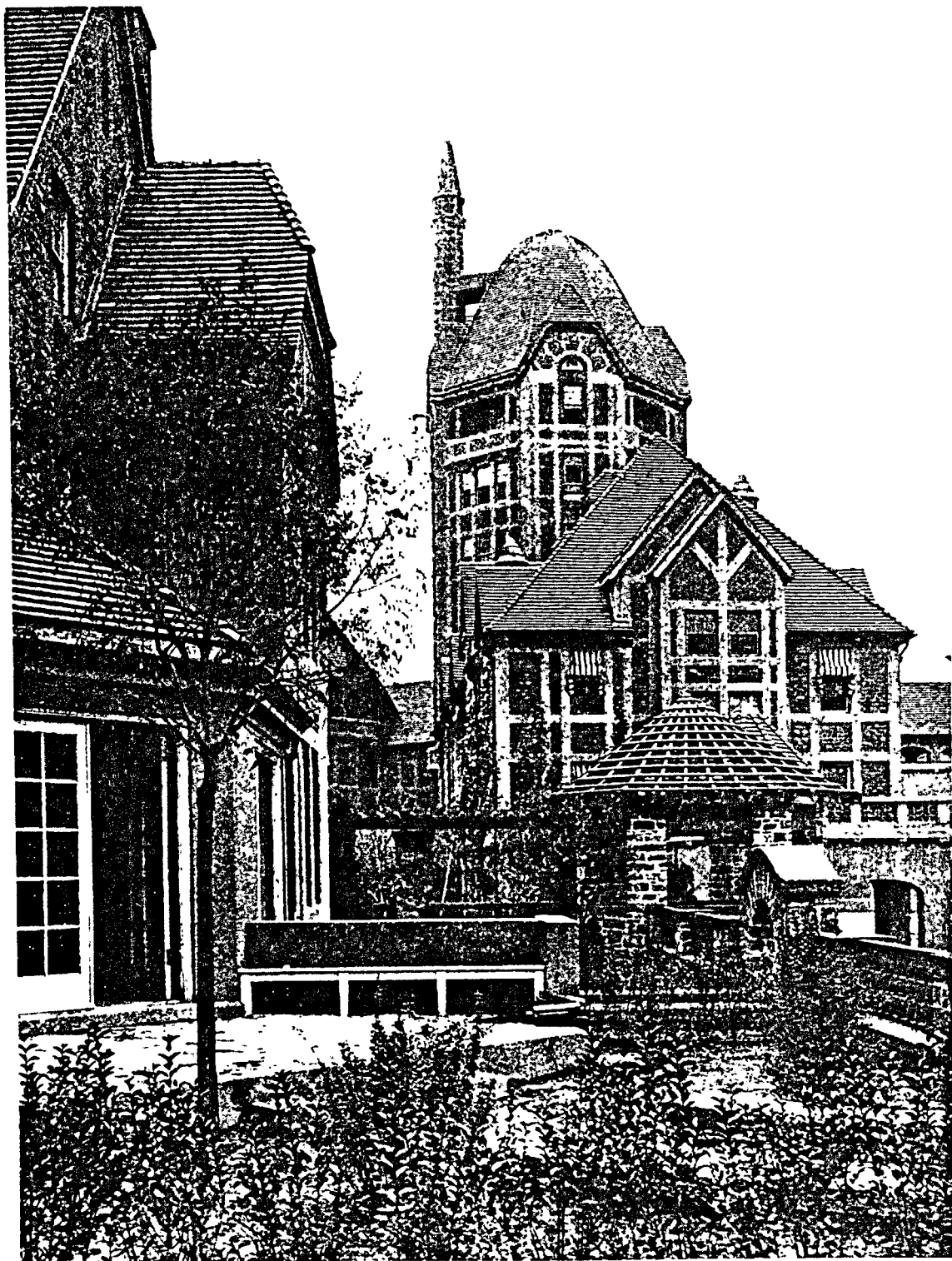


Fig. 48. "Entrance and garden of House I-F 18--Group VI-A." The tower has a dominating presence in relation to Group VI-A located adjacent to Station Square.

Fig. 50. "Housekeeping Apartments in Station Square." Building block on the west side of the Square, connected at right by covered bridge to the railroad station.

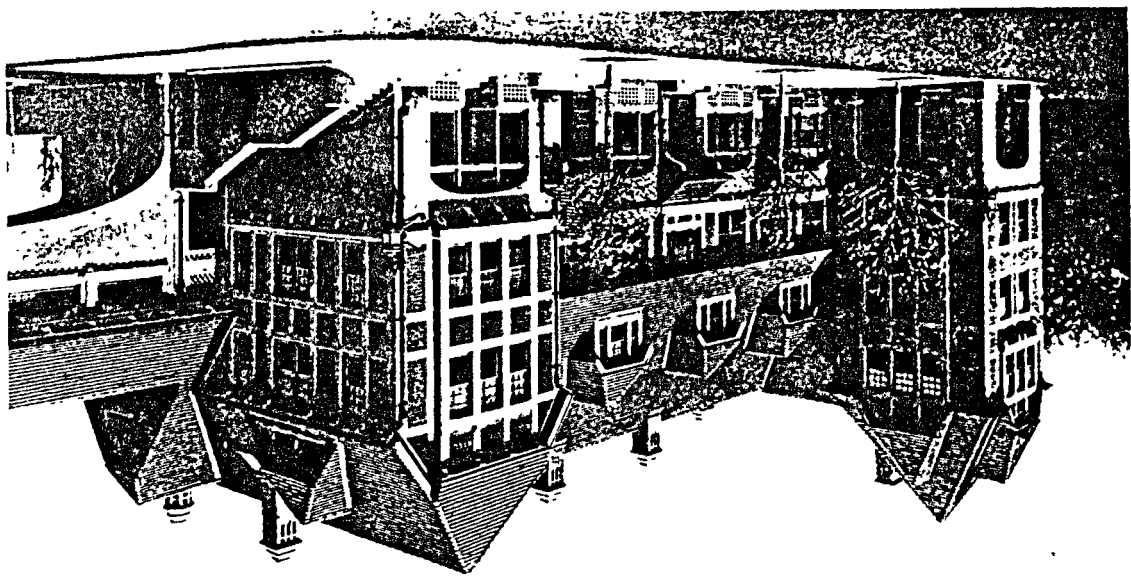
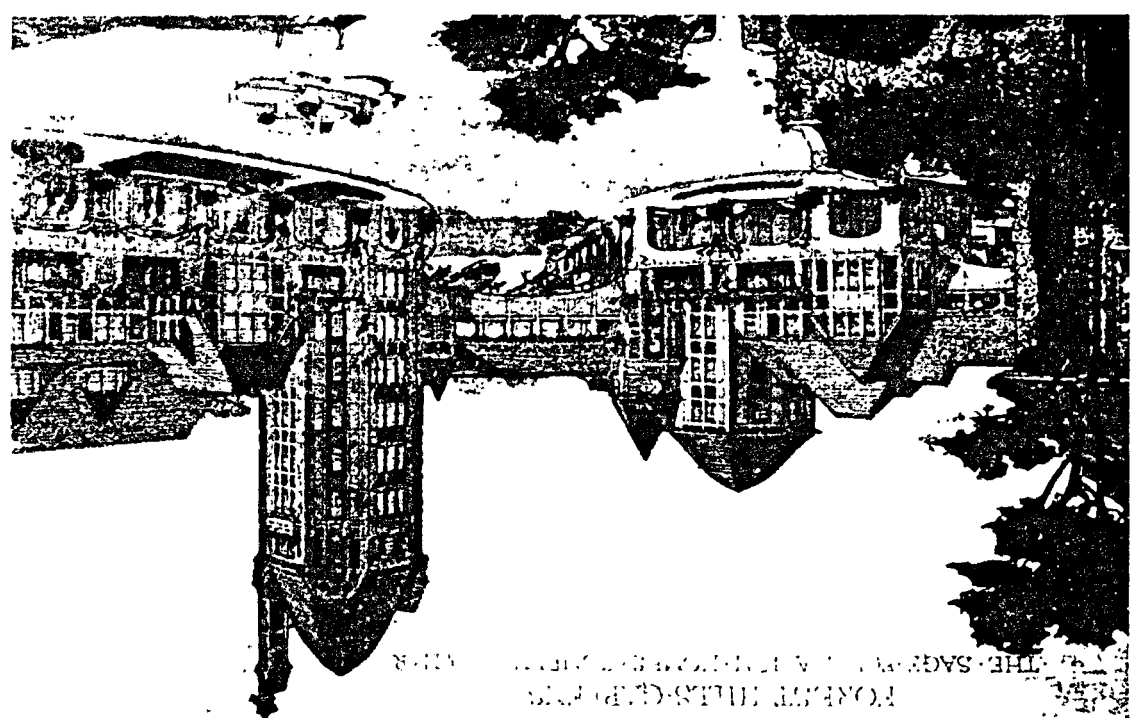


Fig. 49. "Forest Hills Inn and Station Square." Architectural rendering by Atterbury & Tompkins, Associates.



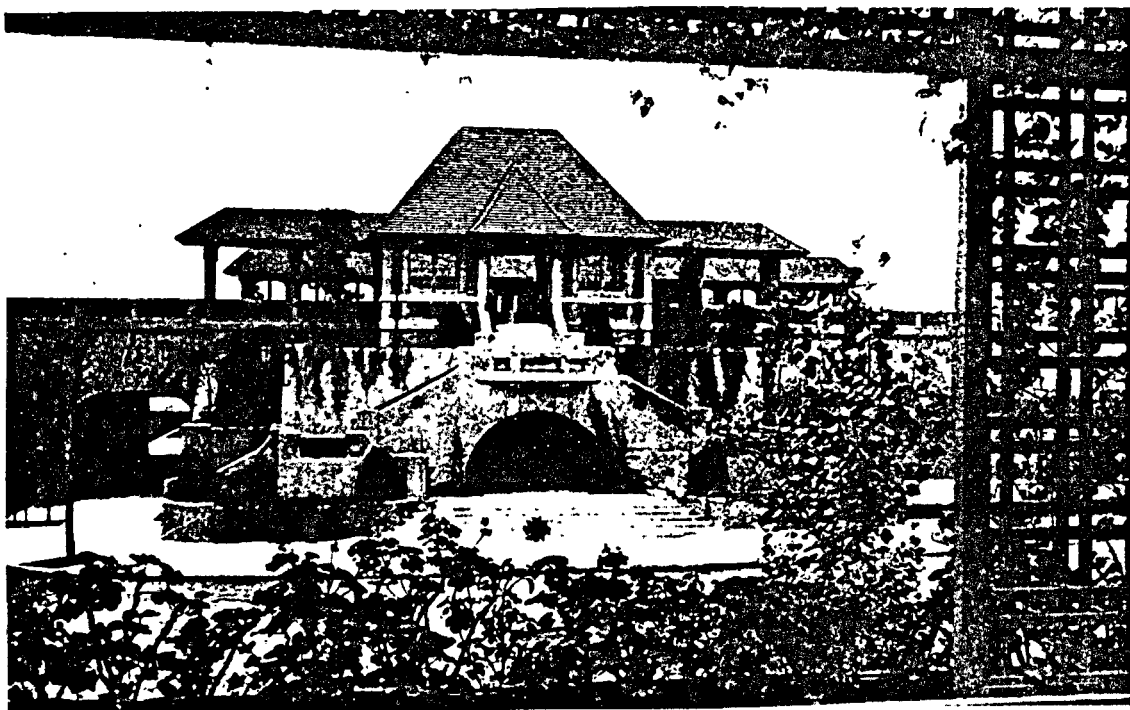


Fig. 51. "The Station from Second Story Loggia of the Inn."



Fig. 52. "Stores and Apartments, Station Square." Note that the eave line continues all around the Square.

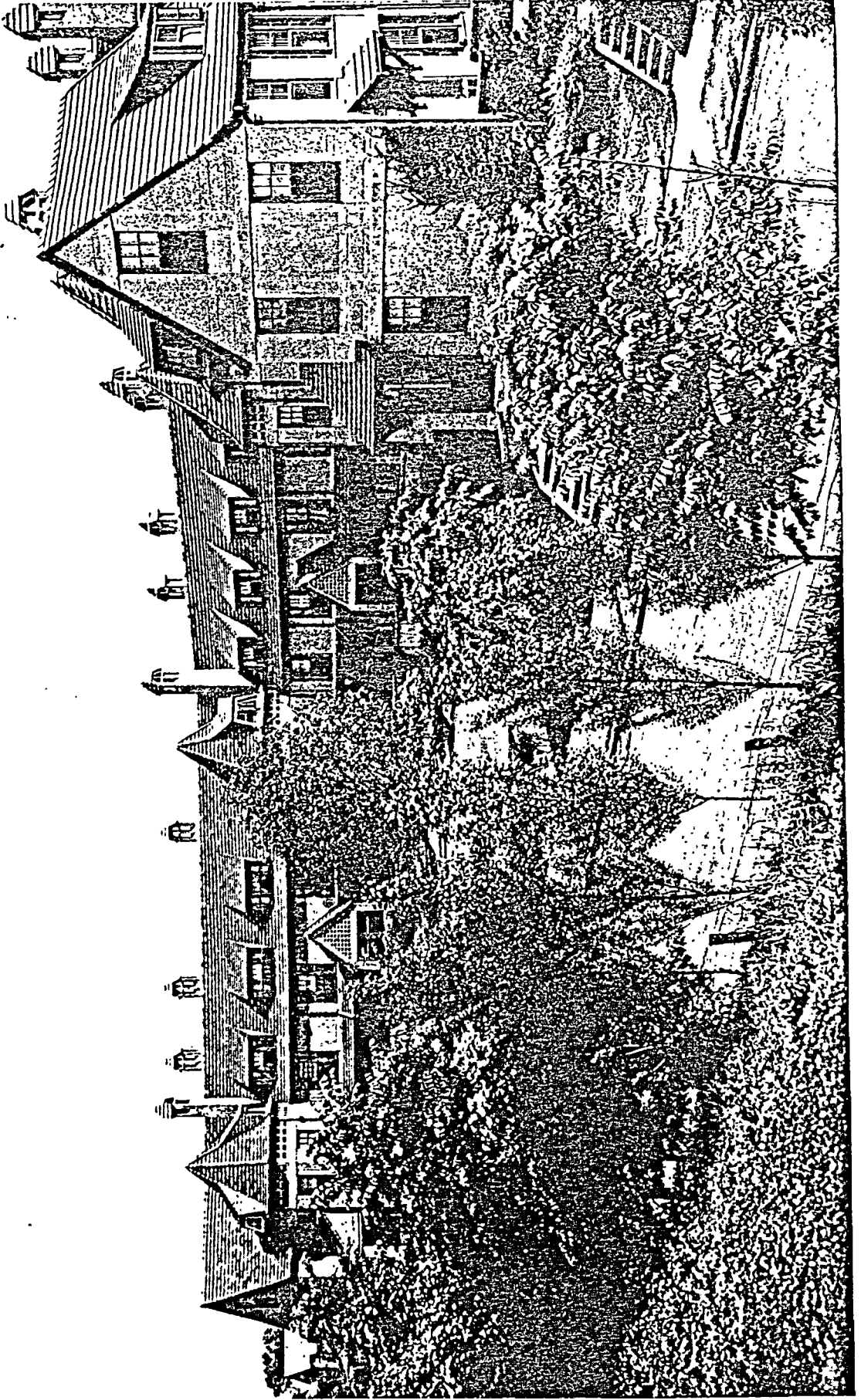


Fig. 54. Group II. Note the relief pattern of the half-timbering method (far right gable end) employed by Atterbury throughout the thematic buildings in the Gardens.

