

A Magazine devoted
to Architecture Garden
and Decoration

Single Number
50 Cents

1222 CHESTNUT STREET, PHILADELPHIA

Five Dollars
a Year

A Personal Examination

Is necessary to demonstrate the reason for the superior wearing qualities of the

"EM-ESS" Plumbing Fixtures

since fine illustrations are no indication of superior design, workmanship and materials

A visit to our showrooms for purpose of critical examination is therefore urged.

The Meyer-Sniffen Co., Ltd.

(Established 1868)

Manufacturers and Importers of

"EM-ESS" PLUMBING FIXTURES

5 East 19th Street, New York

CALIFORNIA

REDWOOD DOORS

Handsomest Doors for the money in the market. Beautiful in Grain and Coloring, and Cheap

PUTTY-LESS WINDOWS

An improved form of Sash Construction, without putty

AMERICAN 3-WAY PRISMS

For Store Fronts and Dark Rooms. Save Gas and Electric Light Bills.

Full information concerning any or all of THESE THREE BUILDING SPECIALTIES will be sent on request. Samples at our office

E. A. CARLISLE, POPE & CO.

2-10 Sudbury Street, Boston

New York Office: 101½ W. 74th Street

THE H. B. SMITH COMPANY

510 Arch Street, Philadelphia

Manufacturers of HEATING APPARATUS

MERCER SECTIONAL BOILER



HIGHEST AWARD at Columbian and National Export Exhibitions for Greatest Efficiency and Durability.

Send for 1907 Catalogue or call and see Exhibit.

MILLS SECTIONAL BOILER



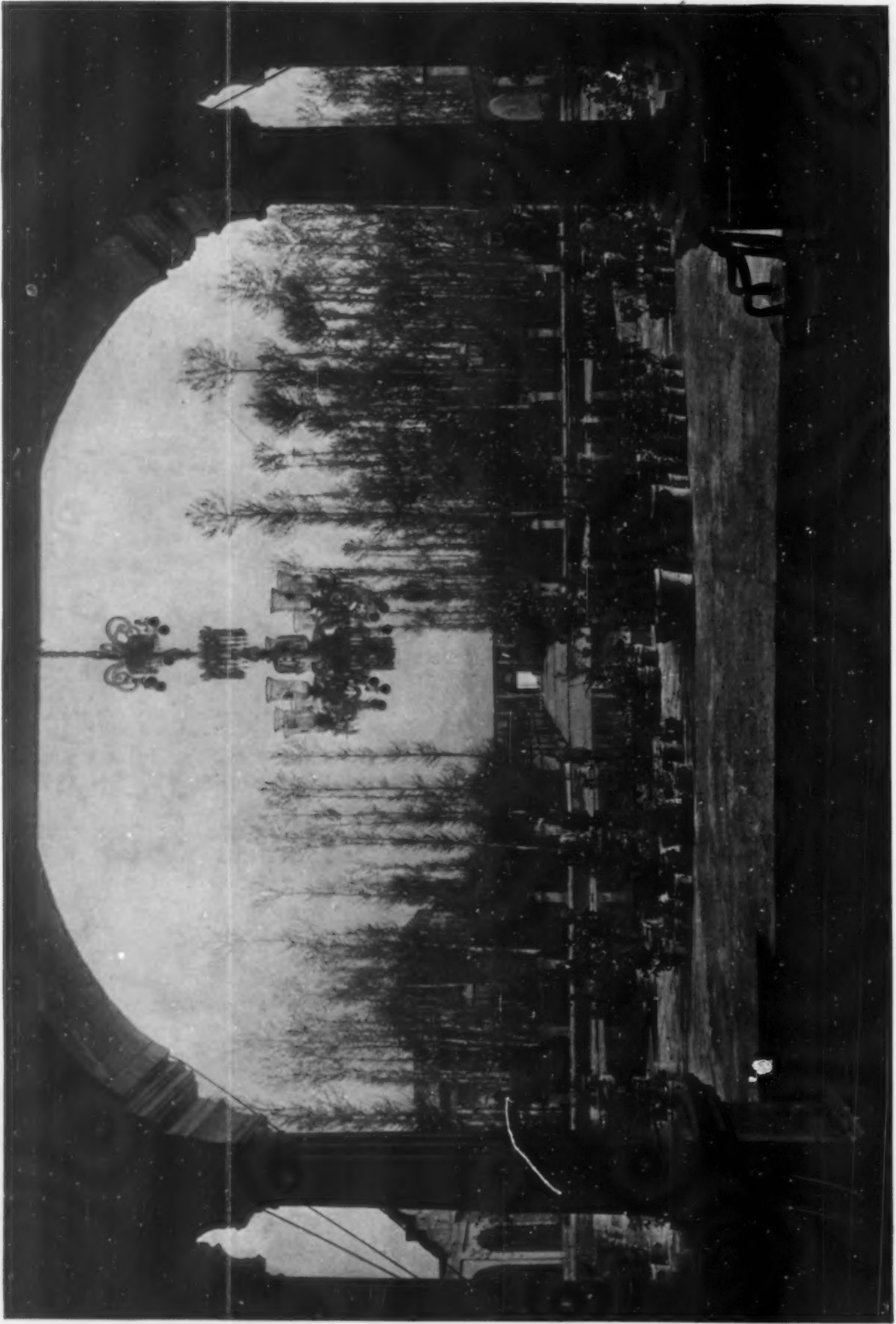
RADIATORS

DIRECT, SEMI-DIRECT and INDIRECT

FACTORIES: WESTFIELD, MASS.

ESTABLISHED 1853

In writing to advertisers please mention HOUSE AND GARDEN



A PRINCE'S GARDEN, PERSIA

House & Garden

Vol. II

MAY, 1902

No. 5

GLIMPSES OF MODERN PERSIA

I. THE GARDENS

IN spite of the conscientious efforts of travelers to disillusionize it, the West has tenaciously declined, for a matter of some hundreds of years, to modify its conceptions of the Orient. It is persistently incredulous of the decay, the threadbareness, which pervades practically all Asiatic life. The Persia the Occident dreams of is the Persia of the Arabian Nights, of Lalla Rookh, of Saadi and Hafiz, of Ismael, and of Shah Abbas, the Grand Monarque, who to reclaim a cheerless swamp district on the shores of the Caspian and unite it with the rest of the empire, built a superb causeway of solid masonry, some hundreds of miles in length, the crumbling ruins of which still look out dismally upon the wayfarer through that pestilential country.

The Persia which had its capital in Ispahan was worthy heir to the splendors of Persepolis and Ecbatana. In such a land, blooming from the Caucasus to the Indian Ocean, the bulbul may indeed have wooed the rose, to the music of fountains, in gardens shining with apples and pomegranates of gold. Mahomet's alluring

picture of Paradise was only a sublimation of the Persian gardens of his day; but that day has irretrievably departed.

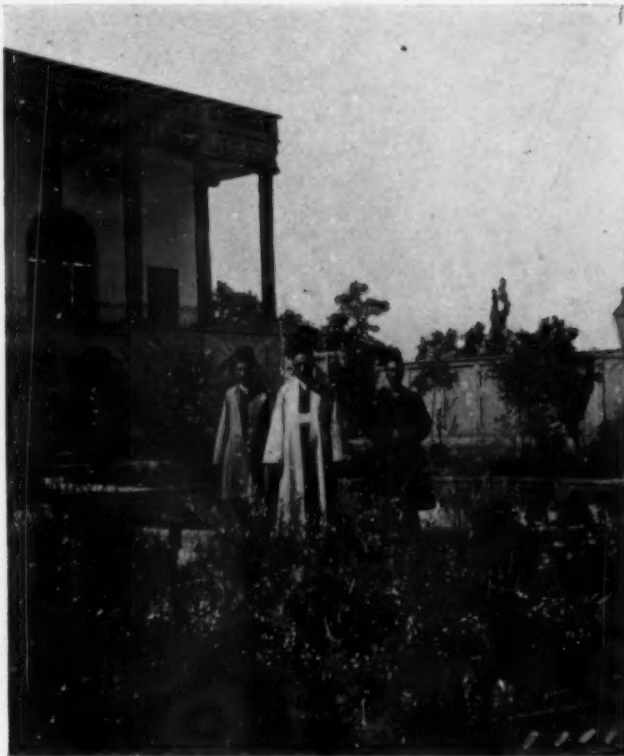
The hard fact is that the modern Persian thanks God if he can make one blade of grass

grow where two grew before, and even that is not an unmixed blessing, for it is certain to subject him to redoubled exactions. In Persia nothing fails like success; nothing is so dangerous or so expensive, even in the humblest sphere. Art and the worship of the beautiful do not go hand in hand with grinding poverty or insatiate official greed, and the Persian garden of to-day, even at its best, is like the palace and the temple, only a pale simulacrum of its predecessors.

Unpleasant as such an exordium may seem, it is

essential to establish this general background of condition, without which any truthful description of Persian institutions as they now exist would seem grotesque.

If asked for the causes of artistic decline in Persia, I should say consuming poverty, and back of that, recurrent northern and eastern invasion, with its attendant spoliation



IN A PERSIAN GENTLEMAN'S GARDEN



A FRAGMENT OF OLD PERSIAN MASONRY

and inevitable racial change. What the hordes of Genghis and Timur began, the present reigning dynasty of Kadjars, out of the rough Caspian province of Mazanderan, has about completed. In the beginning the Kadjars were warriors and vandals; they were never artists. The first of them inaugurated his reign by obliterating all traces of the estheticism of the Sufi and preceding rulers. In its stead he and his successors have created nothing. In the north of Persia the people are Turko-Tartar,—Mongol if you please; only a tinge of the old Persian blood remains. And the Turkoman, swinging like a pendulum between Kashgar and the Bosphorus, has not marked his way with monuments of the good, the true or the beautiful. Progressing southward, in Hamadan, Ispahan, Shiraz, the Turkish dialects gradually give way to Persian, the manners improve, refinement increases. But the poverty is everywhere. Every satrapy in the kingdom, South as well as North, has to surrender its flesh and blood into the hands of some Kadjar princeling or kinsman by marriage, in the way of tax. From every

acre of tillable soil more than half the harvest is squeezed to satisfy the official Juggernaut. The money thus wrung from them flows in a ceaseless stream, each great or petty official taking his "bit" as it goes to the capital. Here is wealth, real wealth; here is display; here is superficial beauty begot in extravagance; here is improvidence which seems to forget to-morrow. Thus is Persia made poor and ever poorer. Already it is a debtor nation, shorn of territory, and mortgaged to the eyes, but how much of riches is hidden in the Imperial secret coffers no man knows—certainly the hoardings of centuries. Some egregious claims, set at a figure which it was thought would make the country bond-slave for decades, have been met with ease and serenity after a little visit to the treasure chambers.

But it is the exactions of the present that are used to beautify Teheran; and in a way it is beautiful. In pictures, the Persian buildings, erected a century or more ago, with their plenteous stucco work and ornamental brick and mirror glass, with their graceful mingling of old Iranian and Arabic with

the Greek and Florentine forms, and something of the Russian new-birth, which is in itself half Asiatic, have a charm most satisfying to Western eyes; they are picturesque. Close at hand, much of the glamour goes, and it is all crude and uninspiring enough; but there is still a magic in the Persian atmosphere that turns its masonry to gold when the sun shines, and makes over its interminable stucco into cameos.

The spirit of the people at large, though, is moribund. There remains only the lees of the old civilization. But so long as he

place that is wooded or even green. Plains which in bygone time have been famously productive show caked and hardened soil, tilled in the archaic way, sometimes with comparatively generous harvest, but far oftener with little or no return.

This state of things seems to be the result of unchecked denudation and consequent destruction of the water supply, the lack of which is sadly apparent everywhere. Over a long and sorry stretch of country I rode with the man who is now in charge of the Shah's experimental farm at Teheran. While



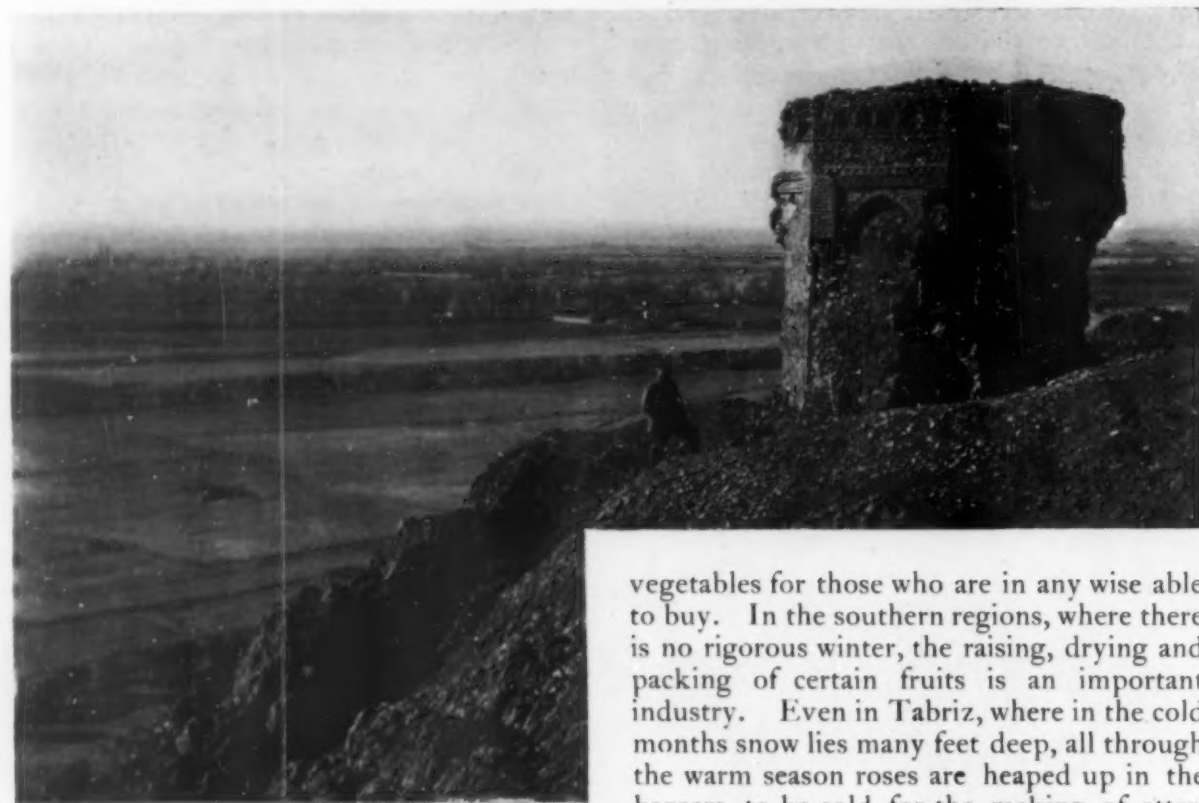
APPROACH TO A TYPICAL PERSIAN VILLAGE

shall draw national breath the Persian will continue to preen himself in a fool's paradise. He is the true Quixote of the new century. Persia, in his walk and conversation at least, is still the greatest and most beautiful land under the sun.

The general impoverishment is nowhere more painfully manifest than in the agricultural conditions. Districts which early European voyagers found well wooded or abundantly fertile present to-day only a dreary monotony of bare, relentless, yellowish gray hills, fruitless fields, and highways along which one seldom happens upon a halting

of Oriental birth, he had been trained in agriculture and horticulture in the best schools of Europe, and was a master of the science of cultivation in all its branches. "The soil is sick," he said; "it is dying of starvation and thirst. Given proper treatment and three-fourths of this country ought to be a perfect garden."

Proof of his declaration is not hard to find. Long distances apart, in the arid tracts of the northern plateau, there are water courses, where noisy streams tumble down from the distant wooded hills, always carefully prisoned, in their lower reaches, to turn



RHÉ (ANCIENT RHAGES) Remains of a once World-famous City

clumsy mills, (also heavily taxed) and then allowed to pass into the underground water system of *kanauts*, which is centuries old. It extends practically all over the country, and is of course badly in need of repair. It is from this network of primitive canals, devised by some wise monarch of old to prevent evaporation, that most of the cities and towns are watered, and from it, also, that the farmers, lease holders of great proprietary estates, flood their impoverished acres for an hour or two of an afternoon.

Where one of these hillside streams breaks at the foot of a slope, there is the densest and most succulent of herbage; and flowers without number and of a million hues make the air fragrant far about. It is in such places, naturally, that the little village populations have lingered, and the road thereabouts often lies for miles between high-walled gardens and orchards, lavish in their productiveness and furnishing many a heavy donkey-load for distant markets. Time and labor are worth little, and in the cities there is usually an adequate supply of fruits and

vegetables for those who are in any wise able to buy. In the southern regions, where there is no rigorous winter, the raising, drying and packing of certain fruits is an important industry. Even in Tabriz, where in the cold months snow lies many feet deep, all through the warm season roses are heaped up in the bazaars, to be sold for the making of attar. This commerce is well under way even in May, while yet from the roofs of the city one may look up and see the snows heavy on the summits of Sahend.