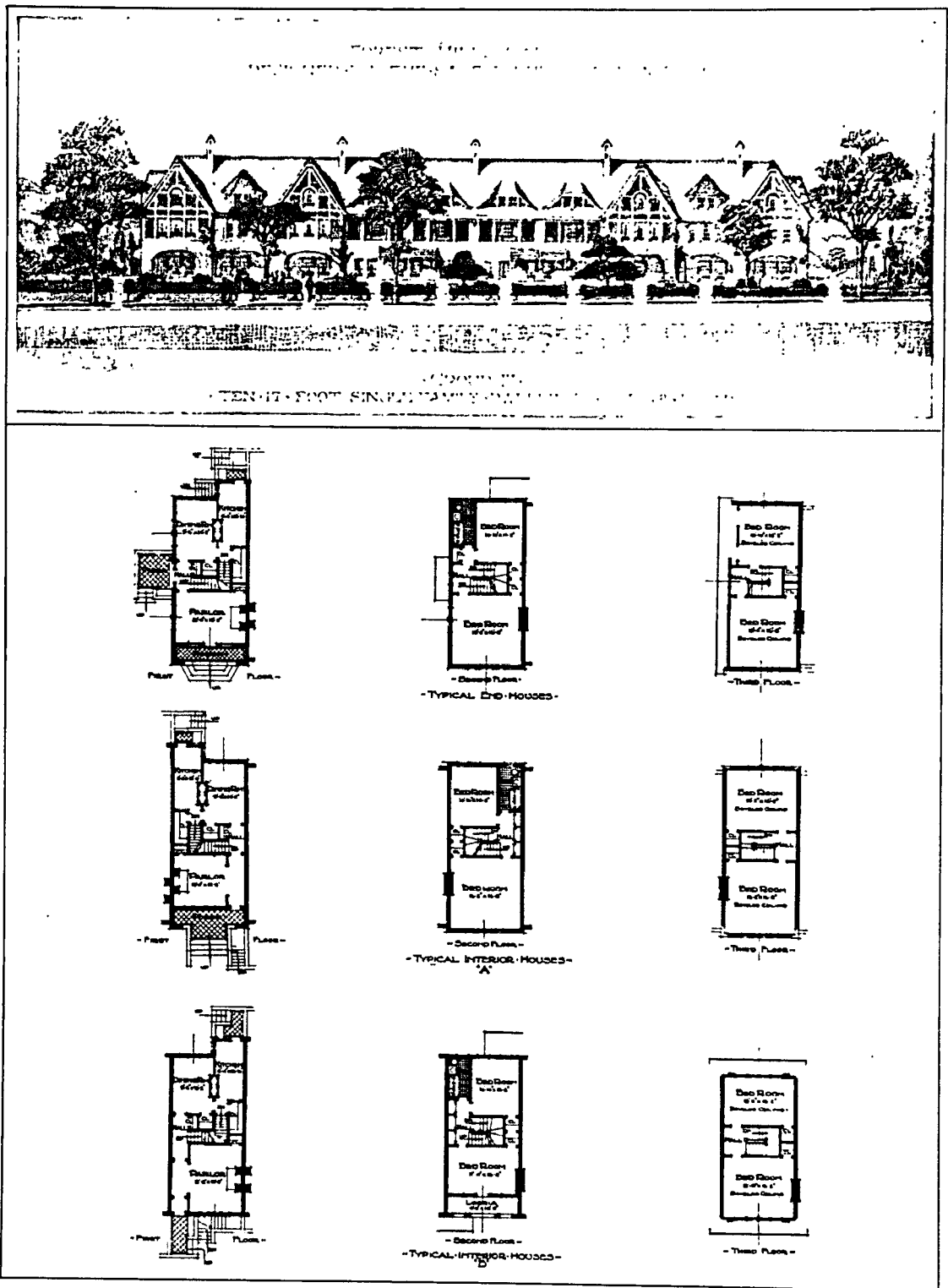
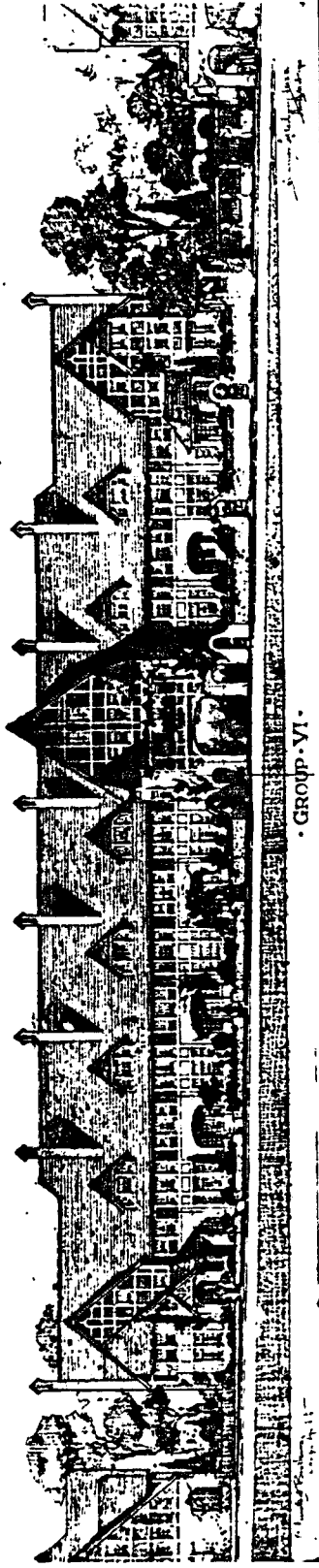


Fig. 55. Group III. Slocum Crescent. Elevation and plans by Atterbury and Tompkins, Associates.

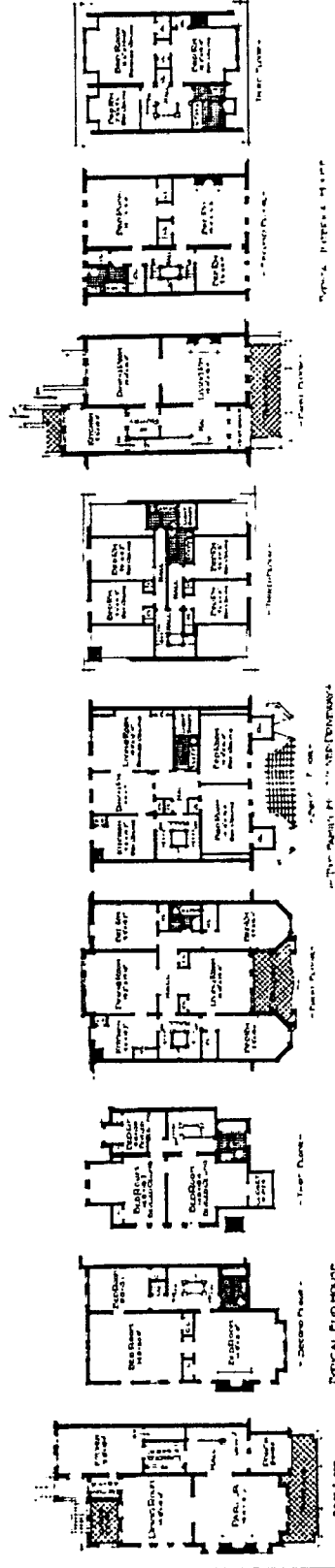


Fig. 56. Group III. Above-Front elevation. Below-Rear elevation.

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Group VI.



1

2

3

Fig. 57. Group VI-A, Greenway Terrace South. Elevation and plans. (1) "Typical End House" (2) "Two family house over driveway" (3) "Typical interior house." Rendering and plans by Atterbury and Tompkins, Associates.

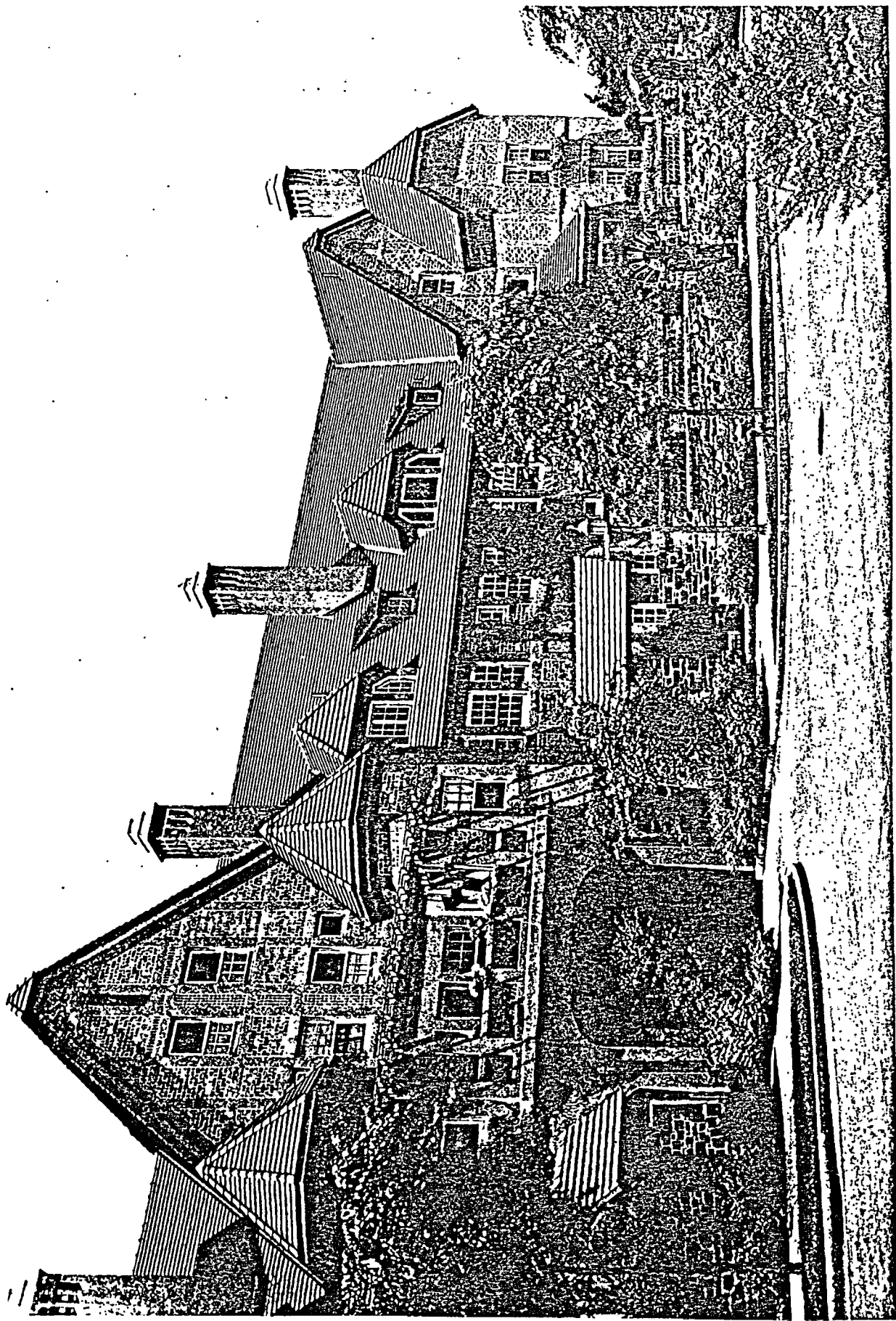


Fig. 58. Group VI-A, Greenway Terrace South. The chimney stacks were mass-produced in the factory at Forest Hills Gardens.

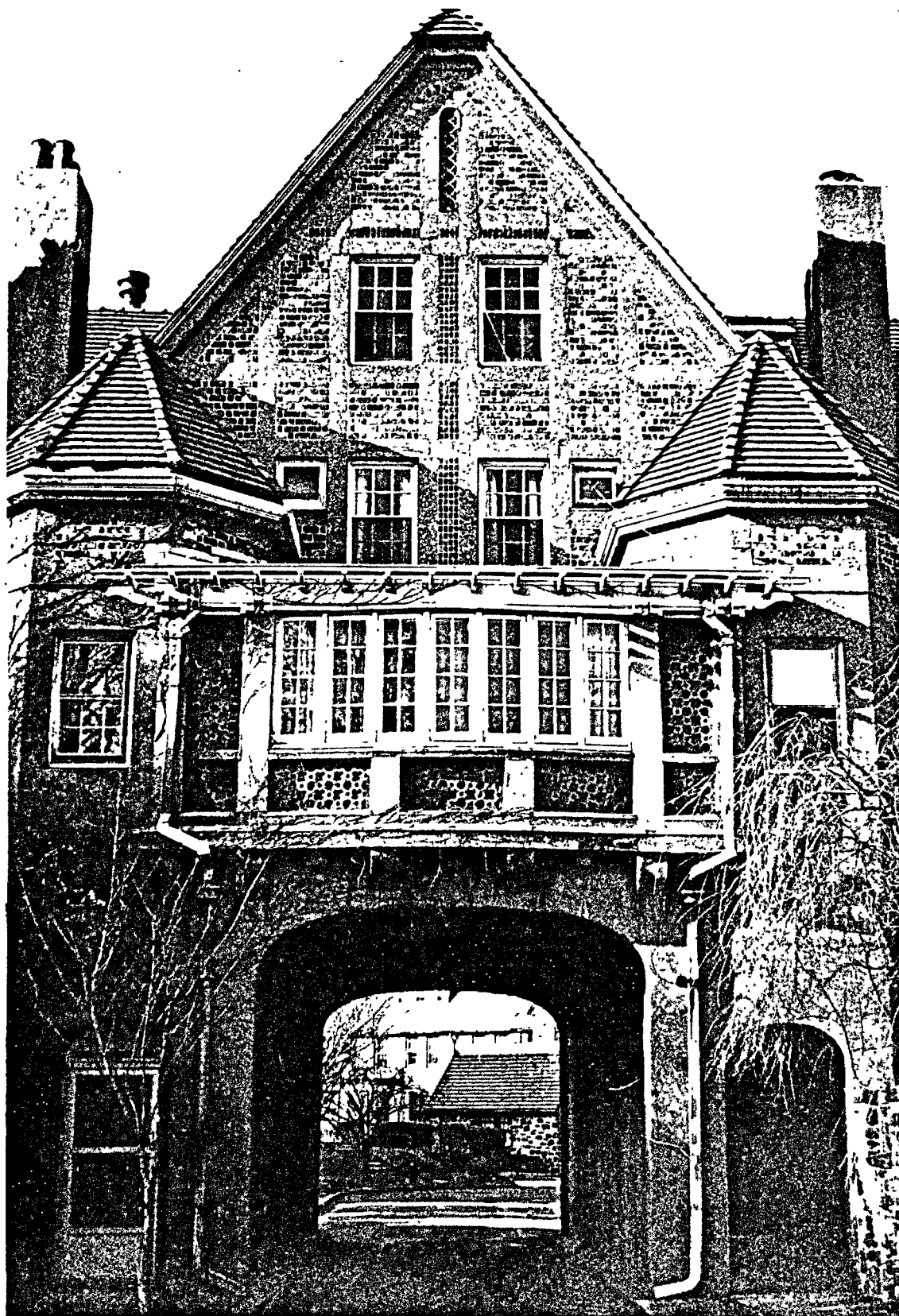


Fig. 59. An attached house in Group VI-A. Archway is the narrow street passing through the building and connecting with Continental Avenue in the rear.