Roses grow wild within reach of the roadway's dust, each bush bent with its burden of innumerable blossoms. Even upon apparently barren hillsides, without grass enough to hide the soil, flowers will be found growing in the springtime,—far as the eye can see, glorious in color, and hardy enough, it would seem, to thrive for a little while on the scant nourishment the dissolving snow has prepared for them.

Riding over the wastes of hill and plain, you discern the presence of cities and towns, not by masses of buildings or the gleam of spires. These are of the selfsame yellow gray hue as the country itself, but it is by the green which towers above the rooftops, by the clustered foliage, welcome as an oasis, that the traveler knows a city is at hand. Once inside the city gates, traversing the wretched streets, surrounded by the smells and the tumult, one is forced to wonder what has suddenly become of all the verdure. It seems to have vanished like a mirage. The

House & Garden



THE ROOFTOPS OF TABRIZ

Showing the Multitude of Small Gardens



TREE-TOPS OF SULTANABAD

Persia's Weaving Center

thoroughfares are narrow and bare. Rarely does one see open avenues of trees such as adorn American and European towns. On either hand are the endless mud walls, from ten to twenty feet high, just such as the traveler will have seen, half-fallen, all along the road, marking the sites of forsaken villages.

All the Persian city life, aside from that which surges and clamors and haggles in the bazaars, is hidden behind these forbidding barriers, and it is here that the gardens grow. Here rise the giant trees which are seen from afar, smiling above the city's heat and noise and filth. Here the Persian's flower-worship—an idolatry which no admixture of sterner blood can exclude from his nature—finds its shrine and its outlet.

I have driven to pay a morning call at the house of a rich Persian of the old school, and been forced to abandon the conveyance and pick the way on foot for half a mile through narrow, broken streets, between walls of most disheartening blankness, to be admitted at last, through a heavy wooden door, into a garden where the air was languorous with perfume and the eyes were dazzled by such prodigality of color as one never sees at home save in a park greenhouse.

The financial and civic status of a Persian may, in a way, be known by his garden. In the decoration of interiors he is not exacting, and as a matter of fact, not overburdened with taste or invention; though to be sure

the Eastern forms do not lend themselves to any great diversity in the ornamentation of rooms. The greatest charm that any apartment can possess is to have windows giving upon a garden in bloom.

The peculiar domestic and social arrangements which prevail in Persia necessitate the distribution of the home, so to say, a partition of it into departments, such as could scarcely be maintained in America, where all the house

is common to all the members of a family. In Persia the divisions of an establishment must be wholly separate, and the gardens are therefore distributed in such manner as to provide a pleasant outlook for all. In the more pretentious houses, —of the nobility or plutocracy—the *anderun* or *harem* is entirely distinct from the rest of the house, oftentimes a separate building, constructed in the form of a hollow square, offering no view on the outer sides, but with its inner windows and doors opening on a beautiful patio or court, with walks,



A GARDEN AVENUE OF CHENARS

fountains,—or at least water-tanks—trees, shrubbery, vines and flowers of its own, upon which no masculine eye save those of the master are permitted to look. The extent of this space is dependent wholly on the depth of the owner's purse, but in cities an individual holding is necessarily confined to a square, save in the case of palaces which are usually situated on the outskirts, and practically unlimited as to park area.



QUADRANGLE OF THE ROYAL PALACE, TEHRAN





COURTYARD OF THE ROYAL TREASURY

TEHERAN

Members of the royal family,—and they are by no means few,—ministers of state and other potentialities who rejoice in a sense of security, are prone to expend upon these gardens a liberal share of the revenues drawn from the farming of taxes, always bearing in mind that to outshine a sovereign, even by the least of glories, is to court a gracious confiscation. Tenure in Persia, whether of place or property, is uncertain at best; possession is by no means nine points of the law, as the record of ruined favorites and cabinet ministers so abundantly shows.

In cities laid out upon level sites there is decided limitation to the possibilities of a garden, even in the most extensive estates; but where hills surround the town the houses of the major dignitaries will usually be found upon the slopes, where terraces—the Persian's highest delight—may be developed, with the accompanying effects of stairs, and attendant devices of masonry. On these

hillsides, too, such as are specially accessible in the suburbs of the capital, the water problem is easier of solution; and that is, after all, next to the possession of sufficient ground, the essential requisite for a Persian garden. The photograph of a bit in the Camranieh Gardens, now the property of the Naib-es-Sultaneh—prime minister and marriage relative of the Shah—illustrates the fashion in which side-hill facilities are utilized, though the conditions apparent are eloquent of the neglect and general decadence to which reference has been made, and into which even the most pretentious of Persian establishments are permitted to lapse.

The gardens of the Zil-i-Sultan—the Shah's eldest son, but not heir to the throne, since it is the royal prerogative to nominate the successor to kingship, and the Zil, while enjoying, or not enjoying, the governorship of Ispahan has not found particular favor in the sight of his sire—will serve to show



A COURT OF THE PALACE

TEHERAN

what methods are employed to effect the necessary irrigation in flat cities. It should be said, however, that in Ispahan the natural supply of water from adjacent hills is good,

though distribution is difficult. Here, too, is manifest the happy-go-lucky condition which mars and vitiates all attempt at beautification in the realm of Iran.

One will seek in vain in the modern gardens for any impressive display of the landscape gardener's skill. The elements sought are rather great profusion, a plenitude of color and soothing masses of shadow, all of which demands are natural developments of the Persian's inherent spirit or the simple outgrowth of his surroundings. A niggard in trade, he is absurdly lavish in certain phases of self-gratification; but the art of being magnificent he has lost.

In the most pretentious gardens there is pervasive suggestion of European influence in the design and a subserviency to the rectilinear, which if not borrowed from Europe, must be attributed to the Tartar strain; it certainly is not Persian, for the Persian's natural tendency is to mazes, such as might be suggested by the winding of a vine or a creeper. The straight line is the Turkoman's delight.

Winding walks, at any rate, are rare, but here again the condition of the country may

be explanatory. The requirements of the water system, to which reference has been made, necessitate in every garden a deal of masonry. Construction of any sort is perhaps more expensive in Persia than in any other country on the globe; not because labor is expensive; that costs nothing. Materials, such as brick and the like, ought to be cheap; transportation, to be sure, costs, for the wagon has not yet superseded the beast of burden. But it is dishonesty that makes building come high. There is absolutely no possibility of having any such work done without being outrageously cheated. Therefore, when all walks must be of solid masonry, brick and tile, raised to a height of two or three feet, few persons are extravagant enough to have them built in curvilinears. So you have the cruciform garden, with no curves save the circle which encloses the water tank in the middle of the expanse. (See diagram.)

Now regarding the reason for these raised



THE BAGH-I-SHAMAL

Summer Palace and Gardens of the Crown Prince at Tabriz

walks. Upon entering from the street, at the main door in the wall, you descend at once from five to fifteen steps to the brick walk surrounding the garden, which is therefore from five to fifteen feet below the street level, since a foot is a modest depth for a step in a Persian stair. This walk, extending around and across the garden, as shown in the diagram, is two feet or more above the ground proper; and out of this ground the beds, in turn, are raised, so that the flowers grow, in a way, on the summits of miniature hills. This impressed me, at first sight, as extraordinary. Turning out one morning at sunrise, for a walk before the heat set in, I learned the secret. The garden was full of dirty water, to the depth of a foot or more, and the level was rapidly rising. The flower beds, rich with the first bour-

geonings of spring, were carefully defined islets in the midst of an artificial lake extending all over the place. And this was the water supply of a Persian city. Once a fortnight, it seems, the *kanauts* or *karises* are tapped for each ward or district, and the water allowed to run in ditches along the dirty streets so dry at other times. The *mirab*,—literally, water-boss,—goes along from house to house, pulls out a plug in the foundation of the wall and lets the water flow through a conduit, running perhaps underneath the buildings, down into the garden. Pipes under the walks permit its passage from one section to another. The soil takes up a part of it, vegetation gets its periodical supply, and the residue, after a rude process of filtration, runs into the house cisterns, where it remains for use. The natives drink the stuff with comparatively small effort at purification; and why pestilence is not perennially preva-

lent, to the righteous taking-off of entire populations, passes all human understanding.

The average rainfall in Persia is small, and cannot be depended upon; but given the necessary supply of city water, and it is easy to induce plenteous growth, for the city soil needs apparently none of the persistent manuring so common to our gardens. The sites of great cities do not change. Tabriz, for example, has occupied its present location in the angle of the Sahend Mountains for certainly three thousand years. Back of that the record is misty. There is no pretence at drainage; the filth and refuse of century after century simply filter into the soil, which therefore is to the highest degree enriched. It is no uncommon sight to see, among the ruins in the environs of a Persian city, men



FROM A TEHERAN PORTICO

sifting the earth from around fallen walls, to be used as a fertilizer or to fill in about the roots of trees where it is desired to develop shade. The Russians are particularly industrious in pursuing this process in the old Persian towns which they have won by arms, such as Nahkitchevan and Erivan, in the neighborhood of Mount Ararat. I first saw it done near the tomb of Noah, on the outskirts of Nahkitchevan, and the charming park of young trees which has grown up in the center of the city is proof enough of what a comparatively little effort of this sort will, by and by, accomplish in places which Persia is now letting run to waste.

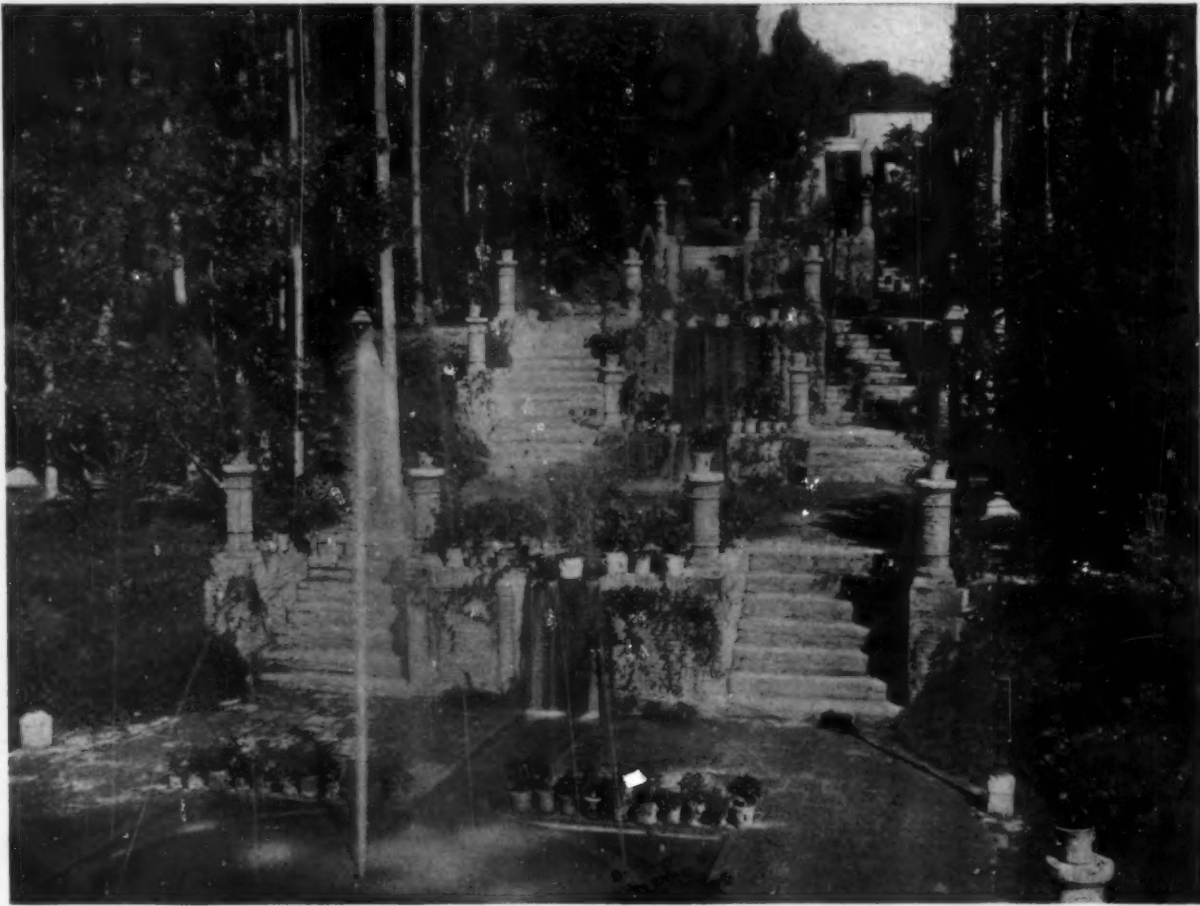
Incidentally, this sifting of earth from the ruins is lucrative, for treasure of all sorts is thus discovered and the laborer sells it for what seems to him a fabulous price. Ornaments, vessels, old coins of gold and silver, Cæsarean, Alexandrian, and others telling



ANDARUN OF THE SHAH'S PALACE, TEHERAN

Inside the Enclosure



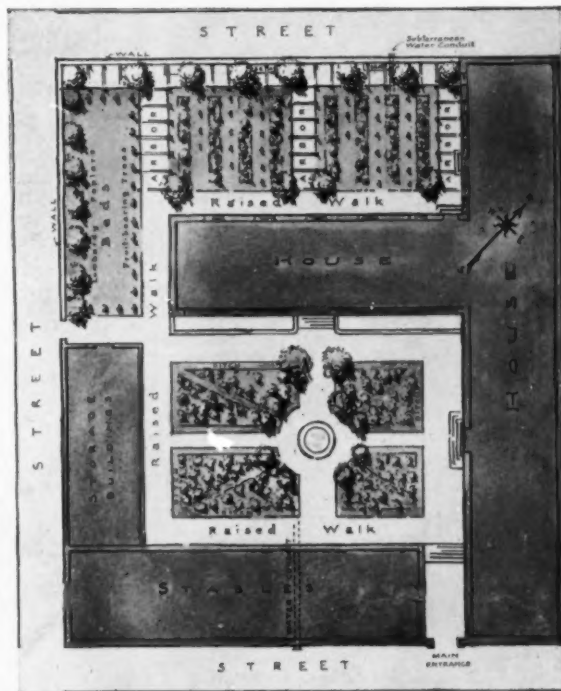


IN THE CAMRANIEH GARDENS

Property of the Naib-es-Sultaneh

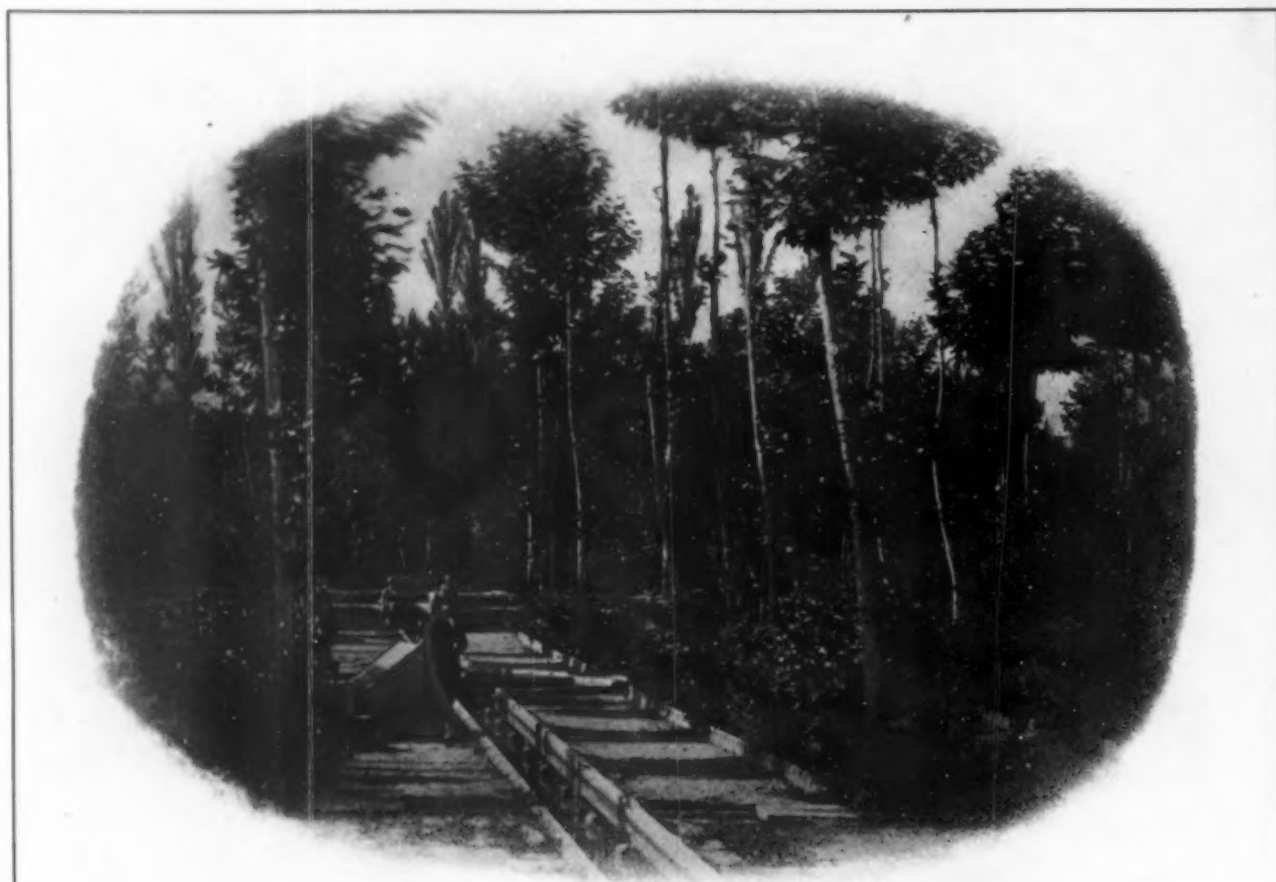
of commercial invasion by Europeans during the Middle Ages, are sold by metal-workers in the bazaars, for a little more than they are worth as old metal. In this regard, aside from its agricultural and mineral possibilities, the whole country is a mine of wealth; but for the infidel to set a spade in it would be disastrous.

Considering the paucity of water, one scarcely need look for playing fountains in any Persian garden; but in many of them there is a circular or



ARRANGEMENT OF PERSIAN CITY PREMISES

octagonal basin in the center, in which a part of the water is detained on its way to the cistern. This serves at once an ornamental and religious purpose, since water is intimately associated with the Mussulman rites. Several times a day, even in the caravansaries of the bazaar, where the torrent of trade is never still, the worshipper goes to the water font, fills his small ewer and performs the ablutions incident to prayer. In many of the humbler gardens the



GARDEN OF THE ZIL-I-SULTAN, ISPAHAN

central space is occupied by a simple shallow cylinder of cement, adorned with potted plants. Thus the suggestion of a fountain is retained, and the attendant expense avoided.

It is hard to conceive of a human, in any land, who extracts more of genuine enjoyment from such a garden as he may possess than does the intelligent Persian. The morning, up to the time when business necessitates his departure for the bazaars, and evening, after his day's wrangling and forereaching are over, find him seated in some shady spot or slowly promenading the broad walks among his flowers, sipping the tea which attendants bring him at incredibly brief intervals, inhaling the smoke of numberless cigarettes, dreaming, plotting business stratagems, but worshipping continually. He does not cull flowers. Few Persians do. They seem rather to look upon the habit as barbarous. A Persian of refinement is much more likely to have a small rug spread before

a particularly fine blossom, pass his hour in silent admiration, and then go away leaving it intact.

But for all this, there is little of horticulture in the way of grafting, or other processes looking to the development of new types. To this the Persian gardener, who is after all little more than a painstaking laborer, is not schooled. It is for this reason, probably, that the flowers to be found in a Persian garden are mainly of the simpler sort, such as chrysanthemums, asters, hollyhocks, the narcissus, hyacinth and tulip, pinks, larkspur, violets and the like. All these attain distinguished size and color. The white lily is most highly prized, but the rose is without doubt the Persian flower. Even in its decadence, Persia is a land of roses. They bloom in great prodigality and with a diversity of form and color which is little short of astounding. The Persian roses seem, though it is perhaps the effect of contrast with their surroundings, to have a



AT THE FRENCH CONSULATE

TABRIZ

quite unusual fragrance. They are amazingly vigorous and hardy, too. Aside from certain varieties of roses and the honey-suckle, flower-bearing climbers are—so far as my own observation goes—comparatively few. The grapevine is much utilized for arbors, where shady walks or resting-places are sought,

and the grapes, which are of excellent size and flavor, keep until early spring. The Mohammedan prohibition of wine is strenuous, and in public every good Mussulman anathematizes drink, but the smallest of gardens will produce more grapes than any family can eat, and the Persian is too thrifty



A GARDEN AND GREENHOUSES

to let anything go to waste.

Fruits are abundant in every garden. Apples are not particularly good, but plums, peaches, apricots and berries of all kinds grow well, even in the north, and the Persian melon has not its equal in the world.

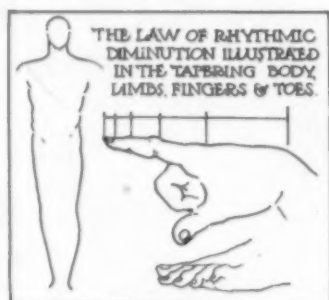
Of shade trees, the chenar or plane-tree, the poplar, the willow, box and elm are most frequent

in the higher latitudes. Palms increase in number as one journeys southward. There, too, is found in greater frequency the cypress, emblem of mourning, lending, with its cone of dark and unequalled green, a somber note in the midst of the garden's brightness.

John Kimberly Mumford.

THE BODILY TEMPLE.¹

CARLYLE says, "There is but one temple in the world, and that is the body of man." If the body is, as he declares, a temple, it is not less true that a temple or any work of architectural art is a larger body which man has created for his uses, just as the individual self is housed within its stronghold of flesh and bones. Architectural beauty, like human beauty, depends upon a proper subordination of parts to a whole, a harmonious inter-relation between these parts, the expressiveness on the part of each of its functions, and when these functions are many and diverse, their reconciliation one with another. For



this reason a study of the human figure with a view to analyzing the sources of its beauty cannot fail to be profitable to the architectural designer. Pursued intelligently, such a study will stimulate the mind to a perception of those simple yet subtle laws, according to which nature everywhere works; and it will educate the eye in the finest known school of proportion, training it to distinguish minute differences, in the same way that the hearing of good music cultivates the ear.

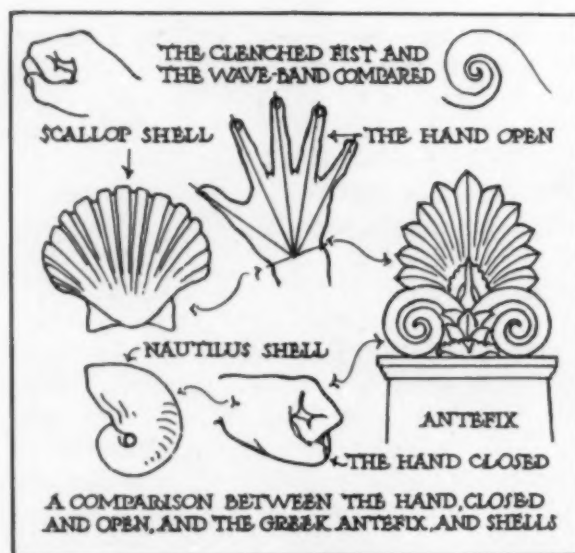
In the ideally perfect human figure, those principles of natural beauty which formed the subject of the preceding essays are all exemplified. Though essentially a unit, there is a well marked division into right and left,— "Hands to hands, and feet to feet, in one body grooms and brides." There are two arms, two legs, two ears, two eyes, and two lids to each eye: the nose has two nostrils, the mouth two lips. Moreover, the terms of such pairs are masculine and feminine with regard to each other, one being active, and the other passive. Owing to the great size and one-sided position of the liver, the right half of the body is heavier than the

¹ The fourth of Mr. Bragdon's series of articles entitled:—"The Beautiful Necessity: being Essays upon Architectural Esthetics," begun in the January number of HOUSE AND GARDEN.

left. The right arm is usually longer and more muscular than the left; the right eye is higher than its fellow. With one nostril the breath is inhaled, and with the other it is expelled. In speaking and eating the lower jaw and under lip are active and mobile with relation to the upper; in winking it is the upper eyelid which is the more active.

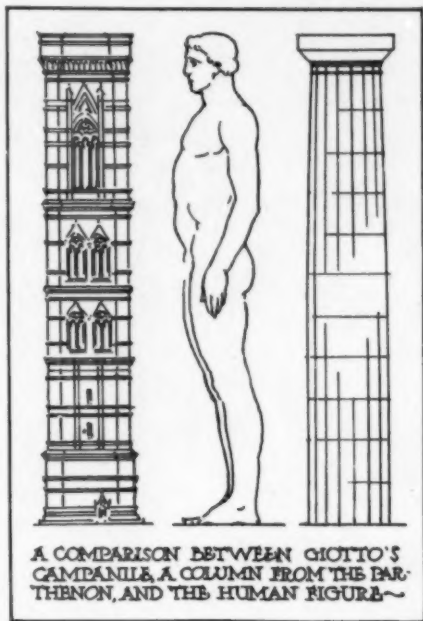
That "inevitable duality" which is exhibited in the form of the body characterizes its motions also. In the act of walking, for example, a forward movement is attained by means of a forward and backward movement of the thighs on the axis of the hips. This leg motion becomes twofold again below the knee, and the feet move up and down independently on the axis of the ankle. A similar progression is followed in raising the arm and hand: motion is communicated first to the larger parts, through them to the smaller, and so to the extremities, becoming more rapid and complex as it progresses, so that all free and natural movements of the limbs describe invisible lines of beauty in the air.

Co-existent with this pervasive duality, there is a threefold division of the figure into trunk, head, and limbs: a superior trinity of head and arms, and an inferior trinity of trunk and legs. The limbs are divided threefold into upper-arm, forearm and hand; thigh, leg, and foot. The hand flowers out into fingers and the foot into toes, each with a threefold articulation; and in this way is effected that transition from unity to



multiplicity, from simplicity to complexity which so appears to be universal throughout nature, and of which a tree is the perfect symbol.

The body is rich in those veiled repetitions, echoes, consonances—or whatever they may be called—which are observed elsewhere in nature and in art. The head and arms are in a sense a refinement upon the trunk and legs, there being a clearly traceable correspondence between their various parts. To the trunk are attached four limbs and a head, and to the palm, four fingers and a thumb. Each finger is a little arm and each finger-tip a little palm; the lips are the lids of the mouth, the lids are the lips of the eyes,—and so on.



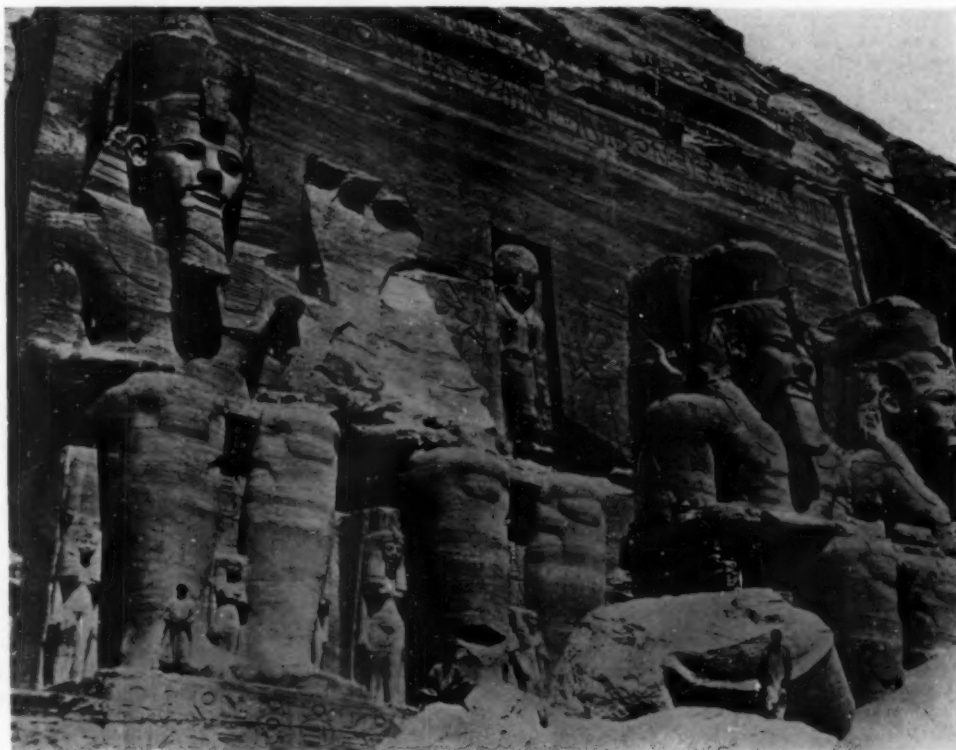
A COMPARISON BETWEEN GIOTTO'S CAMPANILE, A COLUMN FROM THE PARTHENON, AND THE HUMAN FIGURE~

The law of rhythmic diminution is illustrated in the tapering of the entire body and of the limbs, in the graduated sizes and lengths of the fingers and the toes, and in the successively decreasing lengths of the palm and of the joints of the fingers, so that in closing the hand the fingers describe natural spirals.

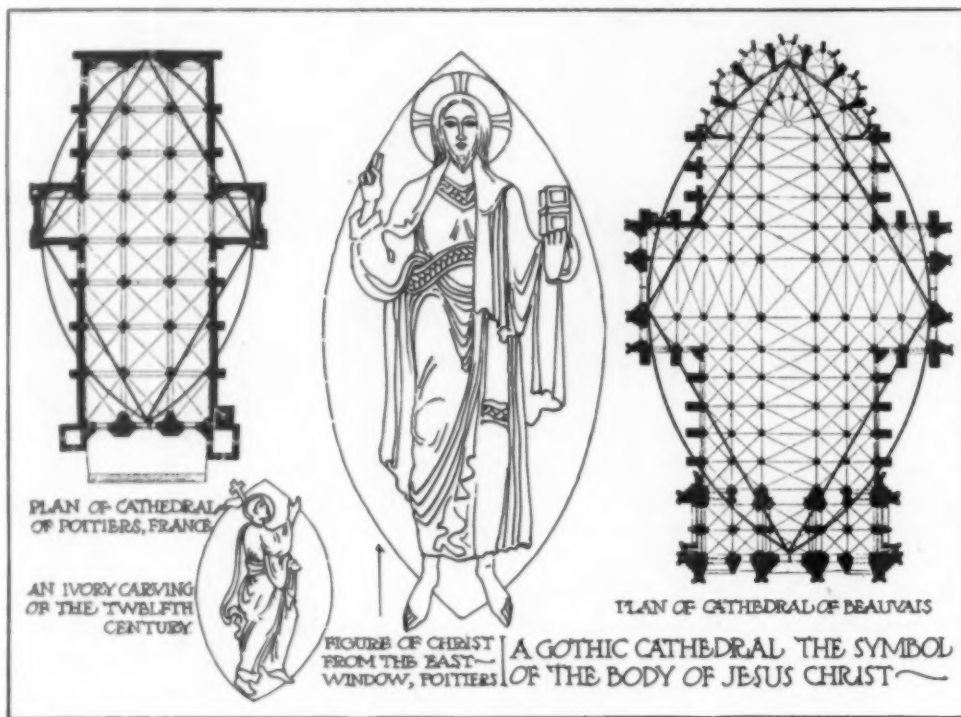
The relation between these laws of beauty and the art of architecture has been sufficiently dwelt upon in preceding essays. They are mentioned again in this connection only for the purpose of reminding the reader that man is indeed

the microcosm,—a little world fashioned from the same elements and by the same laws as is the great world in which he dwells.

There are few more profitable exercises



THE EGYPTIAN TEMPLE OF ABU-SIMBEL



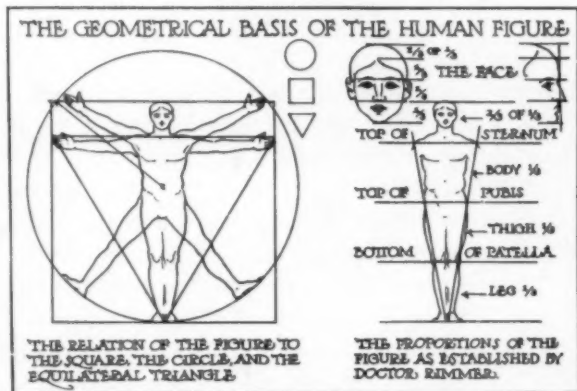
for the architectural designer than that of seeking to discover essential identity between things apparently unrelated,—between a work of architecture and the body of man, for example. The manner in which the tower of a Gothic cathedral ascends from its simple and strong base to terminate in a spire of delicate tracery is not unlike that in which the arm grows from shoulder to finger-tips. The towers and turrets or many a French château are attached to it in the same organic way that the head and limbs join the trunk. There are campaniles in walled Italian towns which seem to stand, like sentinels, looking out on mountain and campagna; nor is their strangely human aspect wholly imaginary. Giotto's matchless tower, for example, conforms very closely to the proportions of the figure. A Doric column, also, is reminiscent of a man, for the excellent reason that the ratio between mass and height are much the same in both.