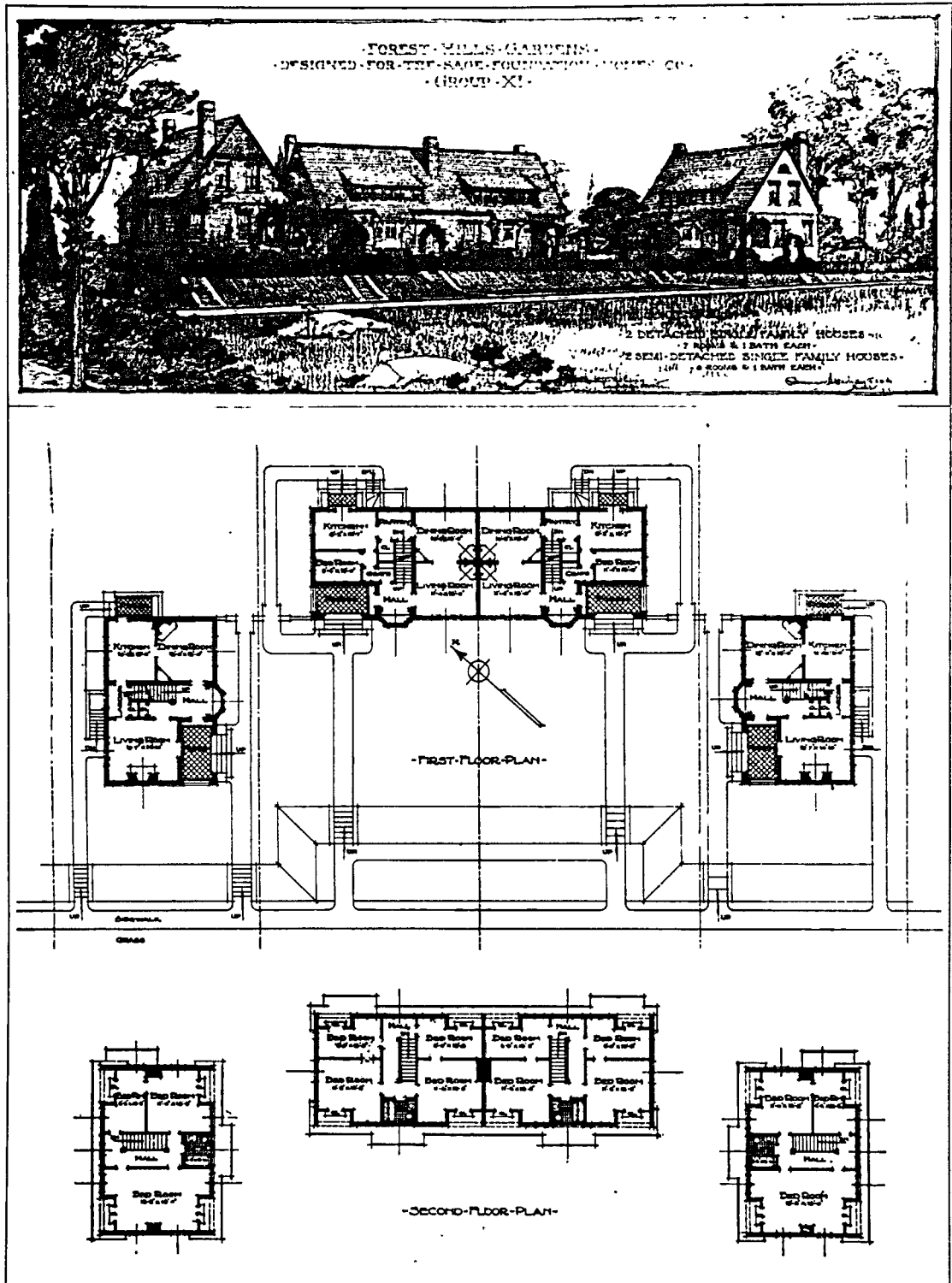


Fig. 60. Group XI. "Two Detached, Two Semi-Detached Single Family Houses." Rendering and plans by Atterbury and Tompkins, Associates.

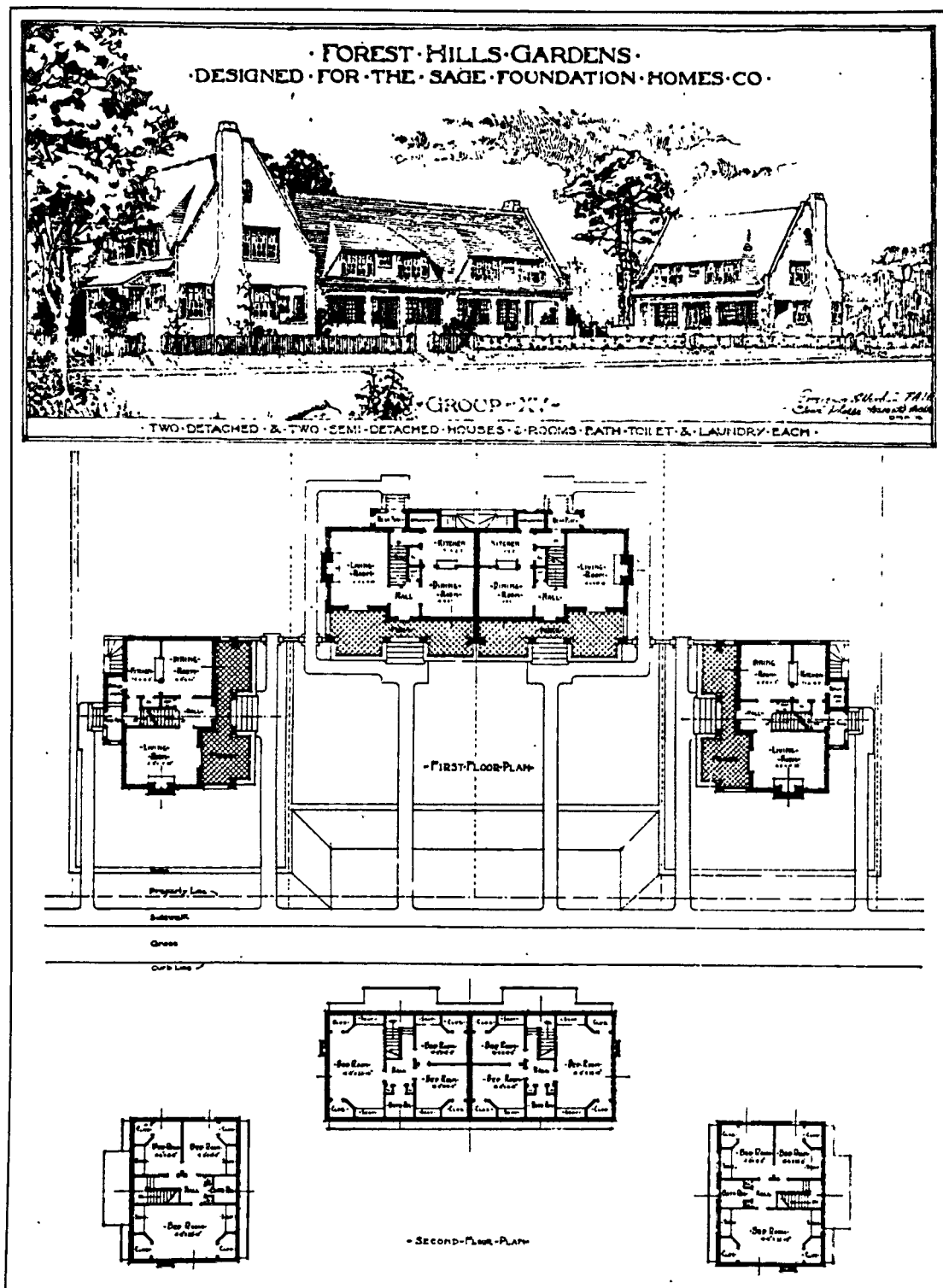
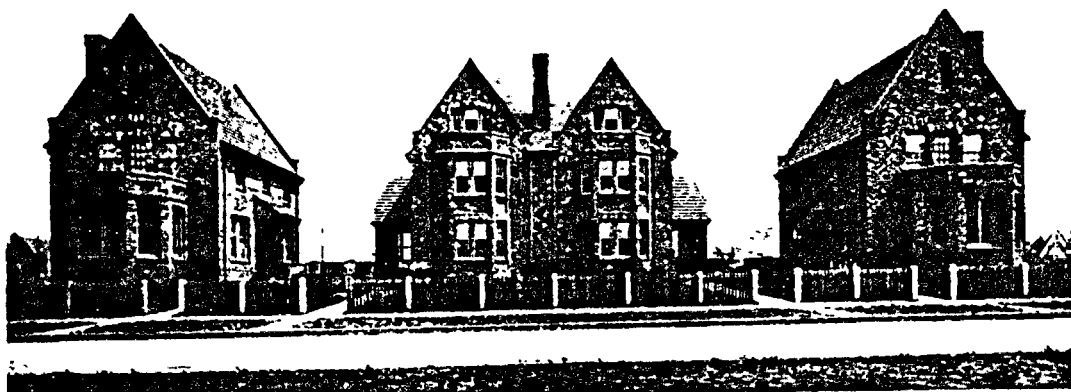


Fig. 61. Group XV. "Two Detached and Two Semi-Detached Houses." Rendering and plans by Atterbury and Stowe Phelps, Associates.



GROUP XVIII-B

DETACHED HOUSES 6 ROOMS AND BATH. SEMI-DETACHED HOUSES 7 ROOMS AND BATH

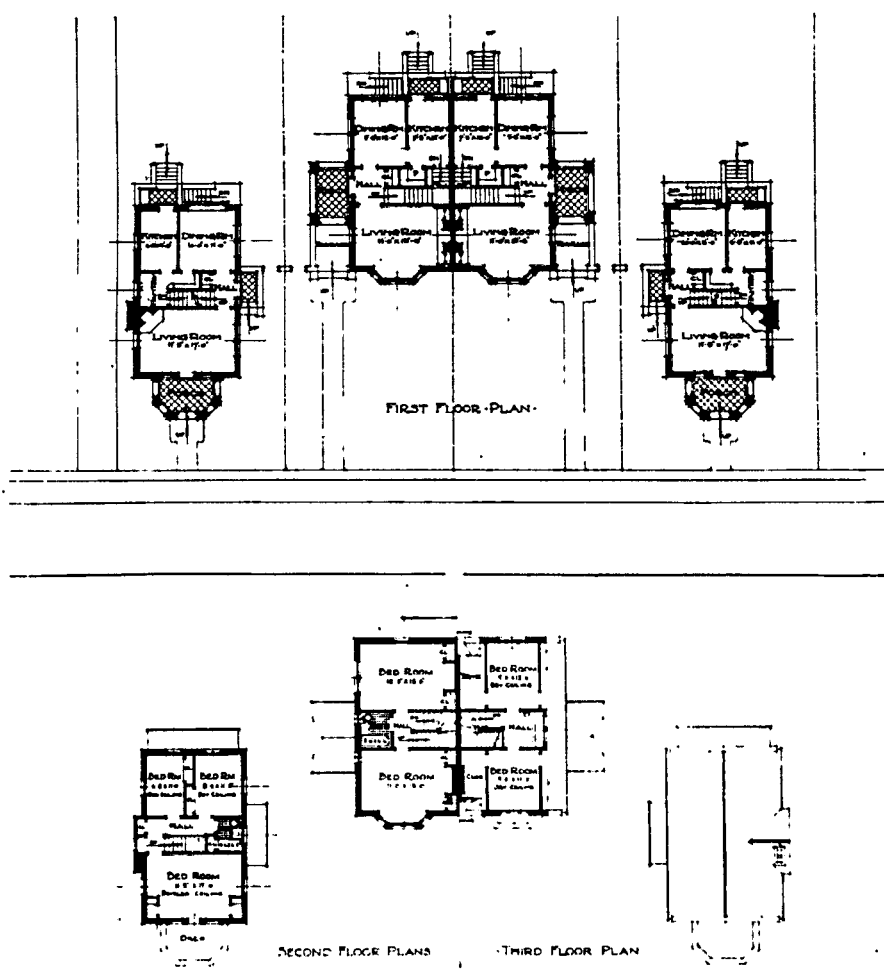


Fig. 63. Group XVIII-B. "Two Detached, Two Semi-Detached Single Family Houses." Grosvenor Atterbury, Architect.



GROUP XIX—TWO END HOUSES 8 ROOMS AND BATH. SIX INTERIOR HOUSES 7 ROOMS AND BATH

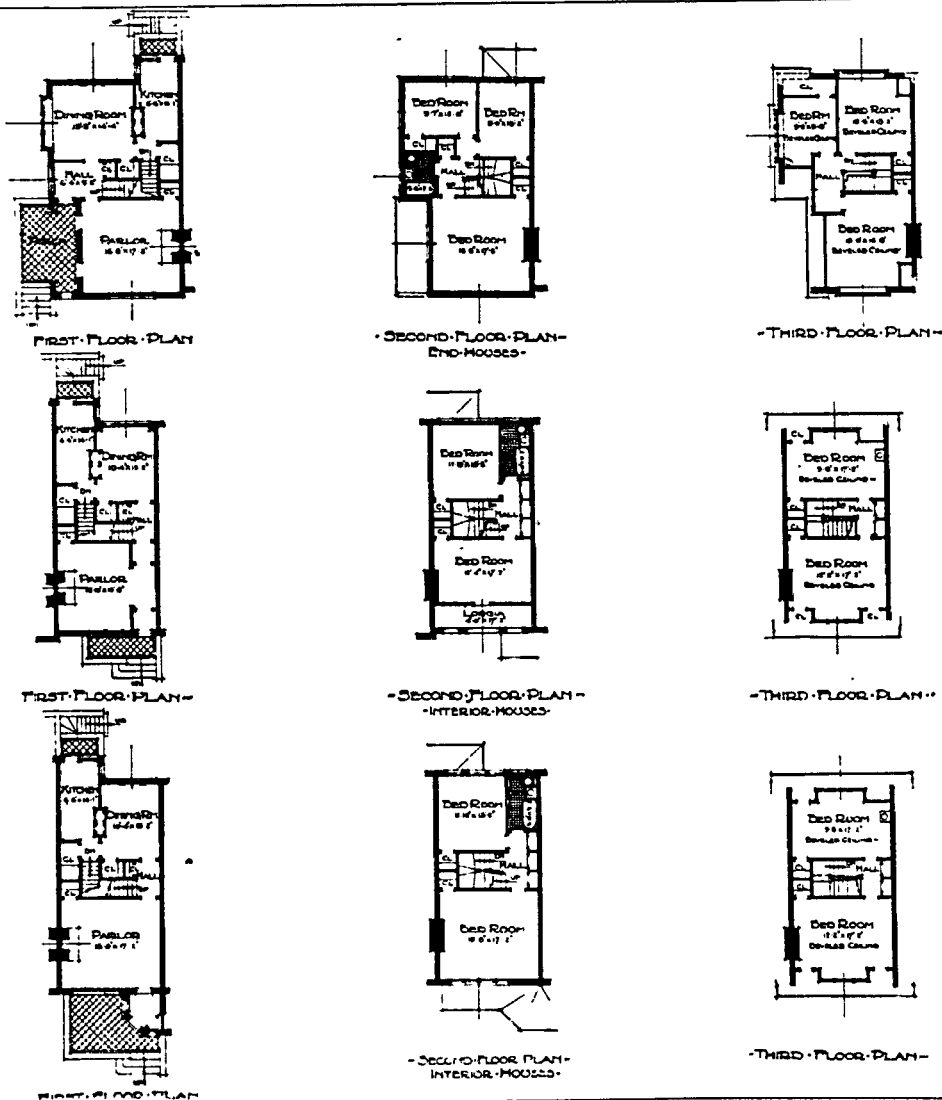


Fig. 65. Group XIX. "Eight 18-Foot and 20-Foot Single Family Houses." Grosvenor Atterbury, Architect.

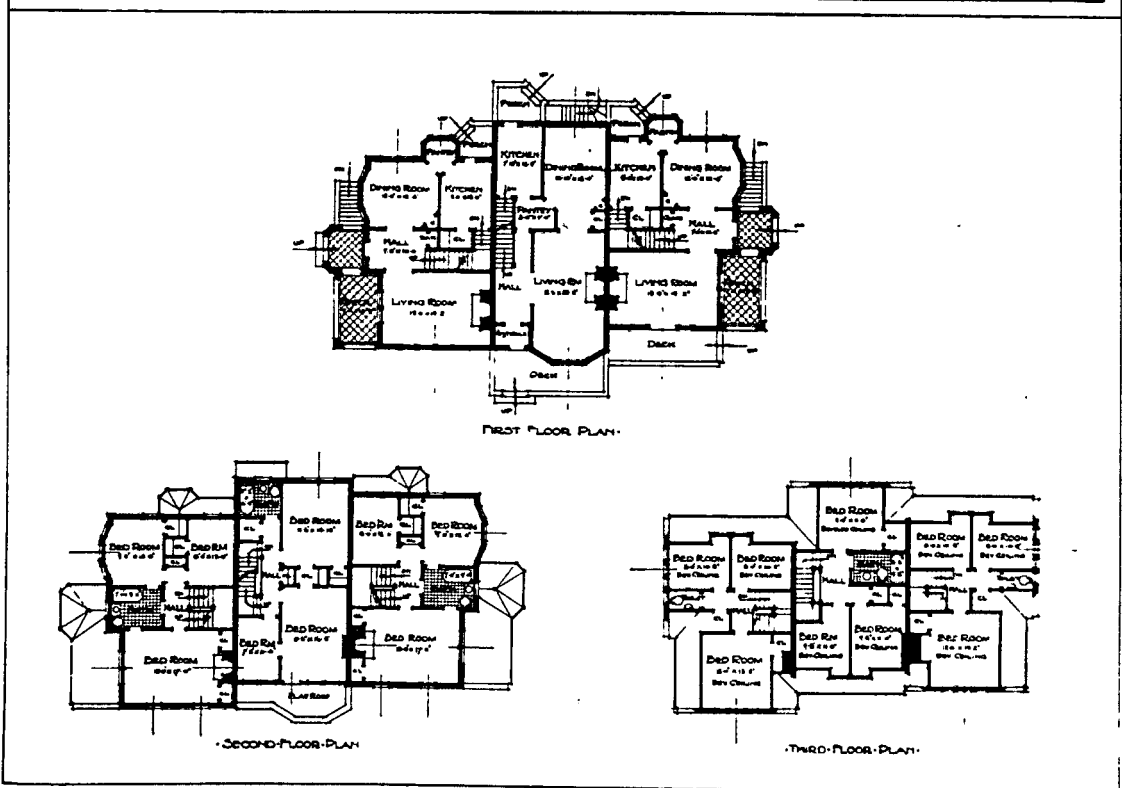
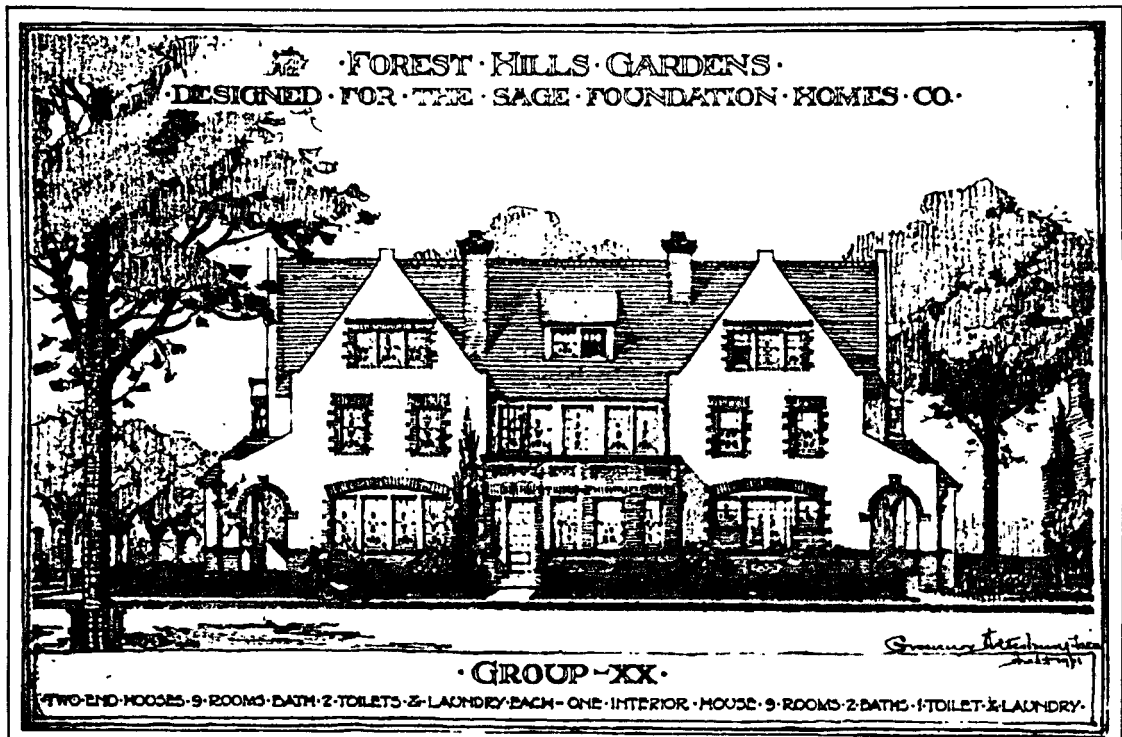


Fig. 66. Group XX. "One Interior, Two Semi-Detached Houses."

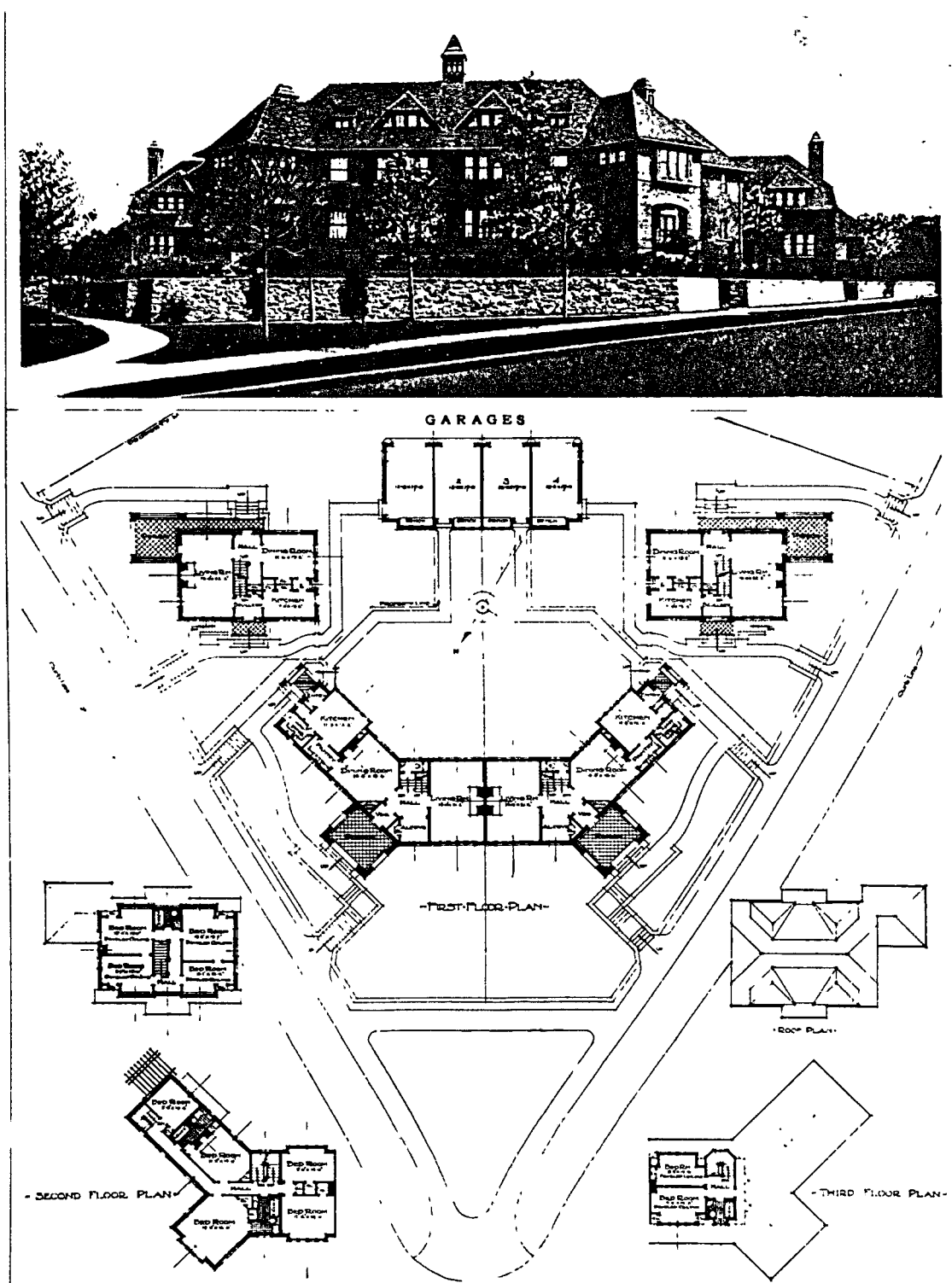


Fig. 67. Group XII. "Two Detached and Two Semi-Detached Houses." Markwood Road. Grosvenor Atterbury, Architect.



• DETACHED SINGLE-FAMILY-HOUSE - I-F-52 •
8-ROOMS-2-BATHS •
• AND • LAUNDRY •

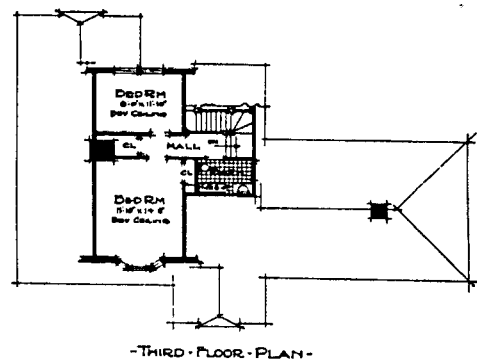
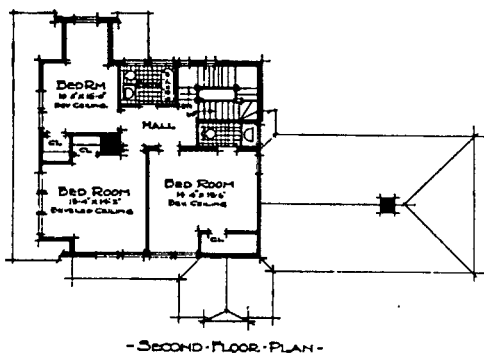
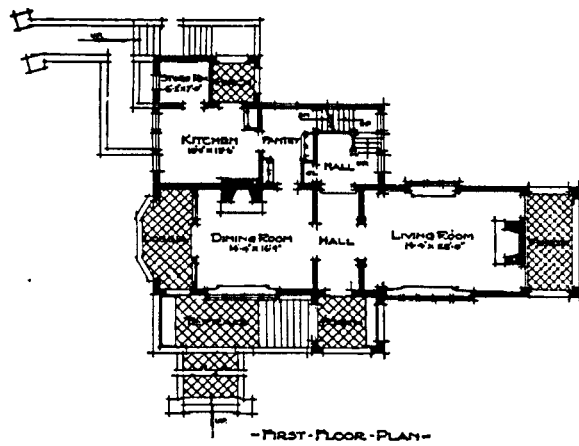


Fig. 68. Robert Harris House, "I-F-52 Single Family De-
tached House." Atterbury & Tompkins, Associates.