Such correspondences, though scarcely accidental, were, on the other hand, not pre-meditated. At certain periods of the world's

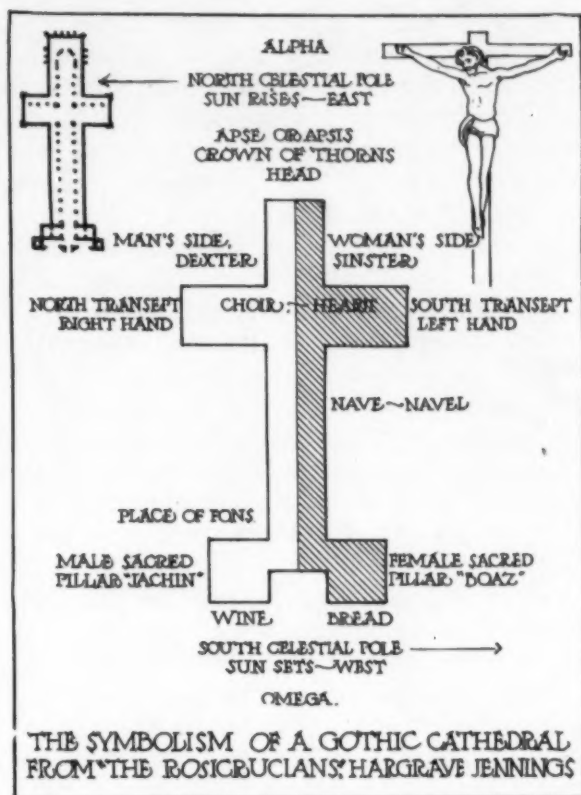
history, however,—periods of mystical enlightenment, when the soul was near the surface of life,—men have been wont to use the human figure, the soul's temple, as a sort of archetype for sacred edifices. The colossi, with calm, implacable faces, which flank the entrance to Egyptian temples; the great bronze Buddha of Japan, with its dreaming eyes; the little-known colossal figures of India,—all these belong hardly less to the domain of architecture than to sculpture. In France, during the mystic centuries of the Middle Ages, a Gothic cathedral became, at the hands of the secret masonic guilds, a glorified symbol of the body of man,—the crucified body of Christ. To practical minded students of architectural history, familiar with the slow evolution of a Gothic cathedral from a Roman basilica, such an idea may seem to be only the maunderings of a mystical imagination, entitled to no more consideration than the familiar fallacy that the vaulted interior of a Gothic church was an attempt to imitate the green aisles of a forest. It should be remembered,

however, that the habit of the thought of that time was mystical, as that of our own age is utilitarian and scientific, and the chosen language of mysticism is always an elaborate and involved symbolism. What could be more natural than that a building dedicated to the worship of a crucified Savior should be a symbol, not of the cross only, but of the body crucified? The *vesica piscis*, which in many cases determined the main proportion of a cathedral (the interior length and the width across the transepts) appears as an aureole around the figure of Christ in early representations of him, a fact which points to a relation between the two. A curious little book, "The Rosicrucians," by Hargrave Jennings, contains an interesting diagram which well illustrates this conception of the symbolism of a cathedral. A copy of it is here given. The apse is seen to correspond to the head of Christ, the north transept to the right hand, the south transept to the left hand, the nave to the trunk, and the north and south towers to the right and left feet respectively.

The cathedral builders excelled all others



in the artfulness with which they established and maintained a relation between their architecture and the stature of a man. This is perhaps one reason why the Gothic churches are more impressive than the great Renaissance structures built at a later period, such as St. Peter's in Rome, for example. A gigantic order furnishes no true measure for the eye; its vastness is revealed only by the accident of some human presence which forms a basis of comparison. That architecture is not necessarily the most noble which gives the impression of having been



built by giants for the abode of pigmies. Like the other arts, architecture is highest when it is most human. The medieval builders, true to this dictum, employed stones of a size proportionate to the strength of a man working without unusual mechanical aids. The great piers and columns, built up of many such stones, were subdivided into clusters, and the circumference of each shaft of such a cluster usually approximated the girth of a man. By this device the mouldings of the bases and the foliation of the caps were easily kept in scale. Wherever a balustrade occurred it was proportioned, not with relation to the height of the column below, as in classic architecture, but with relation to a man's stature.

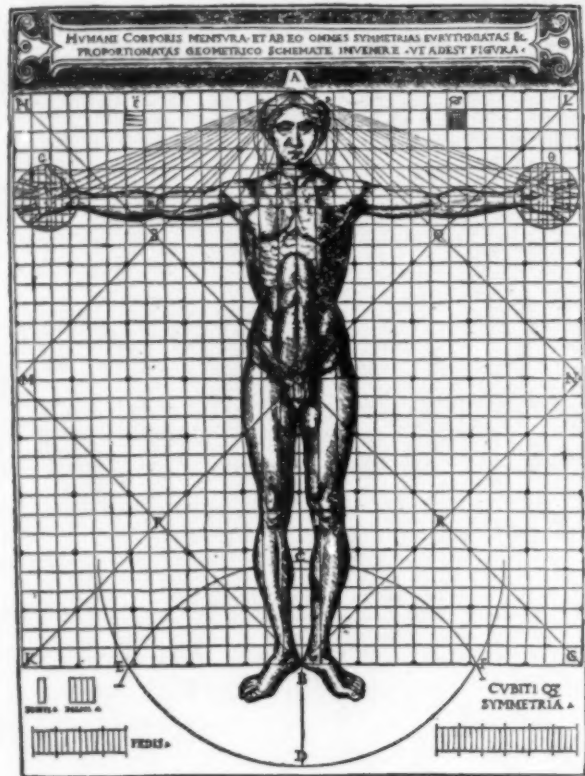
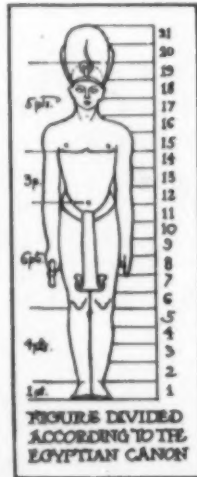
It may be stated as a general rule that every work of architecture should have somewhere about it something fixed and enduring to relate it to the human figure, if it be only a flight of steps in which each one is the measure of a stride. In the Farnese, the Riccardi, the Strozzi and many another Italian palace, the stone seat about the base gives scale to the building because the beholder knows instinctively that the

height of such a seat must correspond very nearly with the length of a man's leg. In the Pitti palace the balustrade which crowns each story answers a similar purpose: it stands in no intimate relation to the gigantic arches below, but is of a height convenient for lounging elbows. The door to Giotto's campanile reveals the true size of the tower as nothing else could, because it is so evidently related to the human figure, and not to the great windows higher up in the shaft.

The geometrical plane figures which play the most important part in determining architectural proportion are the square, the circle, and the equilateral triangle; and the human figure is intimately related to these elementary forms. If a man stand with heels together and hands outstretched horizontally in opposite directions he will be inscribed within a square, and his arms will mark, with fair accuracy, the base of an inverted equilateral triangle the apex of which will touch the ground at his feet. If the arms be extended upward, and the legs separated, the extremities will touch the circumference of a circle having its center in the navel.

The figure has been variously analyzed with a view to establishing numerical ratios between its parts. Some of these are so simple and easily remembered that they have obtained a certain popular currency, such as the length of the hand equaling that of the face, the span of the horizontally extended arms equaling the height of the figure, and the well-known rule that twice around the wrist is once around the neck, and twice around the neck is once around the waist. The Roman architect Vitruvius, writing in the age of Augustus Cæsar, formulated the important proportions of the statues of classical antiquity; and except that he makes the head smaller than normal (as it is and should be in heroic statuary), the ratios which he gives are those to which the ideally perfect male figure should conform.

Doctor Rimmer divides the figure into four parts, three of which are equal, and corre-



spond to the lengths of the leg, the thigh, and the trunk; while the fourth, which is two-thirds of one of these thirds, extends from the sternum to the crown of the head. One excellence of such a division, aside from its simplicity, consists in the fact that it is equally applicable to the face. The lowest of the three equal divisions extends from the tip of the chin to the base of the nose, the next coincides with the height of the nose, (its top being level with the eyebrows), the last with the height of the forehead; while the remaining two-thirds of one of these thirds represents the horizontal projection from the beginning of the hair on the forehead to the crown of the head.

The relation of all these facts to architecture is of the same nature as that of the facts pertaining to musical harmony, discussed in a previous essay. By means of this sort of analysis we approach nearer to an understanding of that great mystery: the beauty and significance of numbers, of which mystery music, architecture, and the human figure, in certain of their aspects, are equally presentments.

Claude Bragdon.



THE GARDEN FROM THE PIAZZA

House & Garden



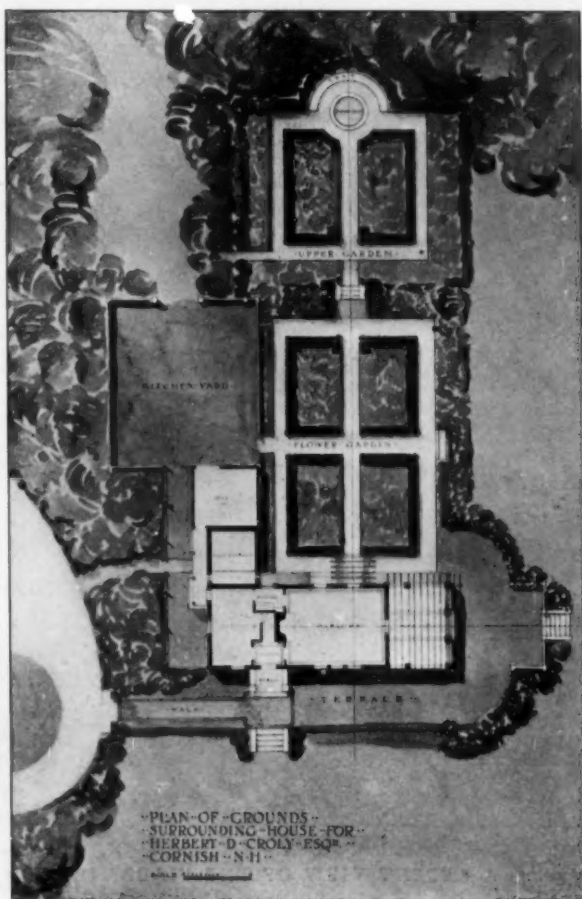
FRONT VIEWS OF THE HOUSE

A SMALL NEW HAMPSHIRE GARDEN.

THE country place of Mr. Herbert Croly is situated in western New Hampshire, about ten miles north of Claremont, and not far from the Connecticut River. It is cut off from the river valley by the first of several low lines of hills that run north and south, and the landscape to which it belongs has only a suggestion of the broad publicity of the valley itself. The immediate site of the house is a small plateau in an amphitheatre of low hills. Toward the north, these hills come down close to the house; toward the east and south, the rise begins gradually some half a mile away; while to the west and southwest, there is a break in the enclosure which affords a full view of Mount Ascutney about ten miles distant, and a glimpse of the valley itself. Thus the location of the house is sheltered without being shut

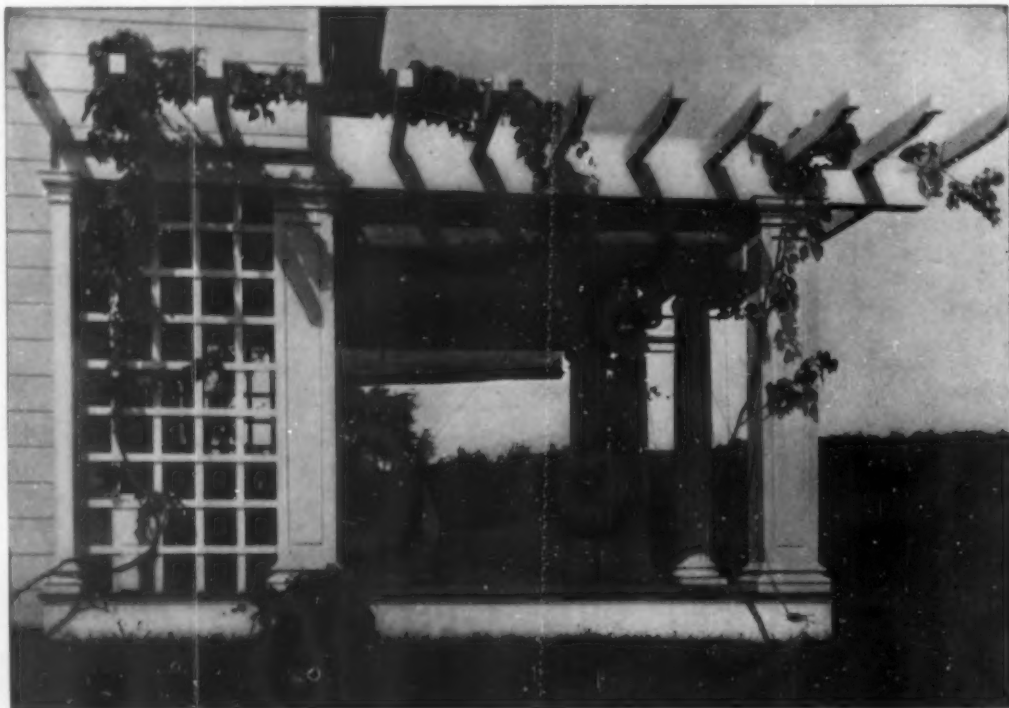
in, private, but well connected with the main-traveled roads.

The plateau on which the house is built is surrounded by a pasture, of which it once formed a part, and the grounds are reached by means of a private road with gates at both ends. It is only the land in the immediate vicinity of the house which has been planted and cultivated; all the rest is as unkempt as the original pasture. As may be seen from the plan, the driveway approaches the house from the north. None of the illustrations give the appearance of the house as one approaches by the road, but some idea of it may be obtained partly from the plan, and partly from the picture which shows the front door and the terrace. The kitchen entrance is situated on the short side of the house, as seen in this illustration, and is screened by a lattice, overgrown with clematis and woodbine, and by masses



THE PLAN

A Small New Hampshire Garden

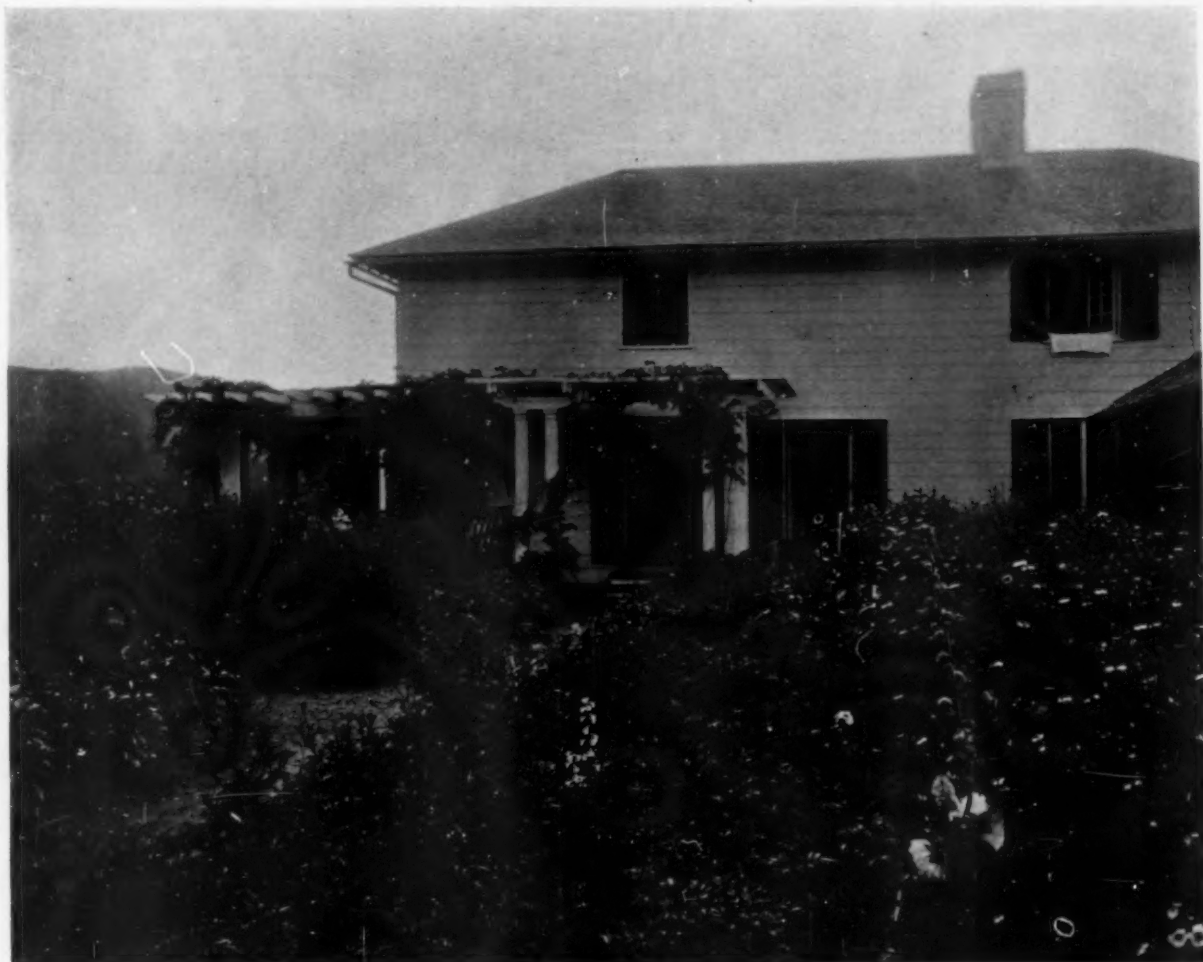


AN EARLY VIEW OF THE PIAZZA



Photographed September, 1901

A RECENT VIEW OF THE PIAZZA



THE GARDEN AND THE HOUSE

of syringas, lilacs, barberry and other hardy shrubs.

The walk along the terrace to the front door of the house is marked by two brick posts, and is paved with brick. The planting on this side consists merely of clumps of shrubbery near the posts, a row of *rosa rugosa* running along the base of the terrace, and some climbing roses immediately against the house. The house itself is very small, including only, on the ground floor, a kitchen to the left of the front door, and one large living-room to the right. The piazza is situated at the end of the house away from the road, and is partly covered by a projection of the floor above. An attempt has been made to treat it structurally as an integral part of the design of the house. The structural relation of the piazza to the

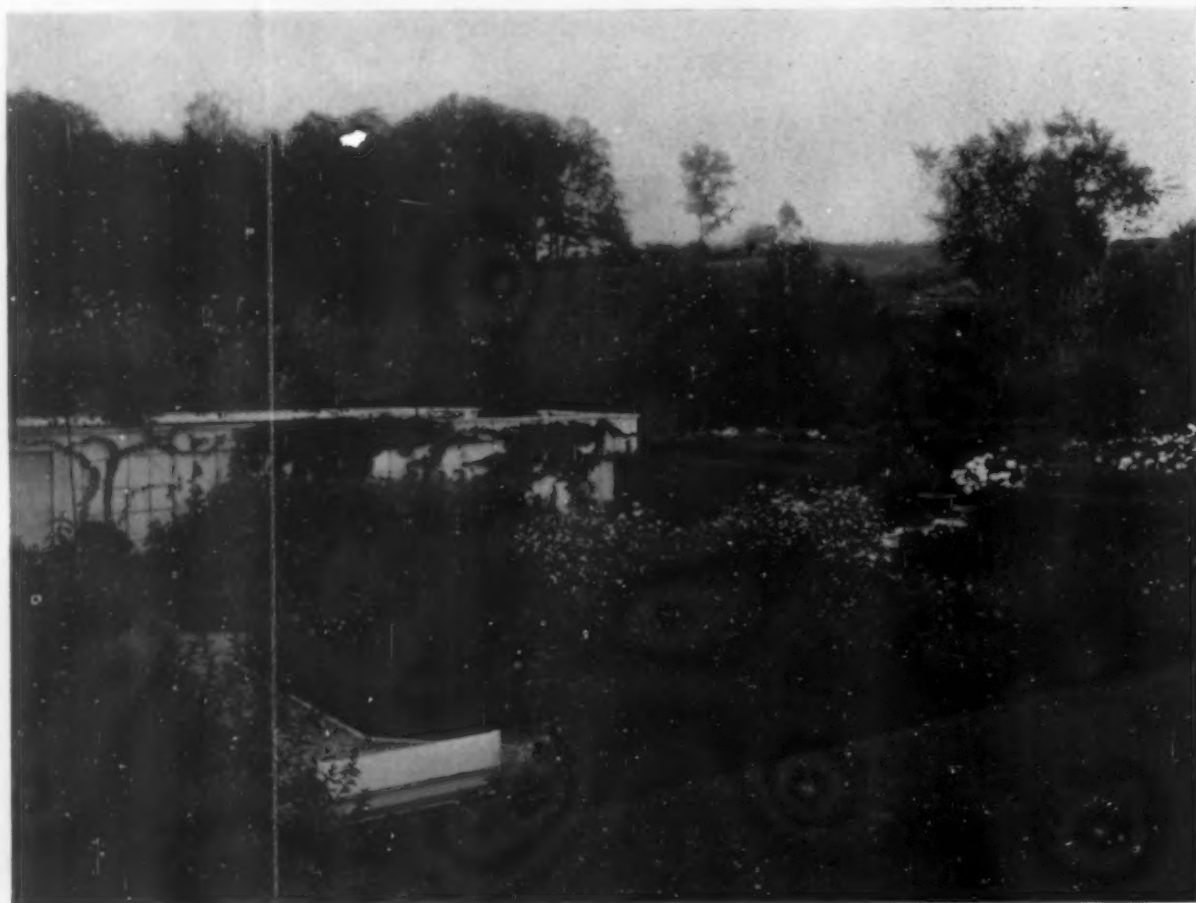
house can be best appreciated in the picture which is taken from a point below the house and at the opposite end of the grounds. It will be noticed that the foliage of the wild grapes growing over and about the piazza is much more abundant in some illustrations than it is in others, and the difference is to be accounted for by three years additional growth.

So far in our journey around the house we have not caught sight of the garden at all; but as we walk around the end of the piazza we obtain a preliminary glimpse of it, with the hills to the north in the background. By referring to the plan it will be noticed that the garden is situated, not merely near the house, but immediately next to it. The house and the kitchen-yard almost enclose it on two sides, and one can step down out of

A Small New Hampshire Garden

the living-room of the house right into the main path of the garden. One of the illustrations shows its appearance from the piazza. The narrow bed to the right is planted with a row of *spirea Thunbergi* in front and with *forsythia* and Japanese honeysuckle behind. The low hedge, which outlines the two beds to the left, is

plan. There is a small porch at this door, protected by a wooden structure, overgrown with wild grapes. Peonies are planted along the whole length of both sides of the path, and back of the peonies masses of larkspur, neither of which are in bloom at the period of the year in which the illustrations were taken. At the end of the beds are wild



ACROSS THE GARDEN

composed of Japanese barberry. The picture illustrates the garden as it appears during the first week in September, and the flowers in bloom are a mass of tall white phlox, in the first bed, and of *boltonia* in the second. The hedge at the back of the picture consists of carefully trimmed *spirea van Houten*.

A more central view of the garden can, however, be obtained by entering the living-room from the piazza and coming out by the door, which leads to the main axis of the

perennial asters, which are just beginning to flower. The upper garden which is reached by the white steps in the rear is eighteen inches higher than the lower garden. The white flowers which indistinctly appear in the upper garden are hydrangeas; but the beds at that end are, for the most part, planted with annuals and with some few hardy roses. These beds are very large, measuring 14 x 25 feet each and requiring great masses of foliage and flowers to fill them.



THE GARDEN FROM THE LIVING-ROOM DOOR

A Small New Hampshire Garden

A better idea of the foliage can be obtained by examining the picture which looks diagonally across the garden towards the piazza, and shows the small covered porch leading into and out from the living-rooms of the house. The small flowers to the right are boltonia, while the mass of green in the center is of marigolds, which were planted after the larkspur was cut down, and which have only just begun to bloom. Another illustration is taken from the embankment, and looks diagonally across the garden in an opposite direction. The white wall which frames the garden in to the left is made of wooden laths and will eventually be covered by the green vines—clematis, bitter-sweet and actinidia,—which as yet have not reached a sufficient growth for the purpose. Earlier in the season, there is a row of hollyhocks along the whole length of this side of the garden. This picture gives a good idea of the background which the garden possesses in the way of elm and pine trees.

In justice to Mr. Charles A. Platt, the designer both of the house and the garden, it should be added that work is still in an unfinished condition. The plan calls for a much more complete enclosure than any which now exists. It is proposed to continue the wall on the left to the end of the garden; to cut down the embankment; to frame the garden in on that side with a low parapet, backed by shrubbery, and to erect, at the end of the main axis, a pergola or some similar structure, which will supply that end of the garden with an architectural motive. The house and garden is, however, a very good example of what can be done at a comparatively small expense in the way of building up a complete country place—a country place, that is, which is not only good to look at and pleasant to live in, but which requires for its maintenance persistent attention and hard but remunerative work.

H. D. C.



LOOKING DOWN THE MAIN PATH

THE ORNAMENTAL MOVEMENT OF WATER IN CITY STREETS.¹—II.

THREE factors chiefly determine the design of a public fountain in a city street or square. These are the amount of money to be spent; the space, its character, extent and surroundings; and the water, the quantity obtainable and the function selected for it, whether purely decorative or also useful. Cost varies with locality, material and the personal equations of architects and civic committees, so it need not be discussed here in detail. Yet it may be of interest to

francs, 72 centimes. If the sum appear modest, let the reader remember that money was worth more in exchange in 1828, when Charles X. was reigning, than it is to-day. Much more expensive were Visconti's other Paris fountains. That of Louvois cost 115,286 francs. For the Fontaine Molière, (1844), with two stories and attic in Visconti's suave Bourbon manner, the expenditure was 195,000 francs, which was topped by the 250,518 francs and 50 centimes paid for that of St. Sulpice.

If the appropriation for a street fountain be large, the architect will have difficulty,



THE FONTE GAIA AT SIENNA

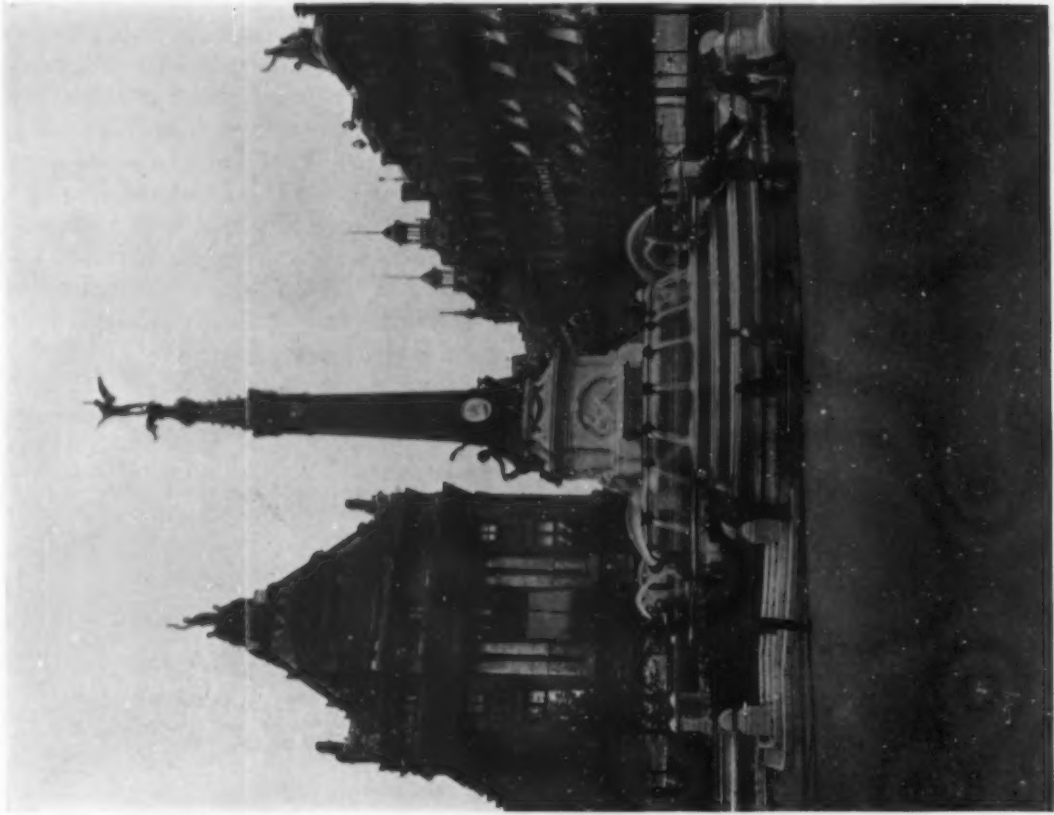
By Jacopo della Quercia. Restored in 1868.

quote the pedantically exact figures triumphantly included by the amiable Ludovic Visconti in his folio volume depicting fountains erected by him in Paris, nearly three generations ago. His Fontaine Gaillon, a high Renaissance portal, its attic surmounted by urns, with its water issuing from a dolphin's mouth, in a niche between Corinthian columns, its child and trident, and its two basins, cost precisely 32,786

perhaps, in preserving simplicity of effect, and in keeping to a moderate scale of size. Each is desirable, under the ordinary conditions of city streets, though each has been ignored by foreign designers with occasional success and frequent failure. The American architect will also do well to scan sharply the projects of ambitious sculptors for his fountain's adornment, for there are few

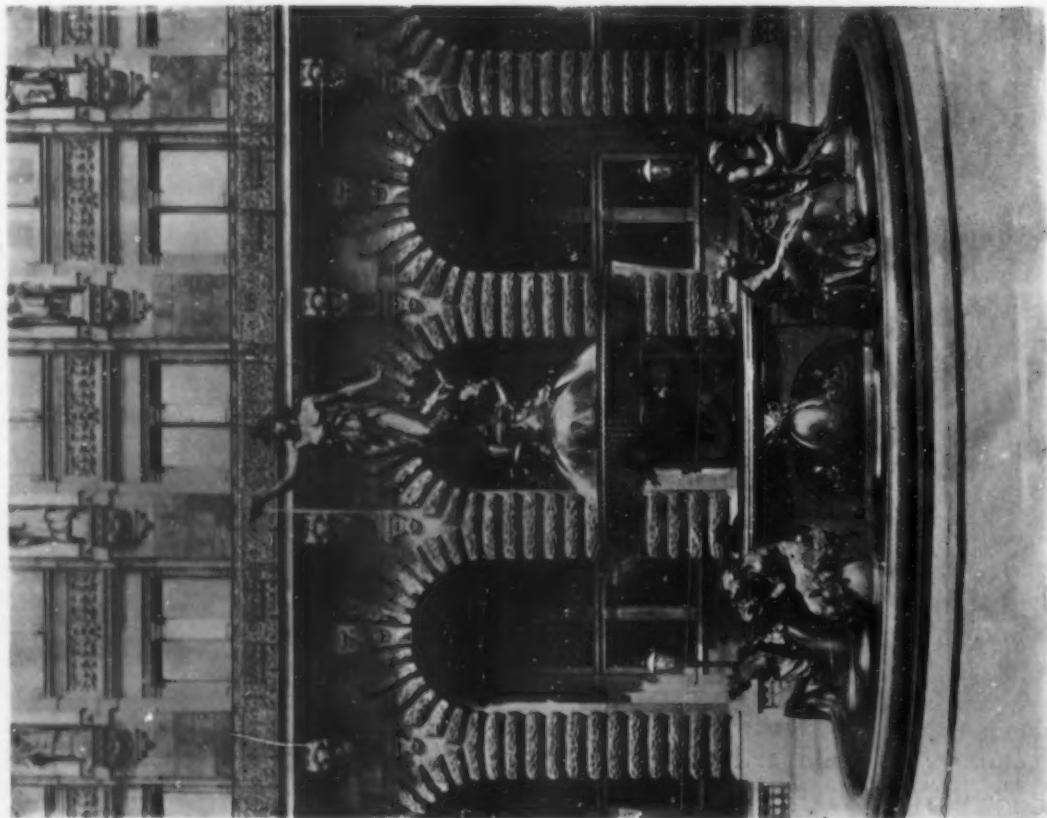
¹ Begun in the April number of HOUSE AND GARDEN.

The Ornamental Movement of Water in City Streets



BRUSSELS

THE ANSPACH MONUMENT

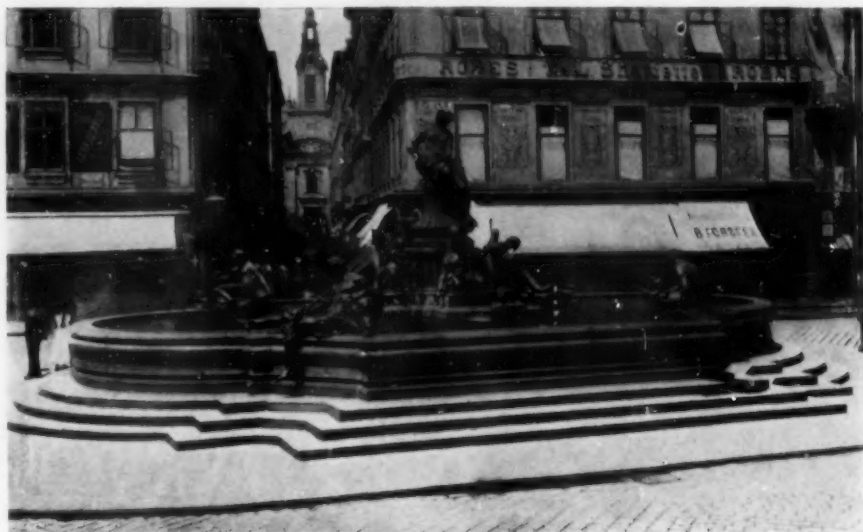


HAMBURG

THE RATHHAUS FOUNTAIN

workers in clay and stone and bronze that can not only copy but create. High or low relief is often safer and also less expensive than sculpture in the round. Low relief is especially suited to wall fountains, as the Sienna basin of Jacopo della Quercia, shown herewith, abundantly testifies. It was suggested in a previous paper that wall fountains are particularly adapted to the crowded streets of American cities, and though della Quercia has no lineal descendant, among this country's decorative sculptors, there are some to whom the theme of a walled basin or pool, with surfaces waiting for the chisel, would be an inspiration.