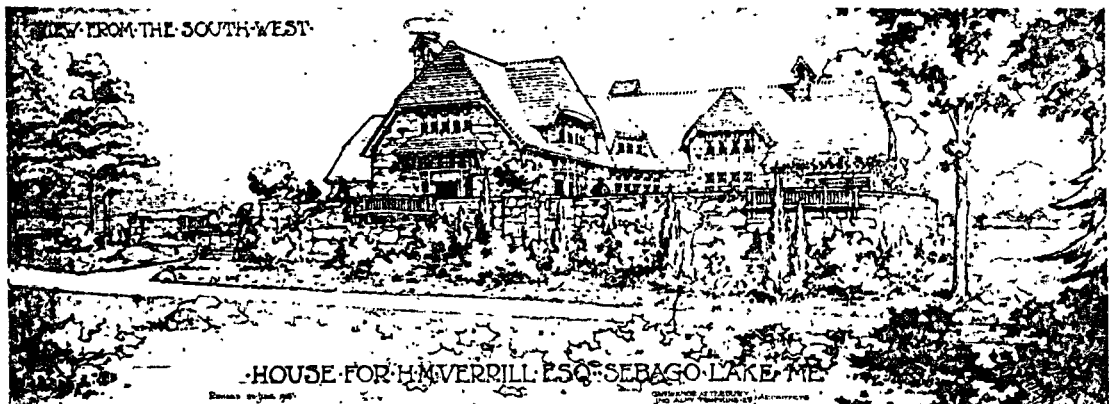
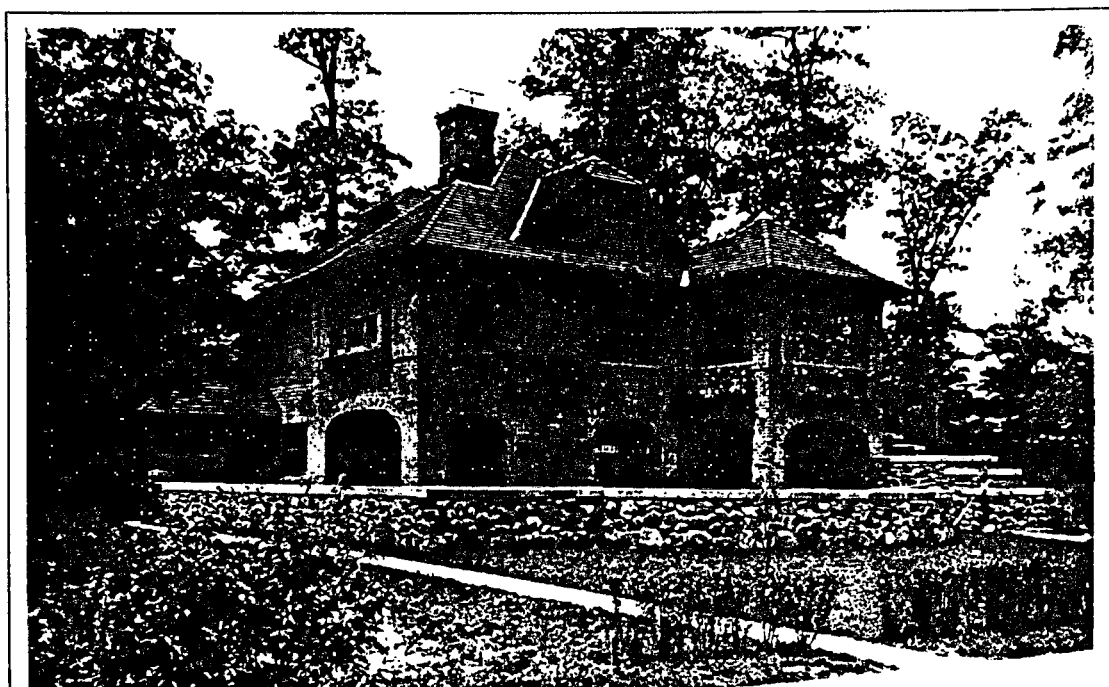
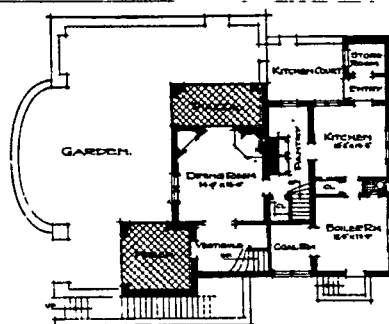


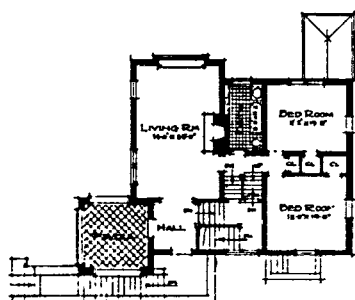
Fig. 69. Above-Sketch of Robert Harris House at Forest Hills Gardens. Below-House for H.M. Verrill., Esq., Sebago Lake, Maine, ca. 1909. Both sketches were shown in the Yearbook of the New York Architectural League.



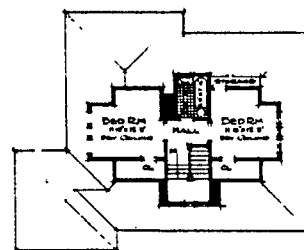
• DETACHED SINGLE FAMILY HOUSE - I-F-51 •
• 7 ROOMS AND 2 BATHS •



- FIRST FLOOR PLAN -



- SECOND FLOOR PLAN -



- THIRD FLOOR PLAN -

Fig. 70. House I-F-51. "Detached Single Family House."
Entrance to the house on the right at the top of the stairs.



Fig. 21. Hawthorne Park



Fig. 71. Mary E. Taylor House "House I-F-240."
Grosvenor Atterbury, Architect.

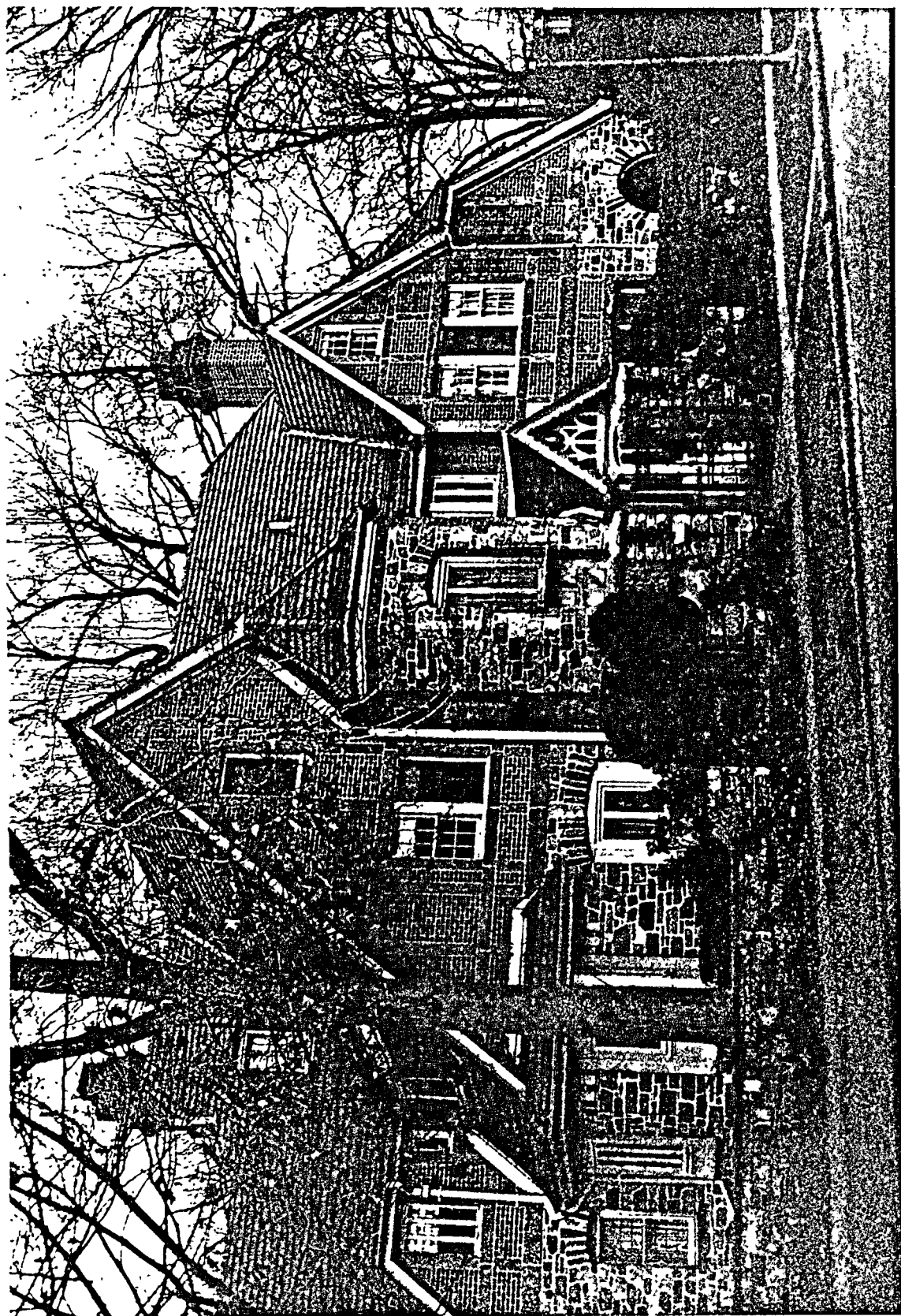


Fig. 72. H.H. Buckley House. Grosvenor Atterbury, Architect. Located at Greenway North and Markwood Road.

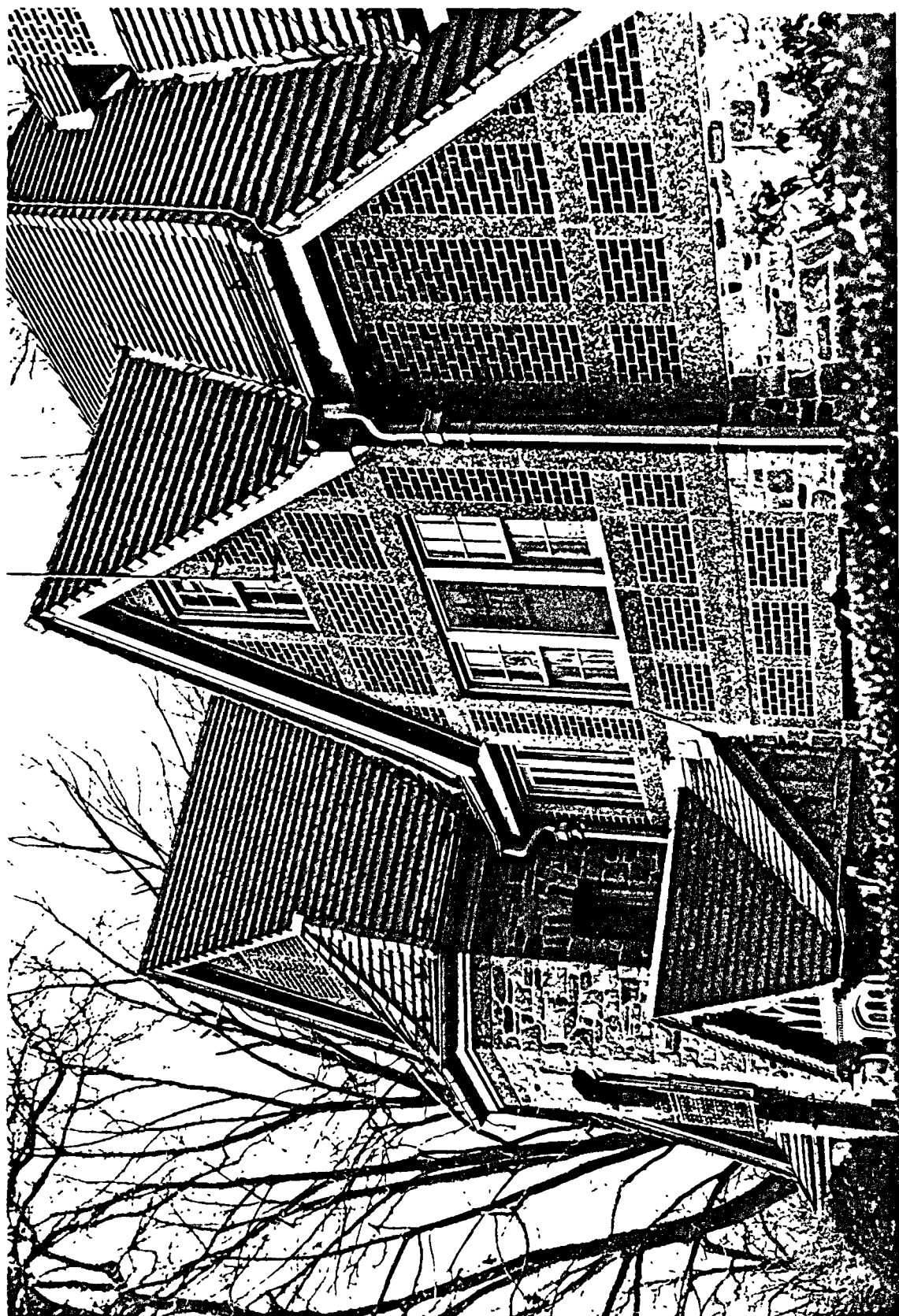


Fig. 73. H.H. Buckley House. Detail of front elevation. Note the half timbering done

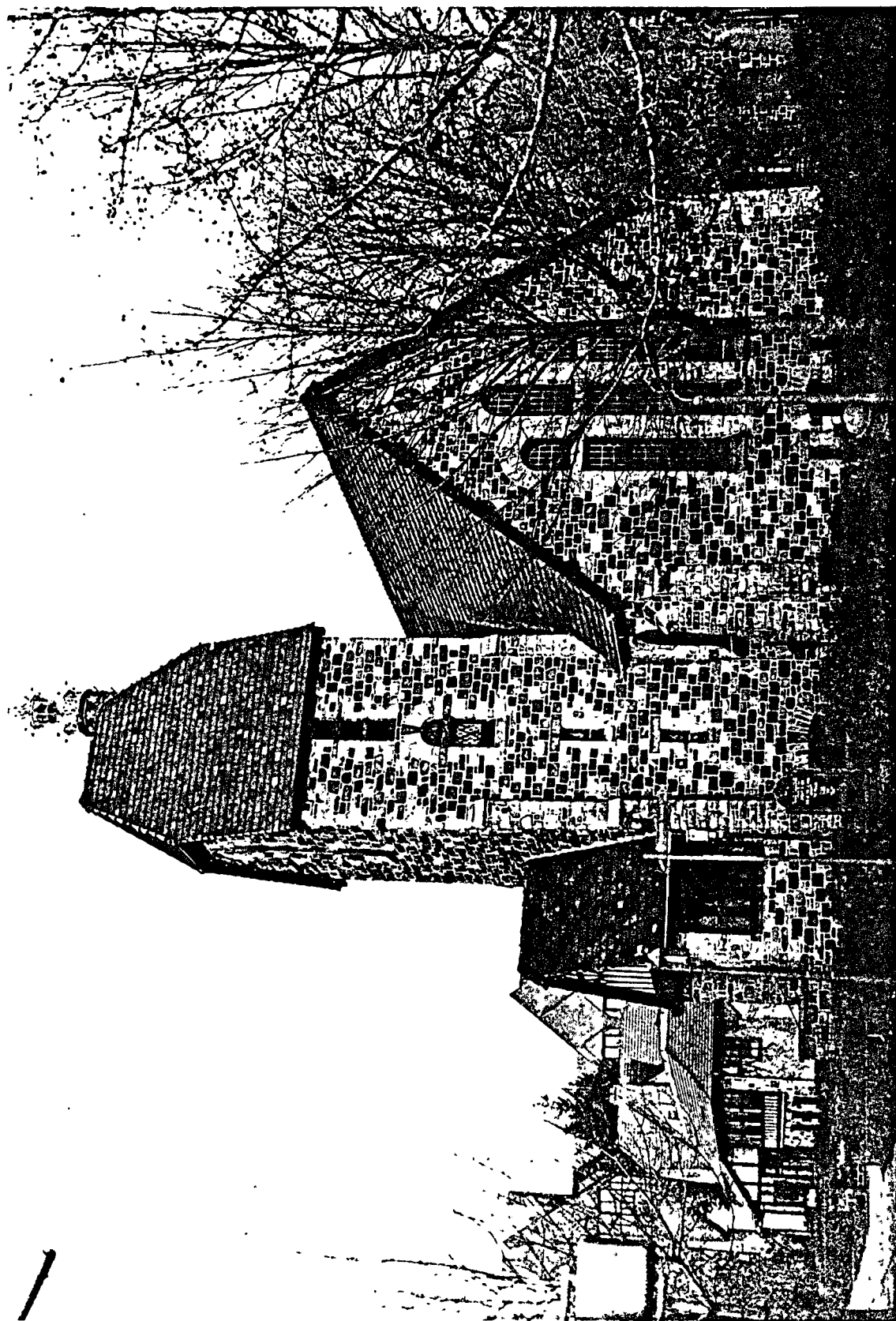


Fig. 74. Church-in-the-Gardens. Located at the corner of Ascan Avenue and Greenway North.

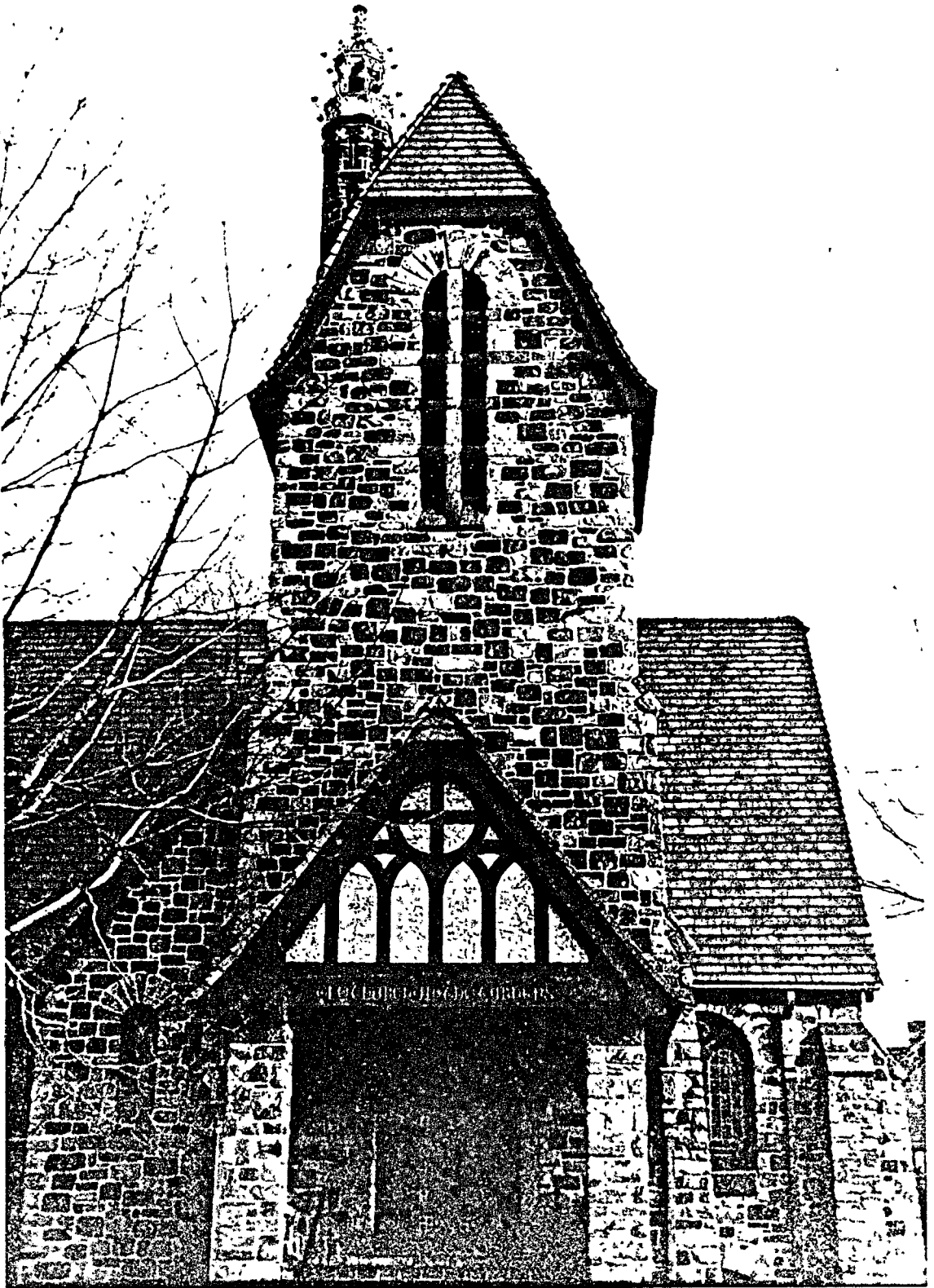


Fig. 75. Towered entrance to the church, facing Ascan Avenue. Note the gherkin-head roof and carved inscription over the entrance "The Church-in-the-Gardens".

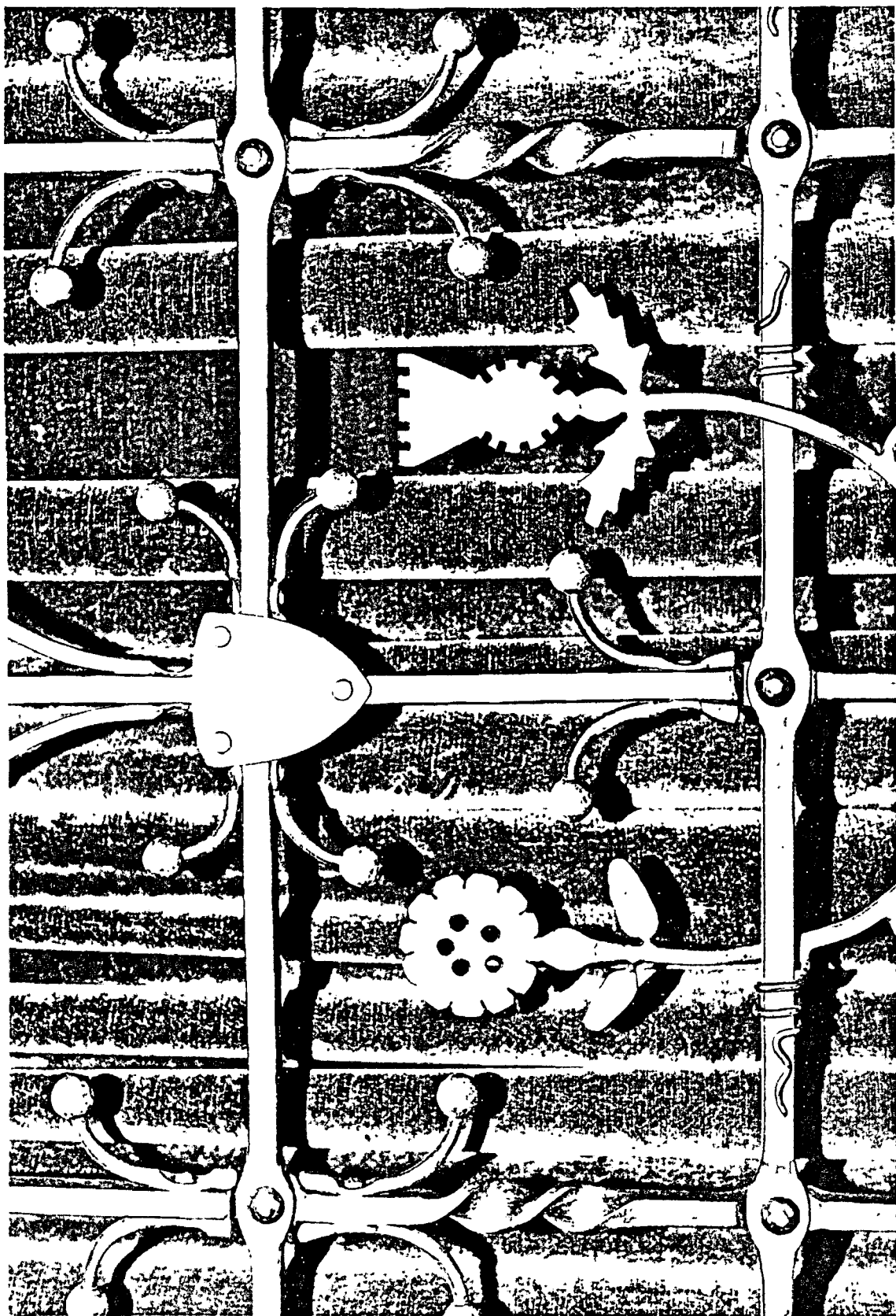


Fig. 76. Rood screen (detail) found in Church-in-the-Gardens.

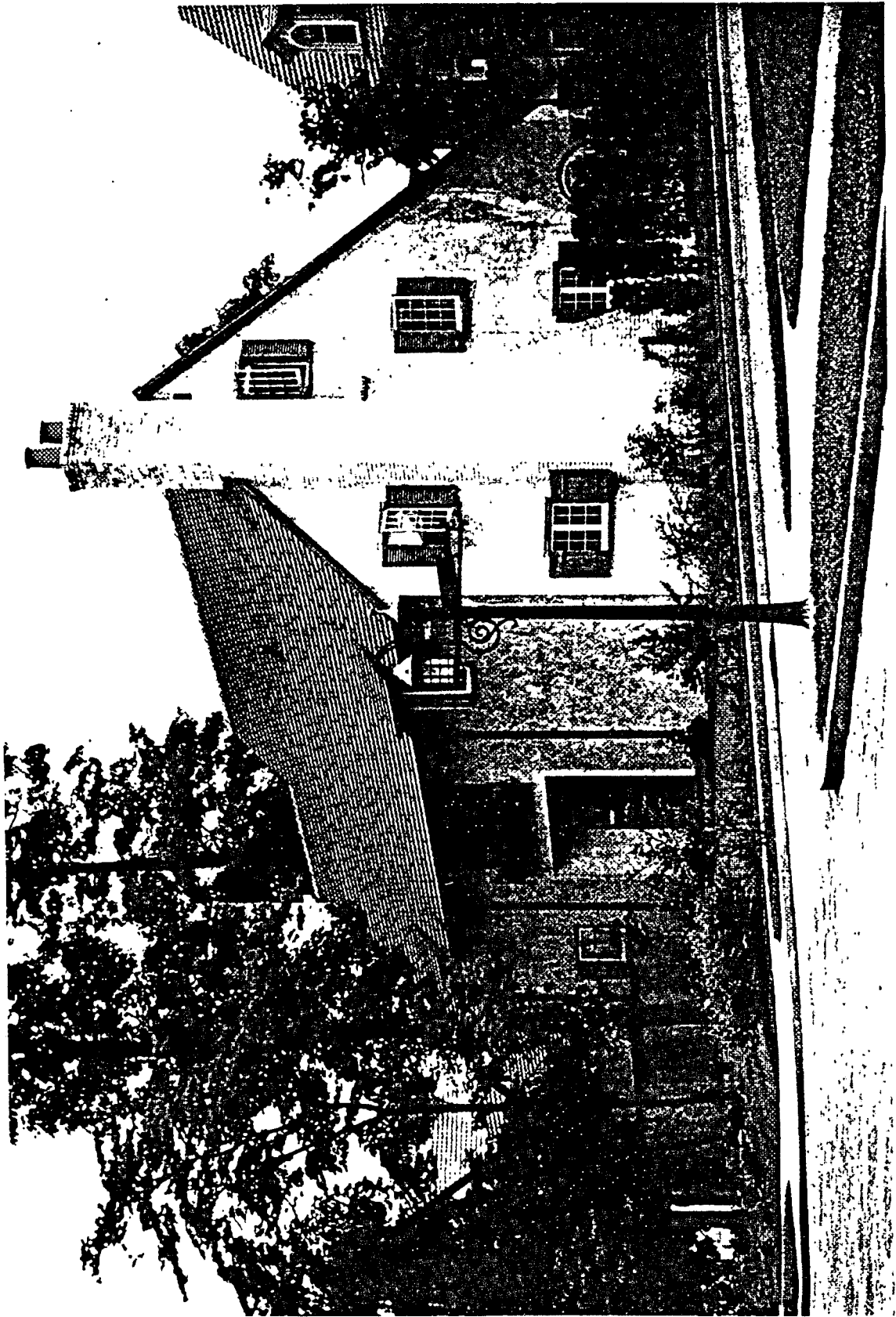


Fig. 77. Boardman Robinson House. 80 Continental Avenue. Albro & Lindeberg, Architects.



Fig. 78. Robert Anderson Pope House. Corner of Groton & Continental Avenues. Albro & Lindeberg, Architects.