Upon the character, extent and surroundings of the available space should depend intimately the design of a street fountain. If the center of an open square be chosen,



IN THE NEUEN MARKT

DONNER

the plan should be circular or polygonal, so that the water, at least in its essential movement, may be visible from all sides. This condition, fulfilled ideally in the fountain of the Neuen Markt at Donner (see illustration) gives vitality to a design otherwise scattering and commonplace. The large stone basin, though raised by three shallow steps from the surrounding pavement, is still low enough not to shut out the water's beauty from the casual passer-by. The Anspach Monument in the Place de Brouckère, Brussels, the fountain before the Hamburg Rathhaus and that in the Hohen Markt, Vienna, are all successful in this respect, especially the former two. Not so the Joan of Arc Monument in the Place de la Pucelle, Rouen, which is really more a commemorative structure, with incidental facilities for distributing water, than a fountain. It was a clever Frenchman who expressed his doubts as to the artistic propriety of placing a water composition about the feet of persons one wished to honor. The drinking fountain to Robert Louis Stevenson, in San Francisco, shown in the April "HOUSE AND GARDEN," was of the same category.

If the space chosen for the fountain be the corner formed by two walls, as in the Albrecht structure in Vienna, the water should be made visible through as wide an angle as possible. The Fonte Gaia in Sienna, with its flanking walls on three sides, is meant to be viewed only from directly in



THE MARIENSÄULE

VIENNA

The Ornamental Movement of Water in City Streets

front. If the space selected for the ornamental treatment of water be at the head of a great avenue, as at the Palais Longchamp, Marseilles, the monumental château d'eau is in order.

The demands of traffic tend nowadays, especially in German cities, to keep down the number of fountains in public roadways. The Vienna fountain in the Hohen Markt is a serious obstacle to wagons, while that at Donner takes up valuable space. It is only in a large plaza, like that of Brussels, that street traffic and a big



THE JOAN OF ARC MONUMENT

ROUEN

fountain do not interfere with each other. In Limoges, several Gothic and eighteenth century fountains, which clogged passages, have been cast out in spite of protests; where massive stone pillars stood, there are now but cast-iron stand pipes, with blind or

flush orifices for needed water.

The surroundings of a space chosen for a street fountain must of course influence the architectural treatment. The Brussels monument, reflecting both the Gothic and the Renaissance styles predominating in the



LE PALAIS LONGCHAMP

MARSEILLES



THE ALBRECHT FOUNTAIN

VIENNA

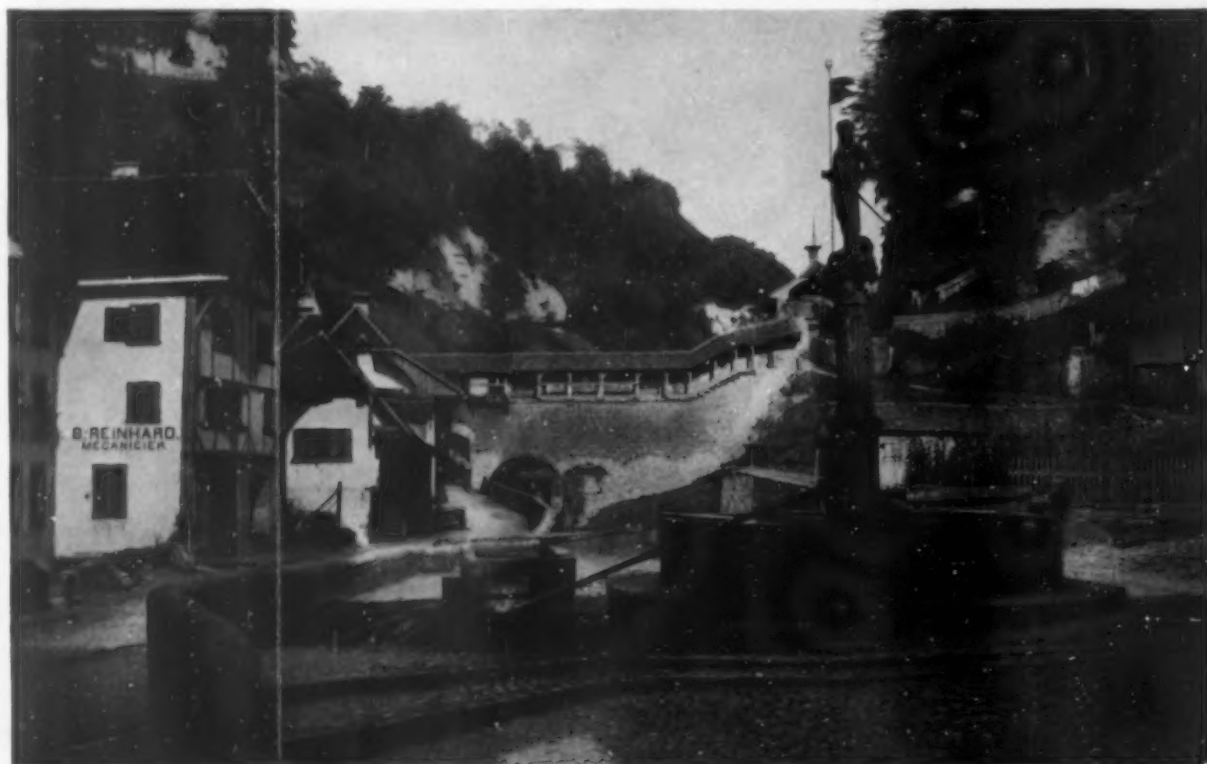
steep roofed building behind it, may be pronounced judicious, though the shaft itself wants impressiveness and has a certain touch of Belgian grossness. The thick, powerful columns of water are not economical, but they count in the architectural scheme, even at a considerable distance. Both the Vienna fountains shown bear perceptible relation to their surroundings. The wall structure is an integral part of a symmetrical scheme, while the Renaissance portico in the Hohen Markt, with its bizarre cockade, and its repeated capitals, needs just such sharp and incisive treatment if it is to hold its own against the heavy cornices and mouldings of neighboring buildings.

For nice adjustment of a street fountain to natural and artificial setting, the Pferdeschwemme at Salzburg may be studied. This Austrian city, Mozart's birthplace, "nestles under the cliffs of the Monchsberg in the valley of the River Salzach, hugging the sheer rock so closely that it actually overhangs the houses in one of the streets. Where the valley widens toward Hohen-salzburg, crowned by the castle fortress, it

opens out into squares, each with its fountain or statue, that afford approaches to the few large structures of the city." In this quiet town of few cross streets and limited vistas, the basin of the Pferdeschwemme, with its broad low balustrade, and the substantial wall behind it, might easily be said to reflect the comfortable short-viewed life of the place. The familiar Schöne Brunnen of Nuremberg, slenderly Gothic as any of its neighbors, is another fountain admirably in harmony with its surroundings. So was the handsome fountain of the early French Renaissance that used to exist at Autun.

The third important factor in fountain design, to which, of course, the preceding conditions must be adjusted, is the water itself, its amount and pressure, and the use selected for it. Shall the fountain be purely decorative, or shall it also be available for drinkers? Up to recent times, the answer would rarely have been in doubt; the fountain was once the sole source of supply to a community and often enough the center of village or neighborhood life. To trace the growth of the decorative factors out of those at

The Ornamental Movement of Water in City Streets



AT FREIBURG

first purely utilitarian would be a pleasant task, but it must not be attempted in detail here. Suffice it, that the early Greek fountains seem to have been merely reservoirs whence water flowed through orifices into a basin; sometimes a second basin was added, for washing. In the early Middle Ages fountains were primarily composed of three basins, arranged in longitudinal series, overflowing one into the next, for water supply, washing and horses, respectively. Next came a compact design in three levels, with central stand-pipe, carrying four

SWITZERLAND

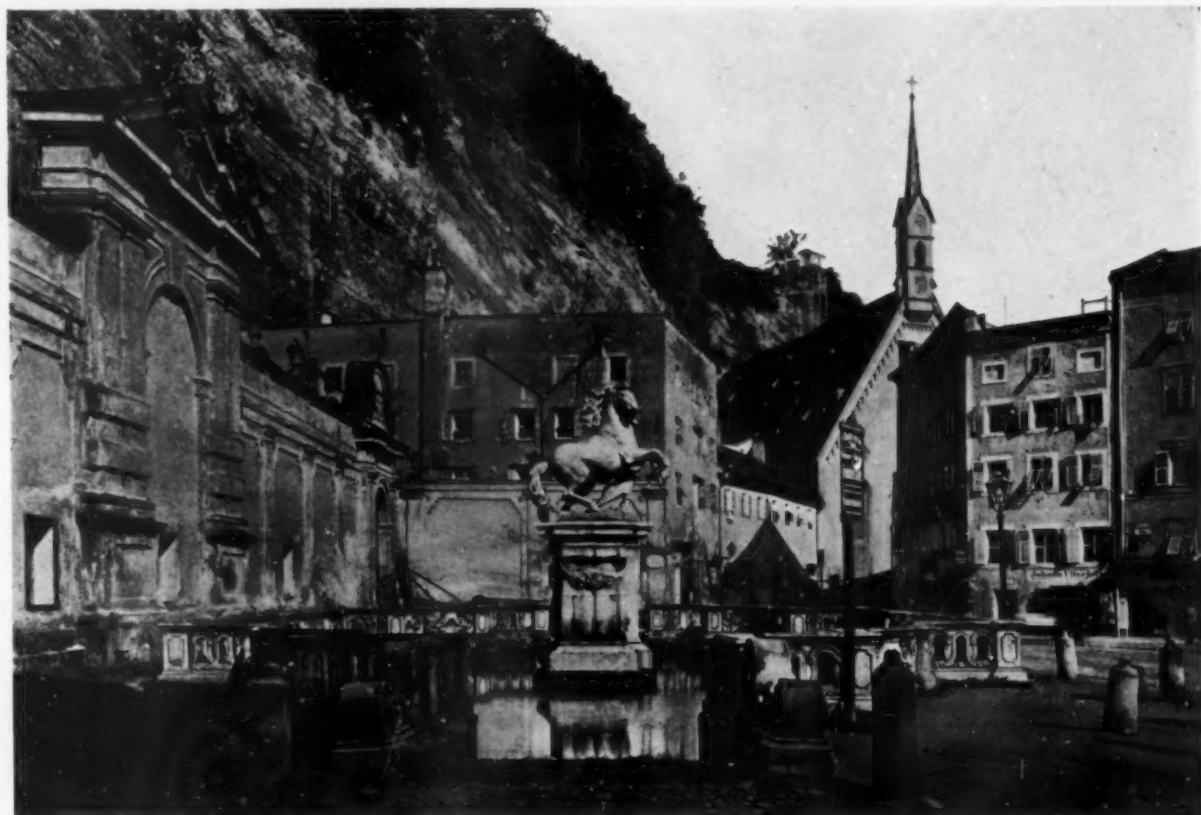
arms, touching alternate edges of an octagon basin, which were reached by four flights of steps. A large circumscribing square contained four basins on the second level, for washing clothes, and an outer square had at its corners, horse-troughs. The central pipe took on ornamentation, and the orifices were supplied with carved or cast heads, through whose mouths poured streams of water. This type was developed, the upper basin was lifted off the ground, and the water and the stone were found to possess limitless decorative



AT BÜREN, SWITZERLAND

possibilities. An interesting stage of this development may be studied in the fountain at Freiburg, Switzerland. Here are the three basins, the two inferior ones connected with the central structure merely by tubes. It was not until after the sixteenth century that metal piping was introduced in any except costly fountains. This meant that water under pressure was rarely used; that upright jets were not often available. The Romans, though they knew of the law that water, confined in a tight tube, seeks its own

wind may blow the water outside the rim. By sinking the basin and surrounding it with low flowers or grass, to catch the drops, the limit may be slightly decreased. But a jet of this sort, while highly effective in parks or pools, is rarely convenient in a street fountain. It was soon found that the maximum effect of the water was obtained by sub-dividing the fall, and spreading the fluid out in thin layers, so as to get the value of every drop. Extra basins, over whose edges drip filmy water, are effective if not used too



THE PFERDESCHWEMME

AT SALZBURG

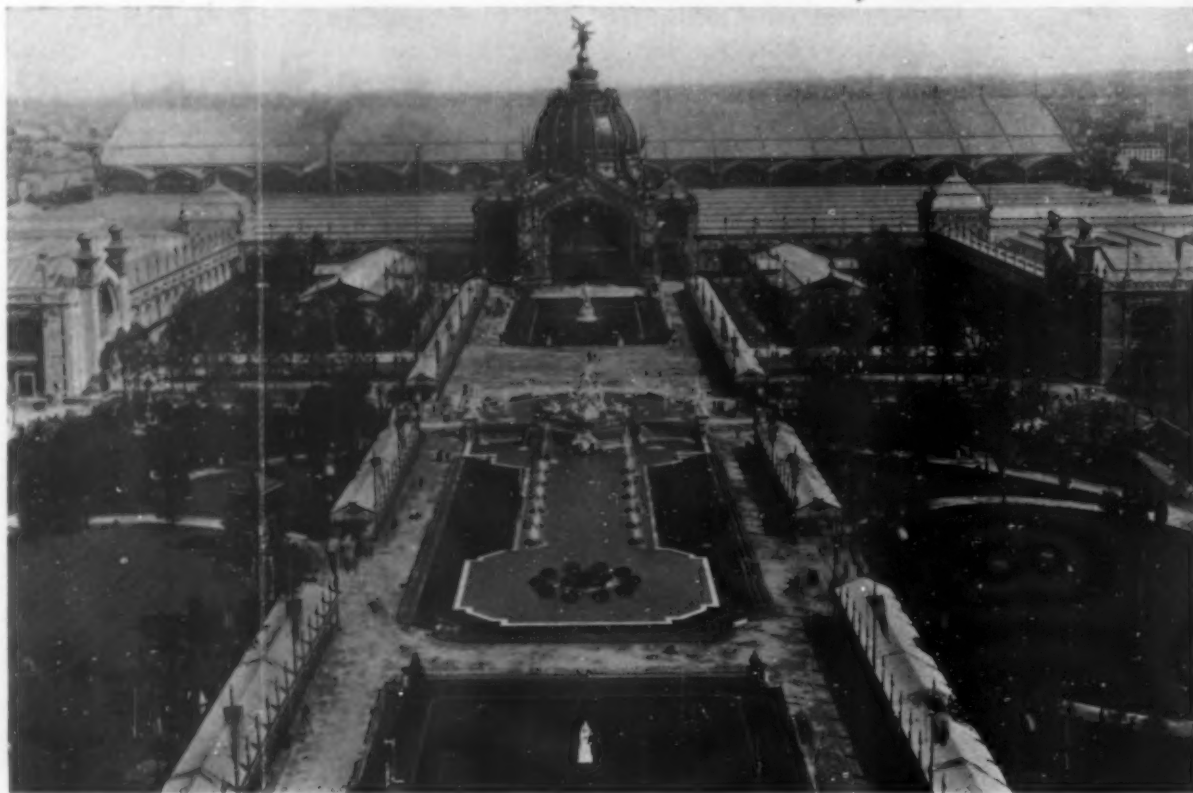
level, applied the principle scarcely at all to fountains. When some bold experimenters carried water under pressure two kilometres in a stone conduit for a fountain at the Place Clautre, Périgueux, in 1533, it was regarded as a remarkable achievement.

With this simple, though hard-won, vertical jet of water at his disposal, the modern architect may figure easily the size of his basin,—that is if he intends to use the full head. The radius of the basin must be a little more than the height of the jet, else the

often in one design. Incidentally the architect must see that the edge of every basin be true and level, else the result will be that seen in the little fountain of S. Cosimato in Rome, the sheet having concentrated itself into a single stream. These sheets of water are used importantly in the Trocadero fountain, Paris, and in numerous other large and small designs. One of their merits is their evaporation into the air of a perceptible amount of liquid.

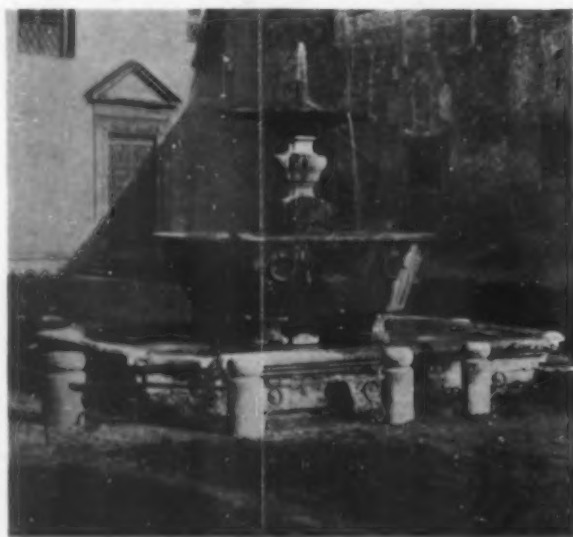
In the Brussels design, it will be seen that

The Ornamental Movement of Water in City Streets



AN ARRANGEMENT OF THE CHAMP DE MARS

Seen from the Eiffel Tower



FOUNTAIN OF S. COSIMATO

ROME

the large streams, as well as falling from a height, are projected nearly horizontally, giving them as long a flight through the air as possible. In the Schlossplatz fountain, Berlin, four large jets send their waters from a low level into an upper basin, thus utilizing them in both directions. A more refined

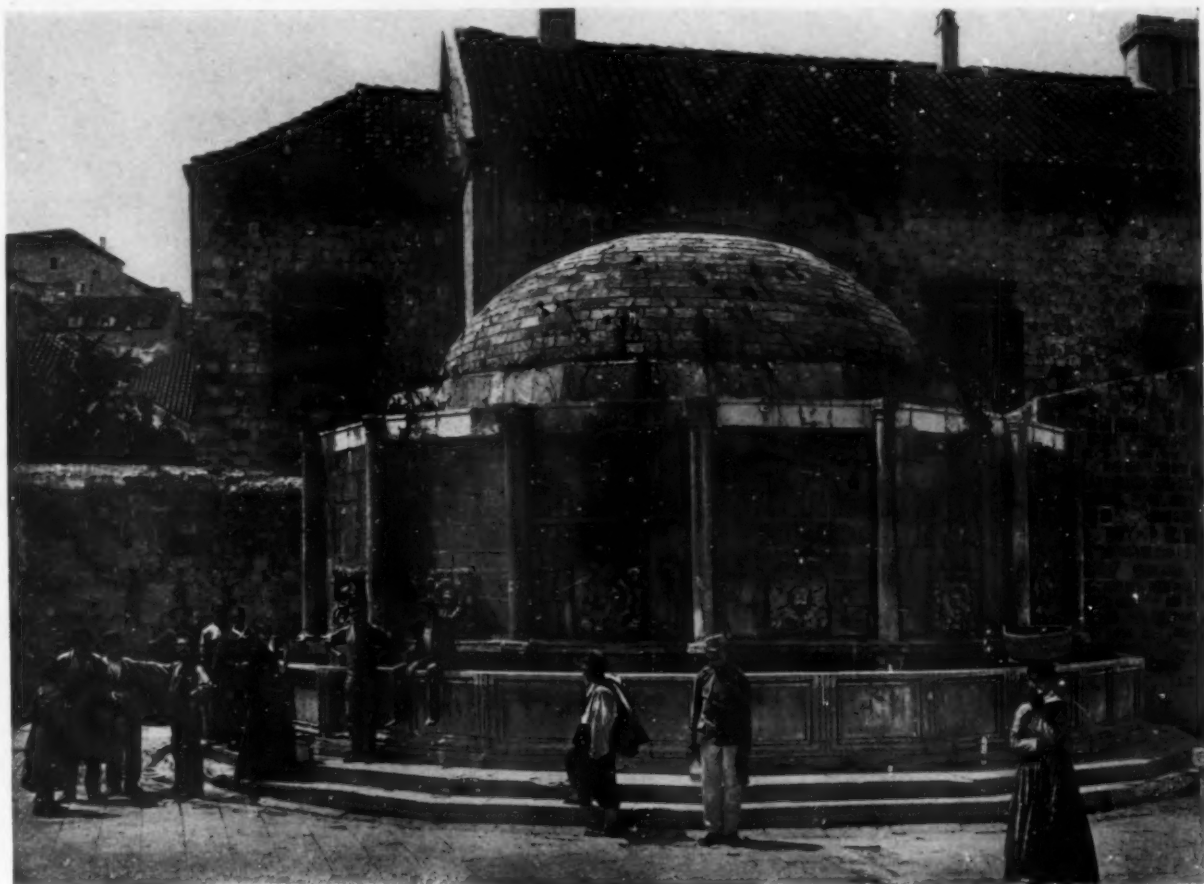
application of the same principle is seen in the fountain of Jacques d'Amboise, at Clermont, France. The Place de la Concorde fountains have jets playing almost horizontally upon the central figures. A less honest, though sometimes legitimate device, was used successfully last summer at the Pan-American Exposition to secure the full value of the water sent through the *château d'eau*. The various surfaces over which the water flowed were colored a delicate blue-green, reinforcing and magnifying its apparent volume. It was a sheer optical illusion, but nevertheless was not to be despised.

More dignified, though this method has its limitations, is the use of sculpture and architecture to enhance the consequence of a small water supply. The early fountains of Paris, erected before the present facilities were obtained, show towering classic structures, or groups of figures, with water carefully distributed in meagre quantities. Often, as in the fountain of the Rue de Grenelle, the thing was carried too far; it is sometimes hard to tell whether the structure can longer be considered a fountain or has become a

mere monument. Diderot rightly speaks of "The beautiful fountain of the Rue de Grenelle—I say beautiful for the figures; the rest I find less than mediocre." Later, explaining, he says: "No fountain can be beautiful where the distribution of water does not form the decorative principle."

One of the best designs in Paris for the efficient use of water is that of Visconti in the

A quite different ideal of fountain construction prevails in Mohamedan countries. There the fountains are generally in small closed buildings, polygonal or square, ornamented richly, with colonnades, niches, cupolas and carvings, but have only small basins to receive water, which is used with scarcely a hint of its decorative possibilities, flowing like a stream from a faucet. The influence



FONTANA ONOFRIO

AT RAGUSA, DALMATIA

Gaillon fountain, already mentioned. A well-planned wall fountain is that of the Rue du Regard, with classic orders and pediment, the façade carrying in high relief a nude figure with a swan, from whose outstretched bill a stream falls into a projecting basin. Vasari's fountain at the Palazzo Vecchio, Florence, with Verrocchio's cherub and an urn whence three lions' heads discharge water, is another economical design. So is that of the Gatteschi fountain at Viterbo, Italy, dating from the twelfth century; and so, also, is the not very beautiful Hamburg fountain already illustrated.

of this Turkish practice seems to have been felt in the fountain at Ragusa, with its large dome and its incomplete-looking tier of stone, guarded by columns at the angles. The water falls from orifices in the carved panels into the narrow basin. Climatic conditions have doubtless importantly modified this design; it is but another example of the tendency of street fountain architecture to meet local need, which, here and elsewhere, has obtained for it a dignified place in the field of design.

Samuel Swift.



AT TRAMIN, TYROL

TYROLESE ARCHITECTURE.

IV. VILLAGES.

THE distribution of buildings throughout the Alpine countries is a phenomenon to American eyes, for mountainous tracts of our own land are usually devoid of human habitations, and the names of our ranges recall wastes of solitary wilderness. But Alpine solitudes are more difficult to find, are less apparent in reality, than they are in the mind's-eye when turning the pages of written poetry. Villages, cottages and herdsmen's huts appear in the most unexpected places where the difficulties of building, the exposure to the elements and the inconveniences of living in uneasy perches would have discouraged any but a people bred among the mountains, where distances are measured by hours of walking and where hard, knotted limbs are accustomed to treading the earth aslant.

In the Tyrol, configuration of the ground seems to have been no obstacle to the location of single buildings, or of villages. Inaccessible promontories were naturally selected for the strongholds of baronial times, but humbler dwellings cling to the precipitous mountain faces, and villages have grown upon a base of forty degrees or in the depths of a defile, where landslides and floods are forever imminent. Those natural catastrophes, which have caused many an

iron cross to rise in the village churchyards, have been forgotten when habitations were to be reared. A mysterious improvidence, this seems at first; but it must be remembered that sites which promise an ideal of comfort are rare in the Tyrol, and those which escape the flood, face the hail and the hurricane of a higher and colder strata of air and are buried from November until May under overwhelming snow. Some light is shed on this aimless and picturesque scattering of buildings among the mountains by recalling the position of the feudal buildings in their former surroundings.

The barons of the Middle Ages were monarchs of their valleys. They dominated the country-side, and took upon themselves not only the care of the roads and the policing of their several districts, but they gave free hospitality to the traveler, provided him with shelter for the night and horses for his next day's journey.

Here, as in many other Teutonic countries in former times, the traveler could not be refused hospitality; and "the lord's shelter" (in old Teutonic, *here-berga*) was the safety of wayfarers, and is still traceable in the modern French *auberge* and the Italian *albergo*. The remoteness of the castle from the thoroughfare along the main valley made it necessary for the lords to entertain their guests at an inn upon the highroad near the base of the hills. This inn was the nucleus of the village. Houses



THE CHURCH OF TELFS

Tyrolese Architecture



AT VILLANDERS

TYROL

of vassals and peasants soon gathered round it, and straggled on each side along the highway or half-hid themselves in ravines above, where mountain torrents tumbled toward the bed of the valley, turning mill wheels on their way, pressed into many services devised by the ingenious Tyroler, now led to a fountain in the cottage garden, now cleverly geared to rock a baby's



DESCENT TO THE VILLAGE OF SPITZ

The isolation of the castle became irksome, when violence ceased for a time, and the difficulties of getting supplies and provisions to the steep heights were keenly felt. Moreover, the life of the village became attractive to the lord himself, and its little gayeties and the stream of passers-by absorbed his family and servants. So

long as there was peace in the neighborhood, the castle was abandoned as a living-place, and

the "town house" of the lord could be easily singled out by its size and pretentiousness from the quaint houses of the hamlet. This plutocratic state of things was, however, soon destined to pass. Frequent wars impoverished the nobles and divided their lands. The progress of the times and reforms of government wore away the feudal system and bereaved the lords of their power. The traffic of the common folk growing, and travelers on the highroads



THE PLATZ OF KLAUSEN

increasing in numbers, the nobles turned to the flow of strangers for a means of livelihood. For a time they gathered tolls for the use of their roads and received some revenue from a primitive postal service they maintained. Hospitality began to be charged for, and the inn-hosts prolonged, the local leadership of the Tyrol's noble blood.

The first few buildings of the village were clustered near a stream whose filtering courses



AN INN AT WEISSENKIRCHEN



A MILL AT KLAUSEN

Tyrolese Architecture



WAIDHOFEN FROM THE YBBS



NEAR SARNTHEIN

penetrated the dry soil and rose in a spring whence the village folk could draw their household supply of water. This was the focus for the buildings, and in the smaller settlements it was marked by a tree trunk hollowed out to receive the water. At larger places a stone basin was built around an upright shaft which supported an iron pipe leading the crystal stream. The ground around this center of outdoor life was reserved when new buildings were erected; the main highway widened momentarily to accommodate the *brunnen* (from which some villages have even taken their name); or a branch road, leading from the mountains, turned in its course to debouch close beside this necessary water supply and useful monument. By this means the *platz* of north Tyrol and the *piazza* of the South first made their appearance.

Later on, the fountains were richly wrought, and frequently a carved image of a martyr, a patron saint or of the Christ was added to the upright shaft which supported

the water jet. Here women and children gathered to fill their buckets. Here was the place for exchanges, gossip, entertainments and athletic feats. To-day the traveler who rides into a Tyrolese village knows that he has reached the center when he gains the *platz*. In noon hours he may find the village road deserted, and only a dog turning a listless ear of life in its midday sleep on a cottage stoop, when the village folk are afield; but the *platz* is never deserted. There heavily shod maidens steal away before him, shyly guarding their full pitchers; and plump little boys in leathern breeches gaze at the stranger with wide, wondering eyes. If it be in the south, a few loiterers will be playing the favorite game of

boccia, or bowls, on the bare ground aside from the path of teams, while others seek shelter from the warm sun under the shaded archway of a house or shop. On a summer's night, small tables with candelabra are set out in front of the inns, and guests grow merry around the ruddy lights.



GARDENS AT KALTERN



GARDENS AT MALS

UPPER VINTSCHGAU, TYROL

Poor and paltry are the hamlets which have not reared their churches. But, nevertheless, there are many such,—a mere handful of cots tumbled as if by the winter storms into an upland crevice,—and the herdsmen of these places still repair for worship to the chapel of the ancient castle. More fortunate villagers point with pride to their church, quite unconscious of its usually crude outline and undignified rococo detail. These buildings are covered outside with a lime wash, so nearly white as to dazzle in a bright sunlight; but the interiors are invariably rich,—though from the point of view of good design, they are vulgarly so. After viewing a garish exterior one

is surprised to find rich strong colors piercing the gloom within and a wealth of twisted altar columns, of multi-colored stone, wrought and gilded ironwork, and sometimes a tree or a vine led from the soil below and trained upon the most important pier. Where there are towers, they are frequently unsymmetrical, and always fantastic in their shape. A copper roof, in varying shades of a literally green old age, invariably covers the belfry, from which during the terrifying storms of winter the bell peals continuously a melancholy warning.

Thus it is that the Tyrolese villages as we find them to-day are ever guarded by the venerable castle, a protecting parent rising

Tyrolese Architecture



TYPICAL VILLAGE COTTAGES

AT WEISSENKIRCHEN

above the verdure which surrounds a conglomeration of chimneys, towers and brown roofs below. For the castle has been virtually the source from which all the habitations have sprung, whether they are clustered in villages or scattered over the steep enclosing sides of valleys. And this origin is frequently revealed in the village names. Goldegg, Haselburg and Salzburg are but a few, comprising the name of the castle itself, for the village was understood to be the necessary accompaniment of



AT ST. MICHAEL, (EPPAN)

the far-famed *burgs*. As many as half a dozen villages took their names from the Reids—that old family of castle builders,—and the frequent occurrence of the suffix *stein* in the village names glorifies the great crags which dominate their several localities and have afforded foundation for feudal buildings. Formerly the village was only an incident to those who lived in the castles and ruled the land; but now the rôles are reversed. The castle is pointed out as an impotent vestige of a

distant age in which the student may read a story and the poet may weave a tale. And the busy village grows and prospers.

The building materials which characterize, chiefly by their color, the Tyrolese villages are two in number: wood and stone. These vary in direct proportion to the size of the village. In the remote mountain hamlets, timber is used exclusively and the settlements are uniformly brown on a background of green. The larger the village, and likewise the individual houses, the more stone is employed; not cut stone, but a coarse rubble, over which a tinted roughcast is spread by the local white-washer, plasterer and decorator (three professions which in the Tyrol are rolled into one). Whatever pigments are employed in this material to give to the walls the small degree of variety desired, the prevailing tone is always gray.

Likewise, the larger the village, the less

variety there is in the individual buildings, the less freedom of outline, often gained at a stroke by the picturesque over-hanging balconies of wood, which nearly surround some of the mountain châteaux. But the most monotonous group of houses in all the Tyrol would still be unconstrained freedom and caprice compared to the architecture of other



AT ST. MICHAEL, (EPPAN)

NEAR BOTZEN, TYROL

Tyrolese Architecture

lands; and here where level sites for buildings seldom exist, and where Nature herself is bent upon picturesqueness as a vent to her solemn mood of grandeur, any group of buildings, when seen as a whole, could never have been designed more charming than these are and more per-



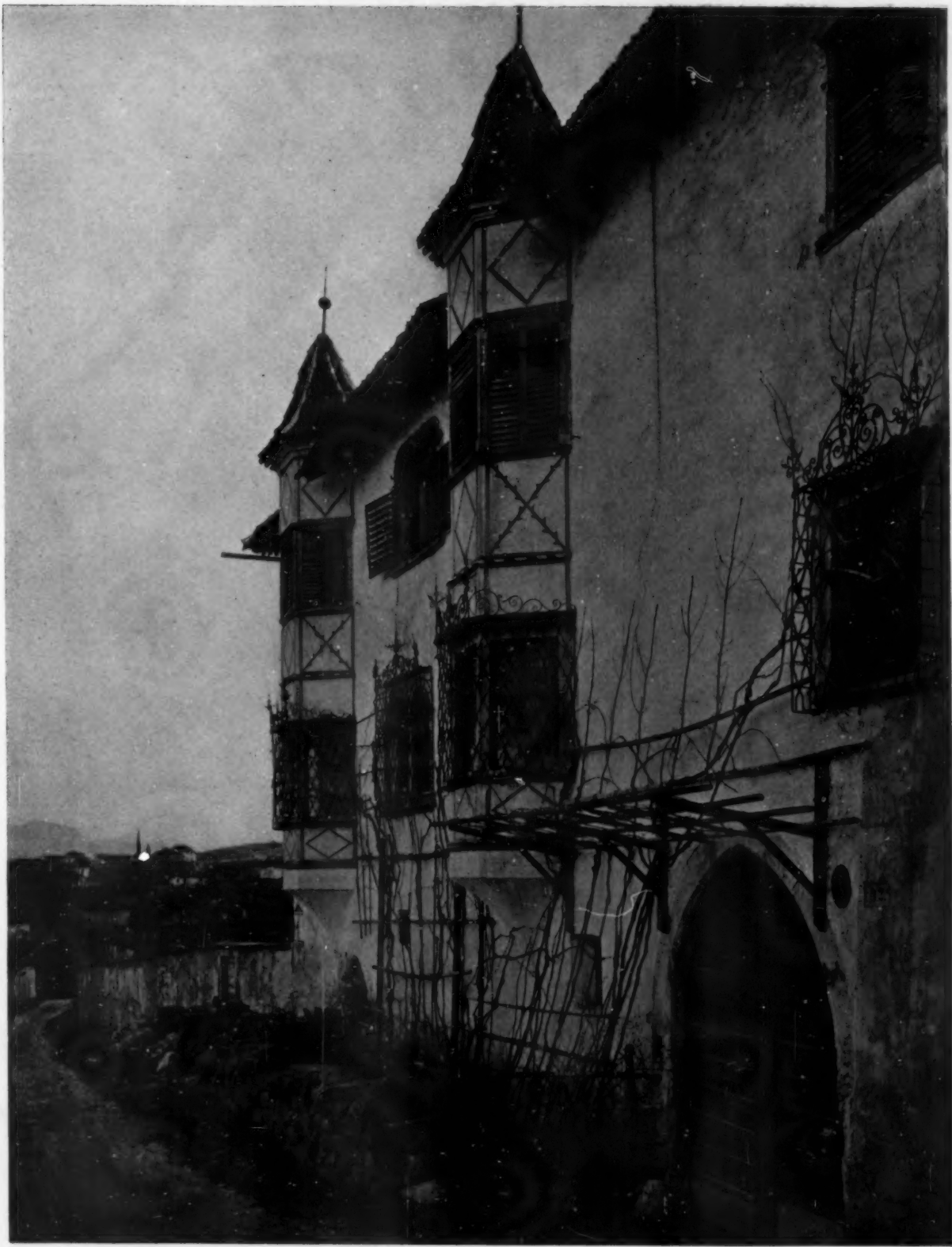
THE PLATZ OF MILLSTATT

fectly at one with the scene surrounding them. There is no exception to this in any aspect of season or of weather. The villages emerge from the lifting mists of morning, as if obeying one of the mountain spirits the peasants tell of. Through the day, rich verdure of innumerable cottage gardens