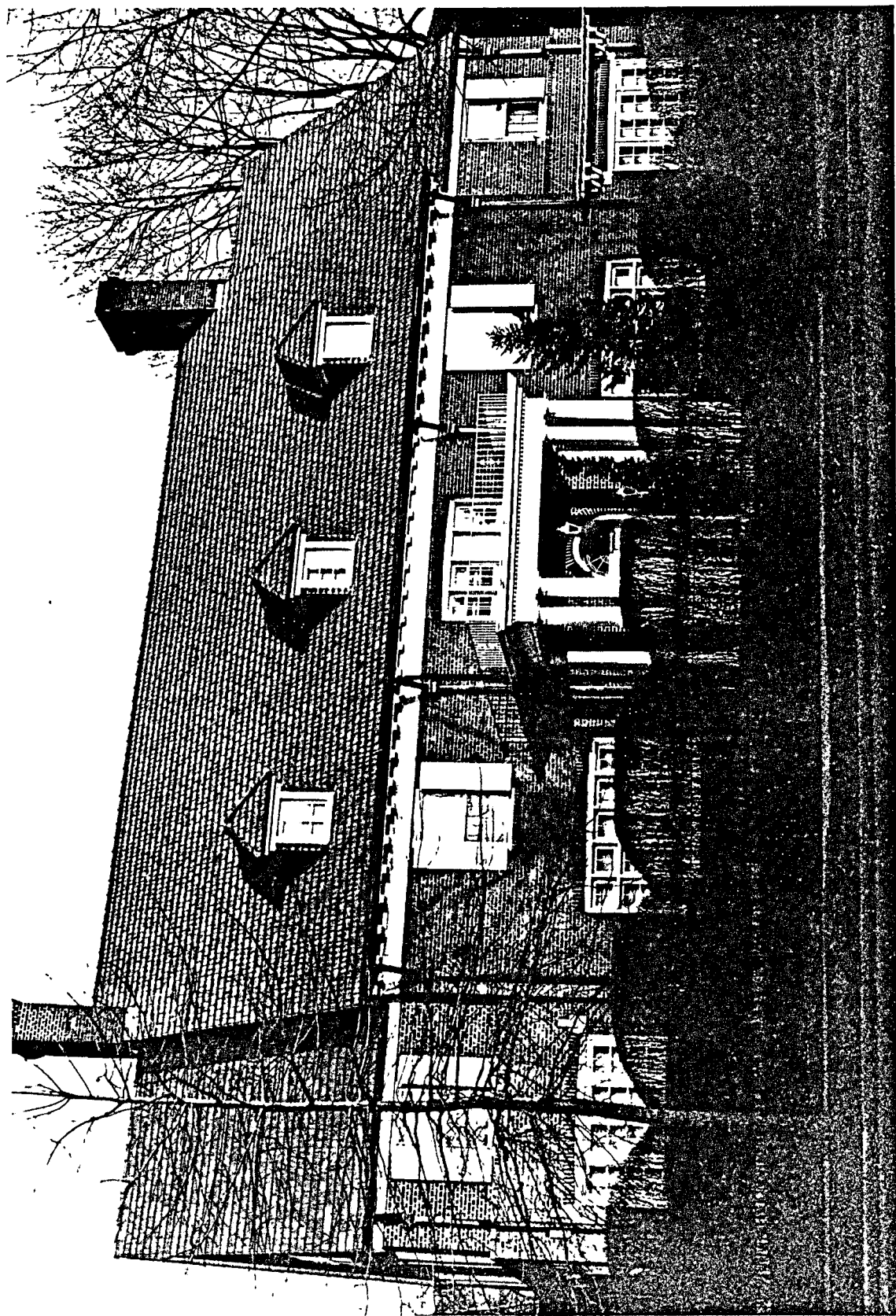
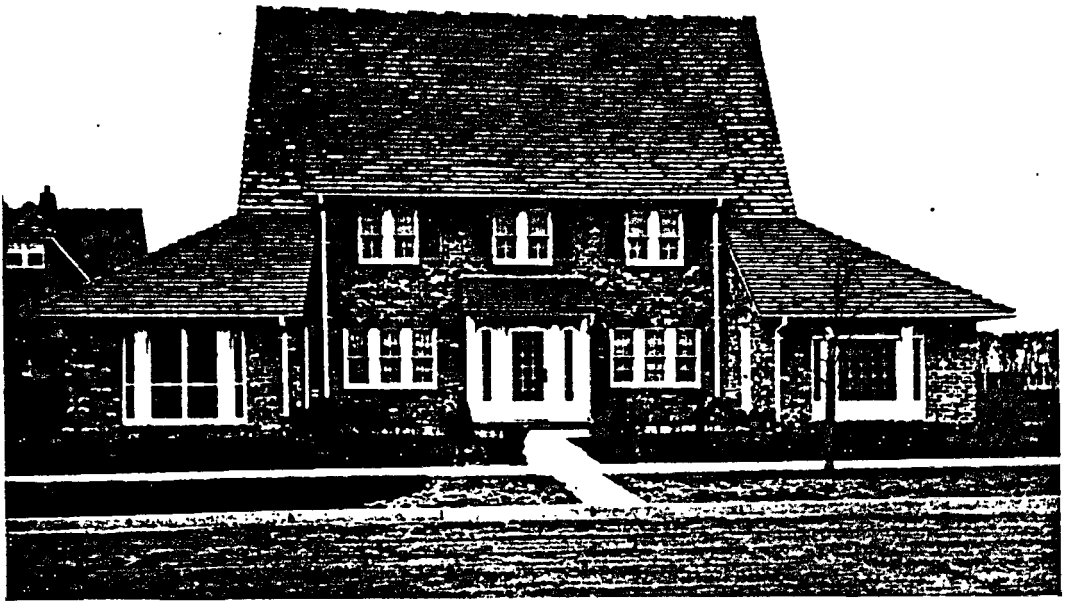


Fig. 79. Hugh Mullen House. On Greenway South where it intersects Groton Street.
Albro & Lindeberg, Architects.



DETACHED SINGLE FAMILY HOUSE I-F 237—8 ROOMS AND 2 BATHS

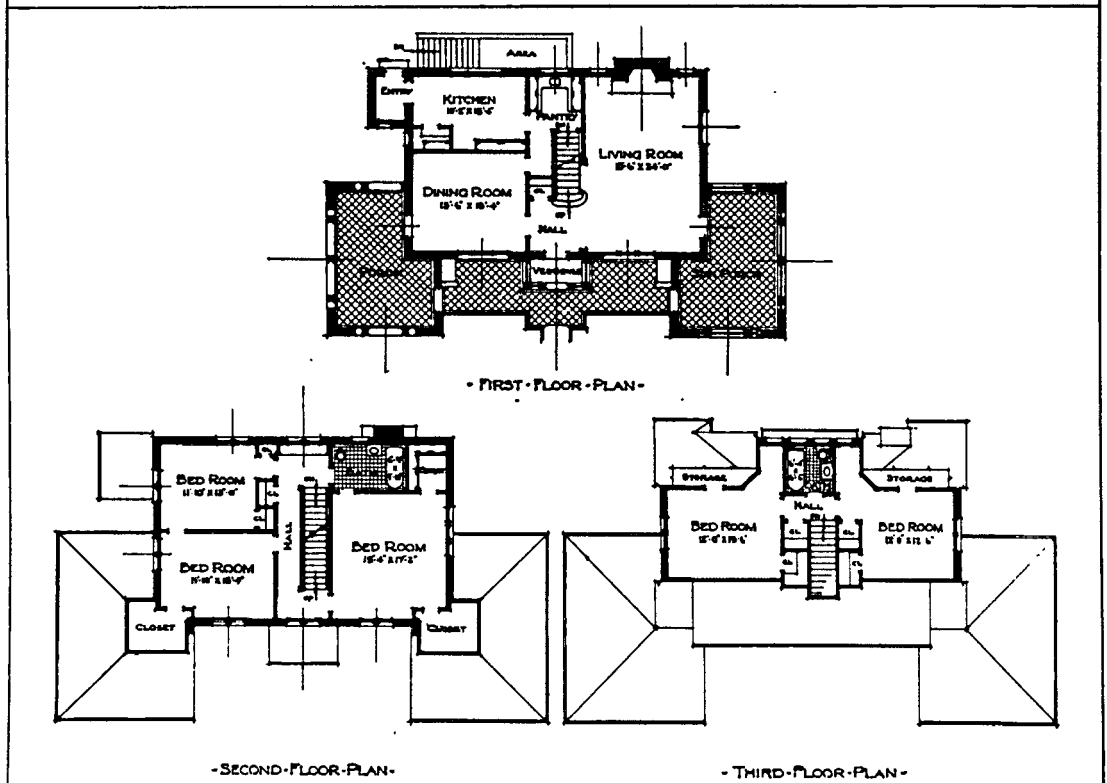


Fig. 80. William J. Leonard House "House I-F-237." Ascan Avenue and Russell Place. Albro & Lindeberg, Architects.

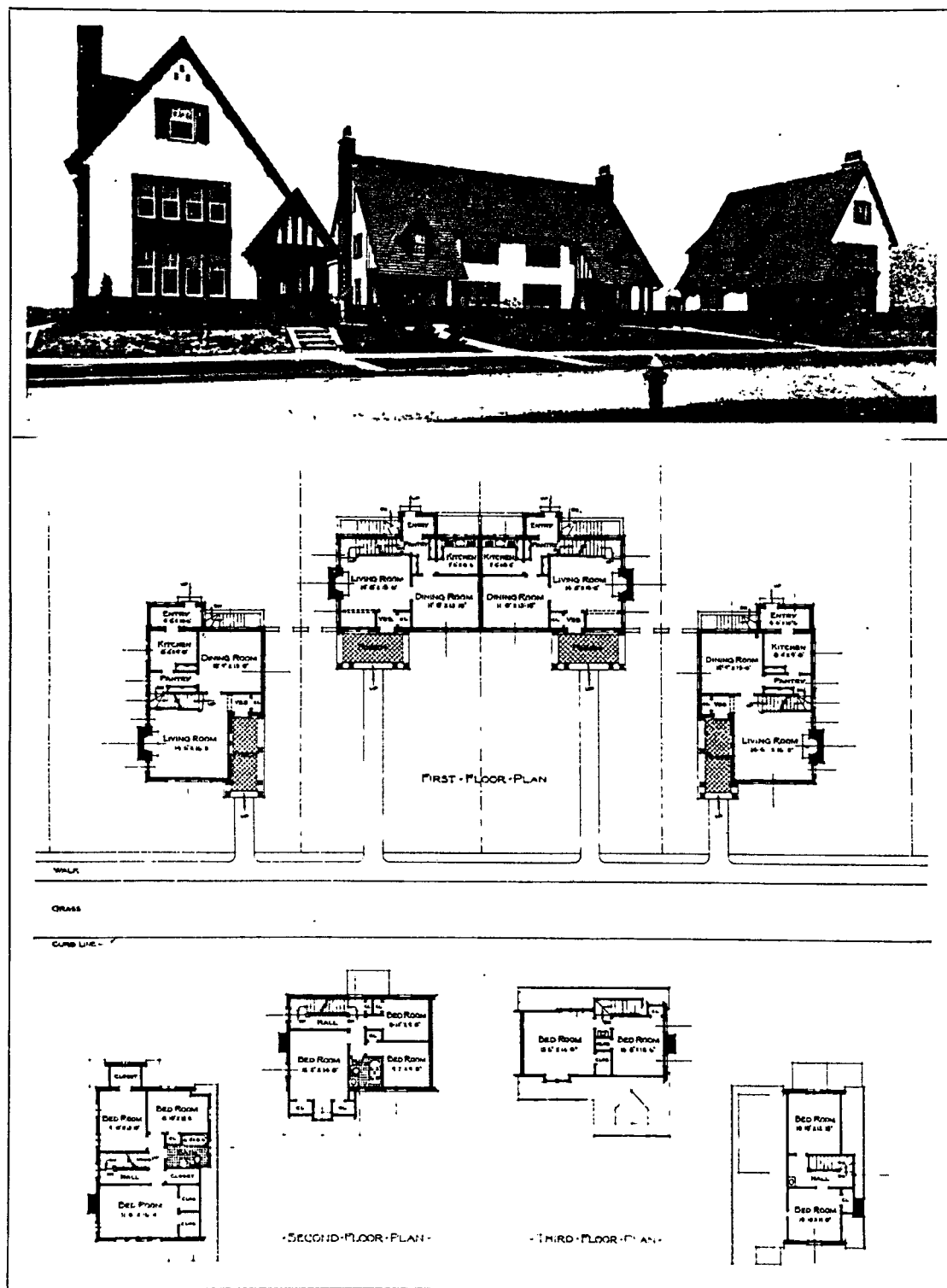


Fig. 81. Group XXVIII. "Two Detached, Two Semi-Detached Single Family Houses." Albro & Lindeberg, Architects. Note the two center houses repeat the form of the Leonard House, (Fig. 80).

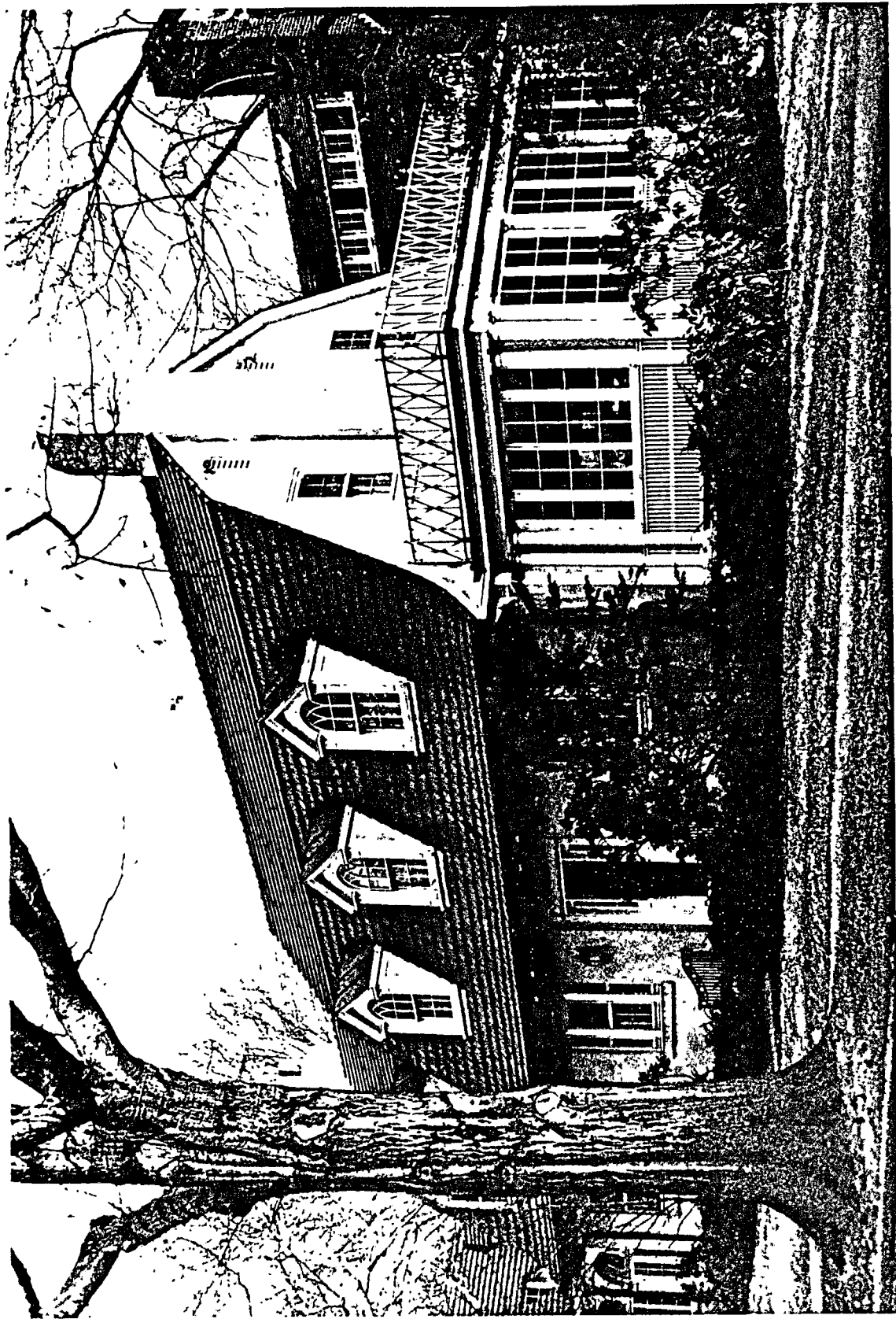
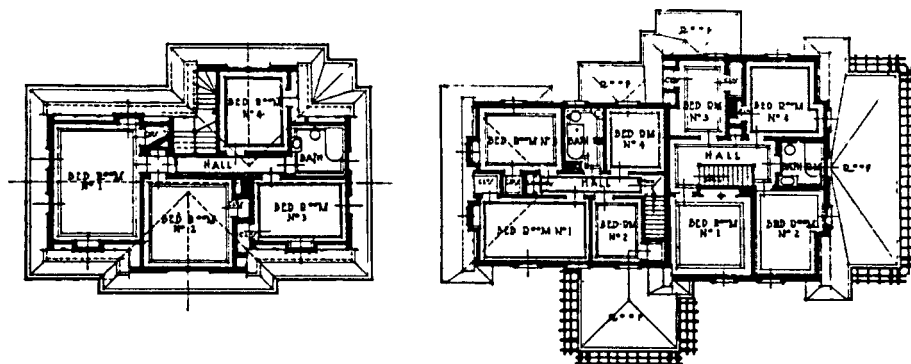
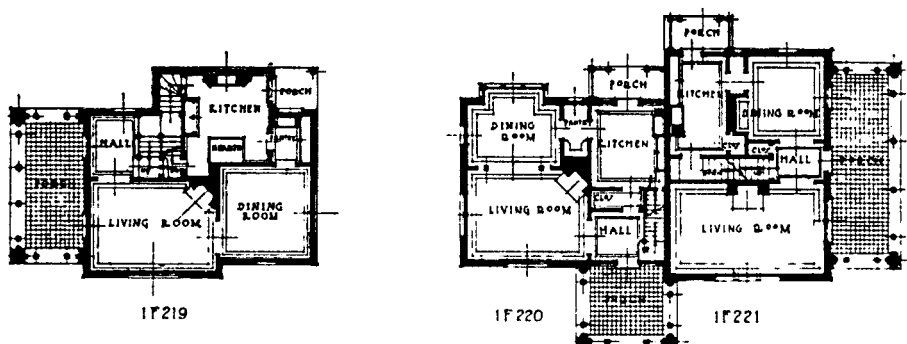


Fig. 82. W.P. Beazell House. Corner of Puritan Avenue and Greenway South. Aymar Embury, Architect.



SECOND FLOOR PLANS.



FIRST FLOOR PLANS

ONE SINGLE FAMILY HOUSE - SEVEN ROOMS & BATH

TWO SEMI-DETACHED HOUSES - SEVEN ROOMS & BATH EACH

Fig. 83. Group XIV. "One Single Family House, Two Semi-Detached Houses." Aymer Embury, Architect.



Fig. 84. Group XIII. "Two Detached & Two Semi-Detached Houses." Wilson Eyre, Architect.

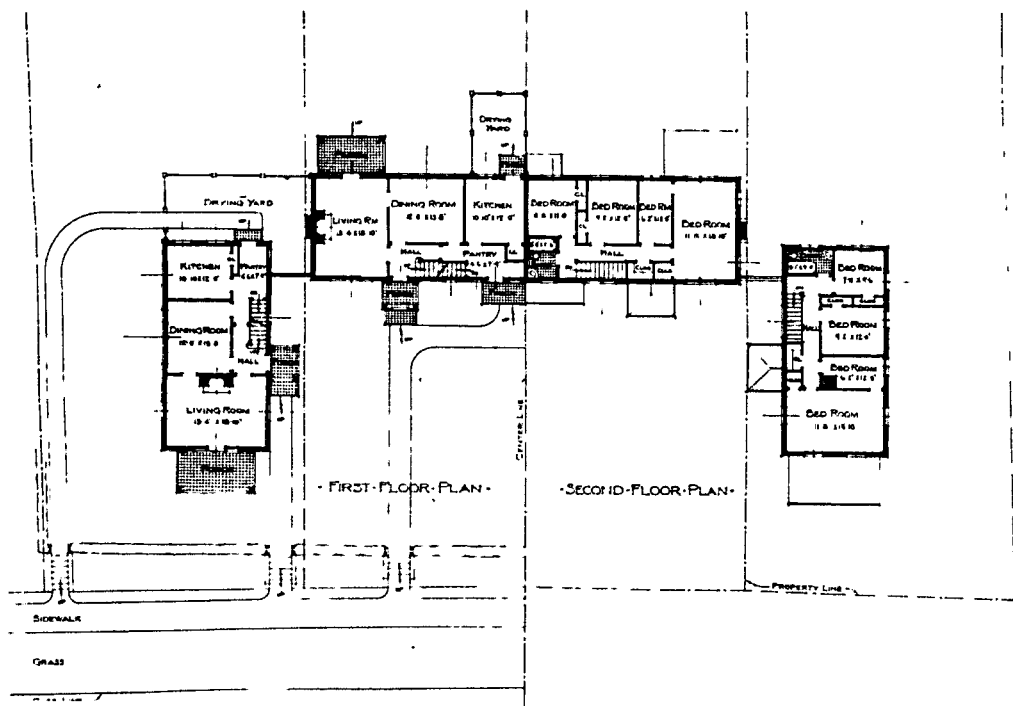
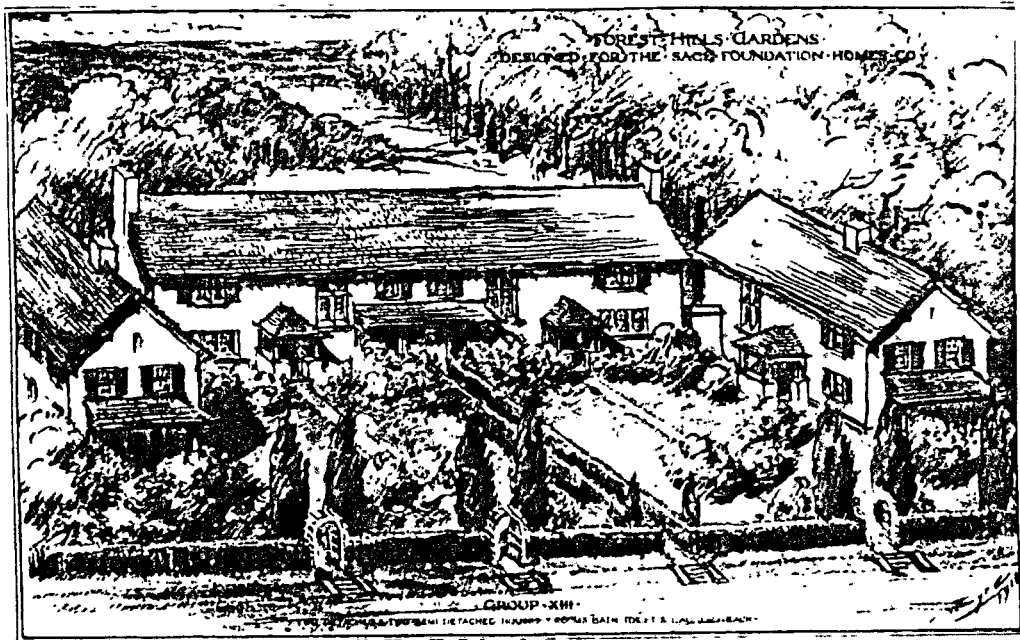
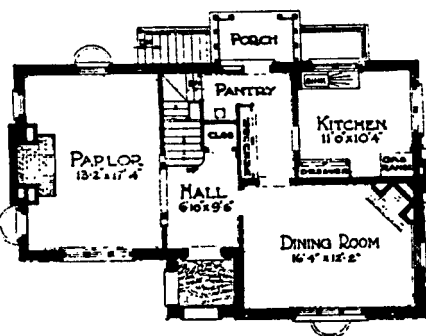
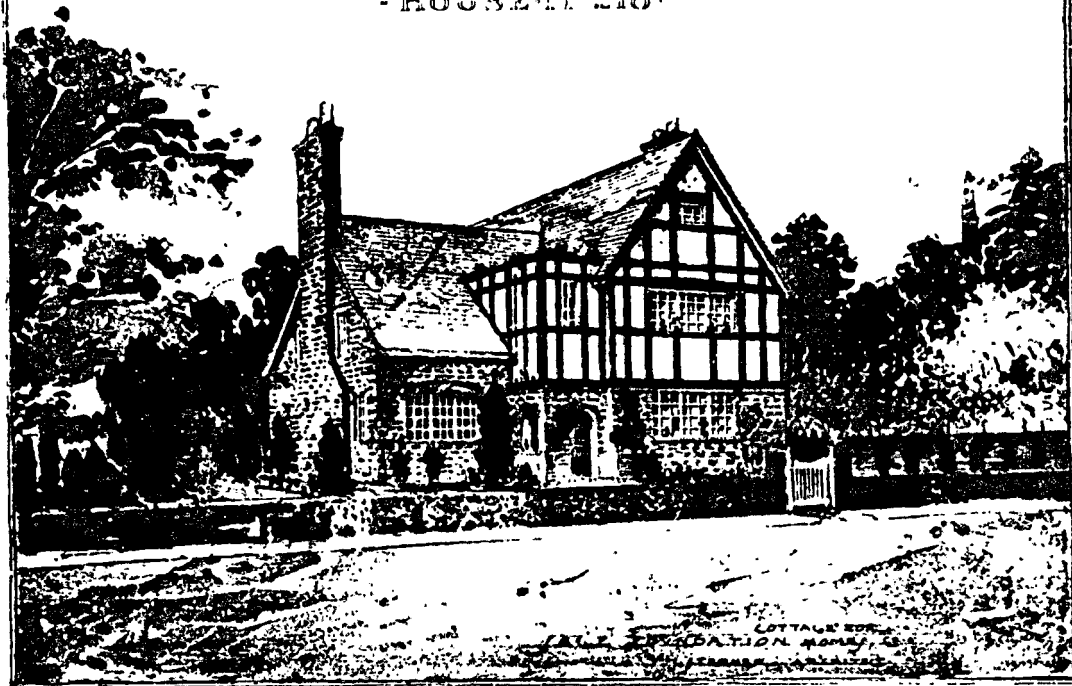
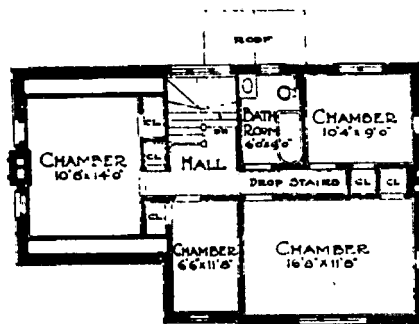


Fig. 85. Group XII. Rendering & plan by Wilson Eyre, Architect.

· FOREST HILLS · GARDENS ·
· HOUSE · I · F · 218 ·



· FIRST FLOOR PLAN ·



· SECOND FLOOR PLAN ·

· SAGE FOUNDATION HOMES · CO · OWNERS ·

· 1 · DETACHED · SINGLE · FAMILY · HOUSE ·

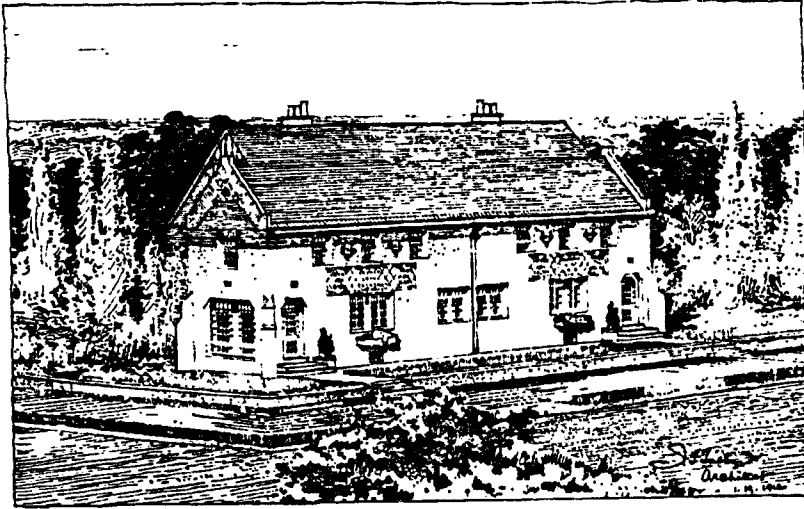
· 7 · ROOMS · & · 1 · BATH ·

Fig. 86. "Cottage for Sage Foundation Homes Company, House I-F-218." Frederick J. Sterner, Architect.



Fig. 87. Howard Duff House. Corner of Rockrose Place and Wendover Road. Eugene Schoen, Architect.

- FOREST HILLS GARDENS -
- DESIGNED FOR THE SAGE FOUNDATION HOMES -



- GROUP XXIX -
- TWO SEMI-DETACHED SINGLE-FAMILY HOUSES -
- 6 ROOMS - & 2 BATHS - EACH -

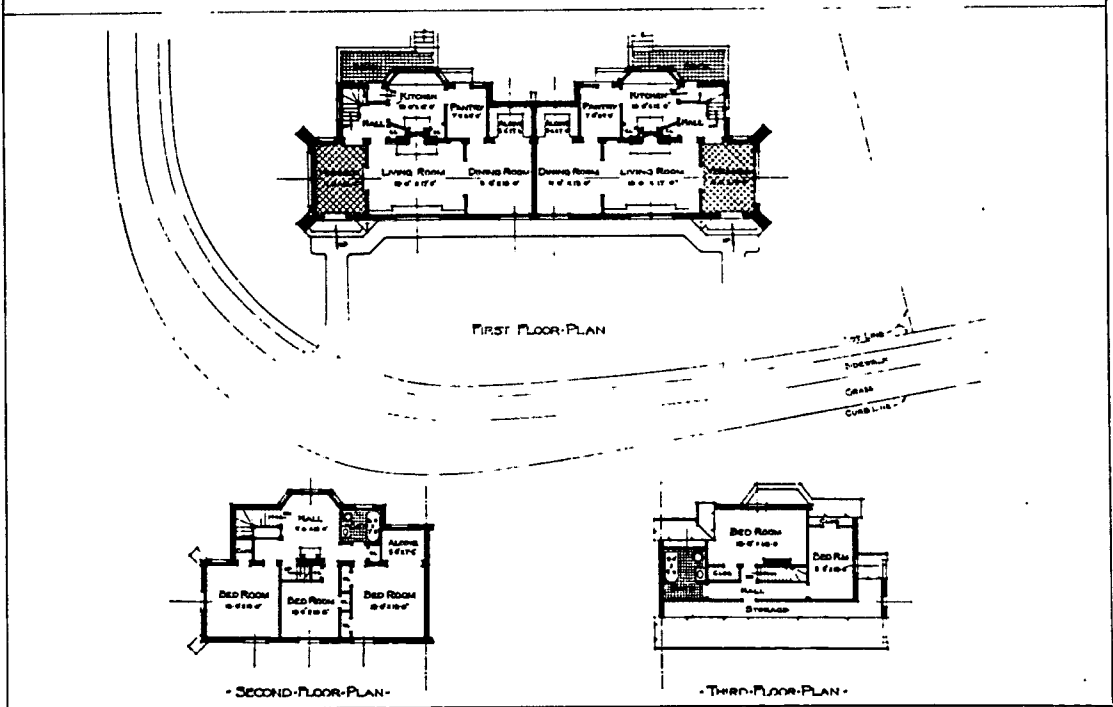


Fig. 88. Group XXIX. J.T. Tubby, Jr., Architect.