THE PLATZ OF ST. MICHAEL, (EPPAN)

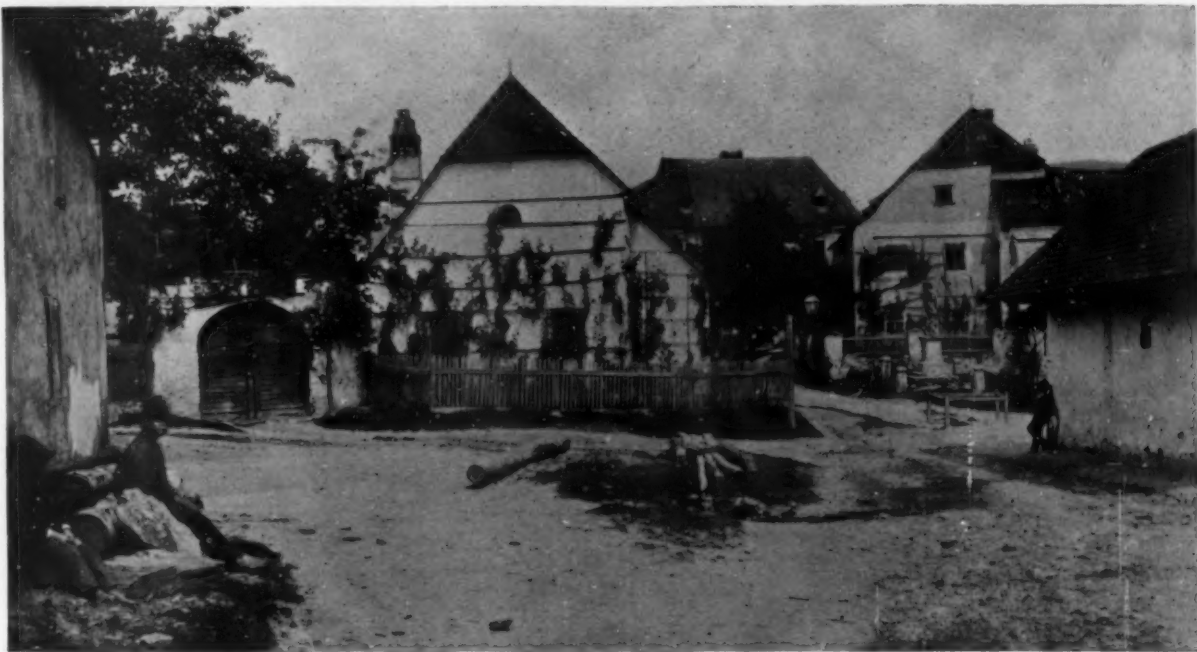
NEAR BOTZEN, TYROL



AT ST. MICHAEL (EPPAN), TYROL



House & Garden



VILLAGE SCENE

AT ROSSATZ

and trees protruding from narrow crevices between the buildings are a relief in the summer sunshine, which at midday is often hot, in spite of the high altitudes. At night,

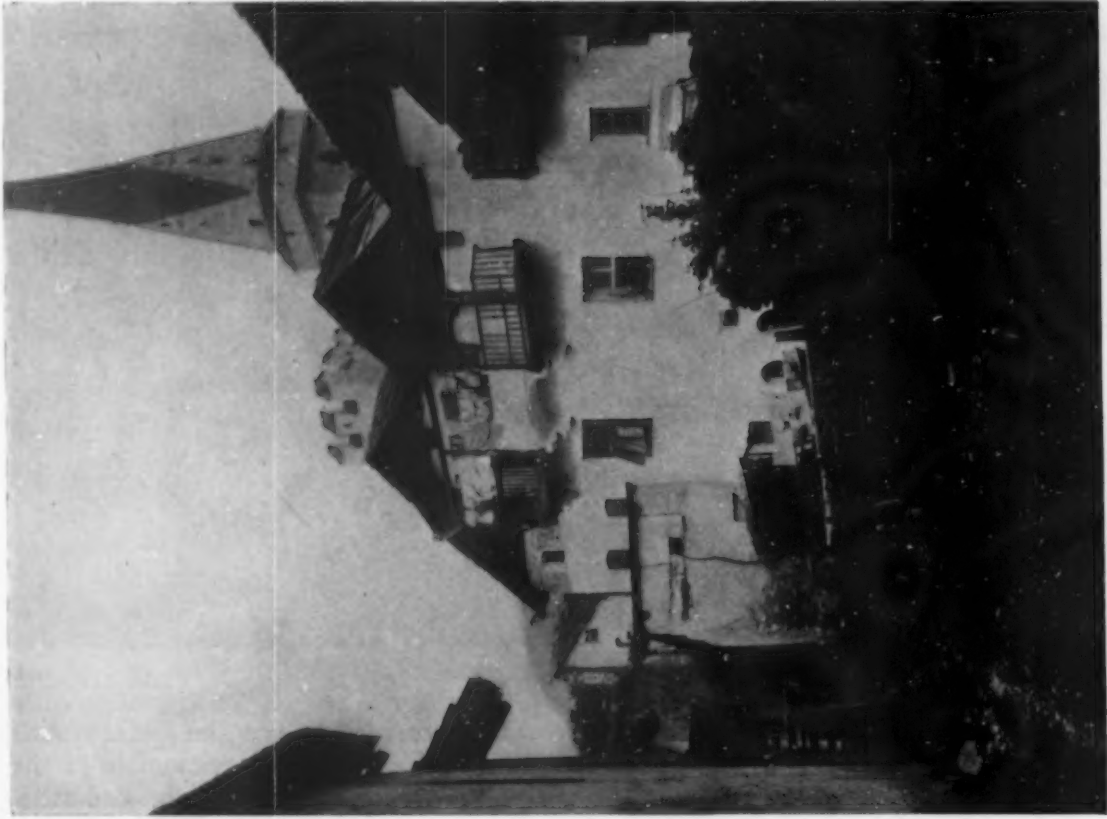
twinkling street-lamps or a dim gleam from a window, suffice to locate the hamlet in the enveloping gloom, for electric lights and other modern improvements are viewed as much



A HOUSE ON THE PLATZ

ROSSATZ

Tyrolese Architecture



IN THE PUSTERTHAL

AT BRUNECK



IN THE VINTSCHGAU

AT SCHLUDERNS



THE PLATZ OF SCHLUDERNS

VINTSCHGAU, TYROL

askance, as were the engineers who came to build the first railroad in this primitive country. Sidewalks, drainage systems and many other improvements are still considered inventions of the devil, and should they be welcomed, dire results are foretold. Tradition tells of a village which stood in the bosom of a wide and fertile valley. The

inhabitants suddenly losing their respect for God, one day the water rose from the earth, spreading over the valley, and entirely inundated the place forever. The bells of the accursed village fishermen still hear from the depths of the water on still summer evenings.

Herbert C. Wise.



COTTAGE GARDEN, NEAR KÄRNTEN

THE SOLDIERS' AND SAILORS' MONUMENT COMPETITION.

IN PHILADELPHIA.

WHEN the competition for the Soldiers' and Sailors' Monument, to be placed in Logan Square, Philadelphia, closed on March 3d, sixty-two designs and seven models were submitted. The sub-committee of the City Councils, which had the work in charge, was fortunately open to professional suggestions, and assistance in the preparation of an equitable program was accepted from the T-Square Club and the Philadelphia Chapter of the American Institute of Architects. One juror, it was announced, would be selected by each of those societies, and these two persons would select a third. In this manner the decision upon the designs lay in the excellent judgment of Mr. C. Howard Walker of Boston, Mr. John M. Carrère of New York and Mr. Charles Grafty of Philadelphia. On March 25th awards were announced as follows:

FIRST—LORD AND HEWLETT, NEW YORK CITY.

SECOND—C. F. ROSBORG, NEW YORK CITY.

THIRD—W. L. COTTRELL, NEW YORK CITY.

FOURTH—ACKERMAN & ROSS, NEW YORK CITY.

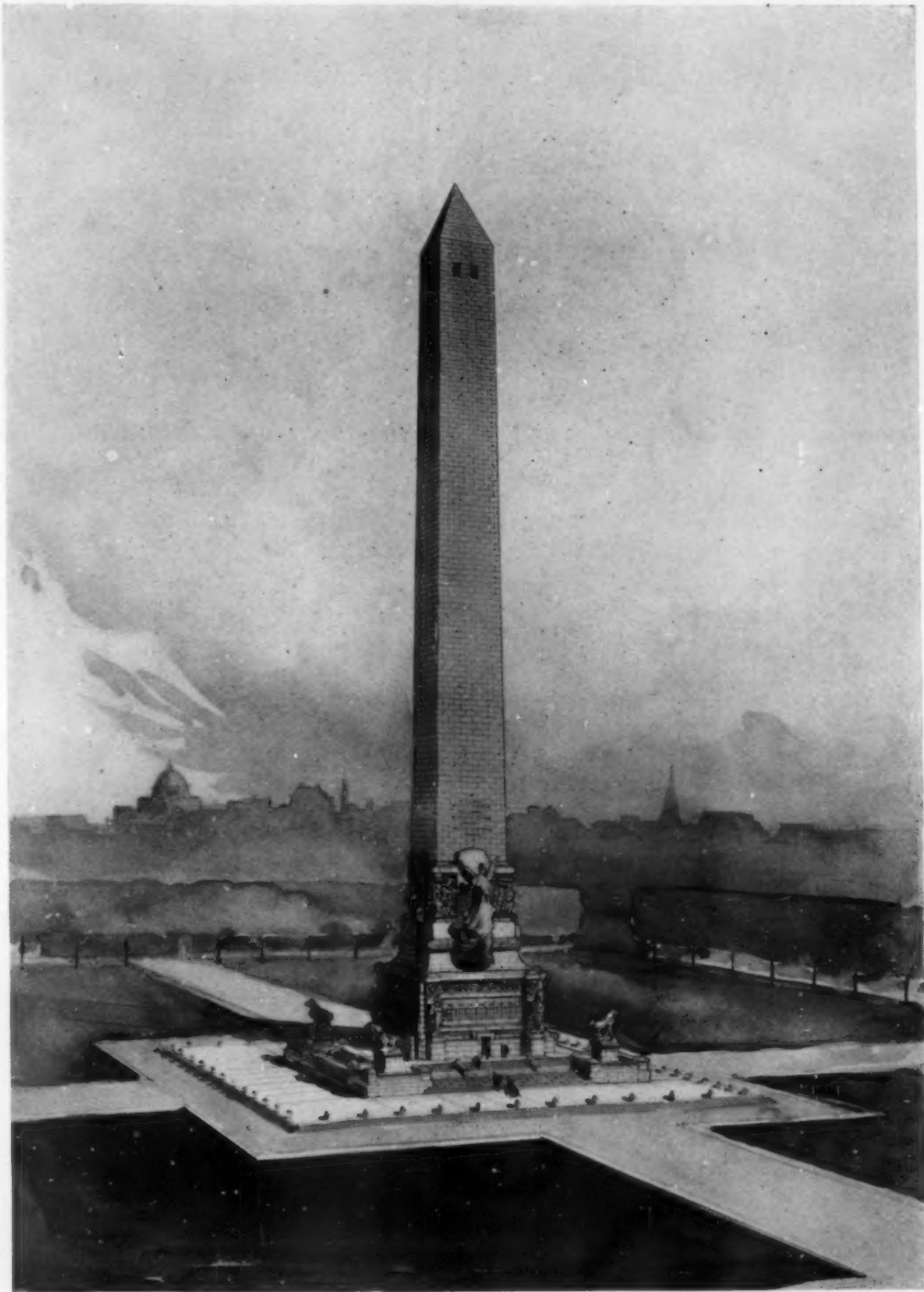
FIFTH—CARY & LYLE, BUFFALO.

Design number three received favorable comment in the report of the Jury, in being "especially worthy of praise for its distinction and appropriateness." The author of the best design is to receive a prize of one thousand dollars; of the second, six hundred dollars; of the third, four hundred dollars; of the fourth, three hundred dollars; and of the fifth, two hundred dollars. The first, second and third prize designs are illustrated on the following pages.

The competition did not provoke a very general response throughout the country. The reward may have been considered trivial, and the publicity the project enjoyed was, perhaps, insufficient for many strong designs to be entered. Among all these, real competition existed only between six or eight. It was a matter of regret that the names of local firms did not appear among those of the successful competitors. Though a number of Philadelphia architects entered draw-

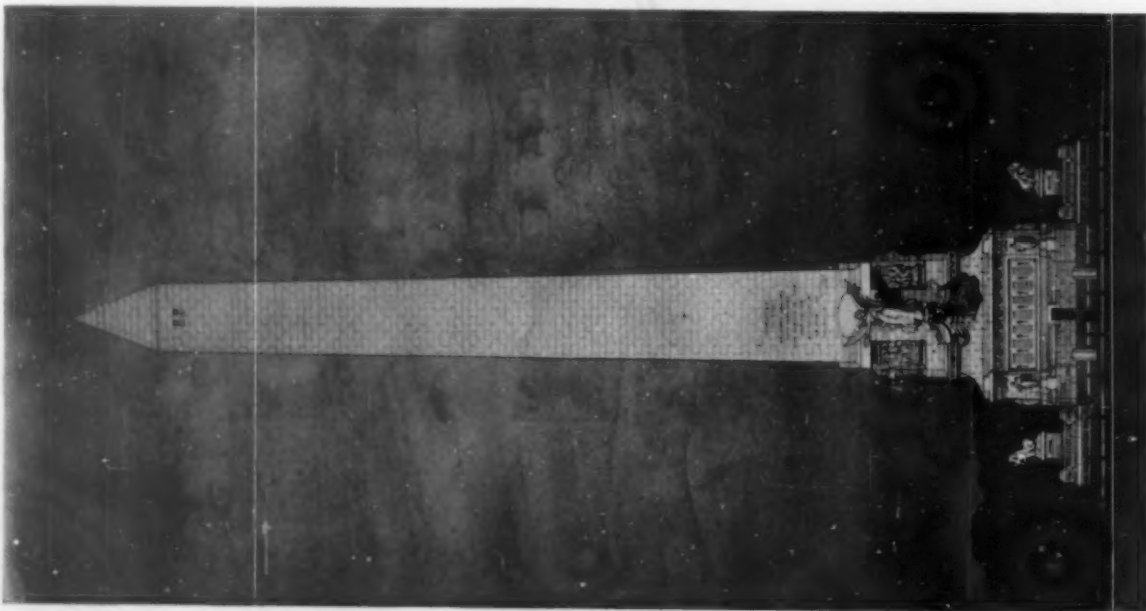
ings, the best designers of this city held aloof from the competition chiefly because of their belief that the monument would never be built. This opinion reflects, perhaps, the earnest desire of public-spirited Philadelphians that the expenditure of half a million dollars for this structure, in the particular part of the city where it is now proposed to be placed, shall never be made; or at least, not until such an improvement can be devised to have a more far-reaching effect in the improvement of the city's plan than the burdening of this unimportant square. To isolate such an ambitious monument, "In honor of the soldiers, sailors and marines who served in the war for the suppression of the rebellion," upon a rectangular space only 650 x 560 feet, in an uninteresting section of the city, and enclosed by streets indifferent in their architectural character, is certainly to be deprecated, in the absence of any broader architectural scheme by which the surroundings would be improved.

In spite of Logan Square's location in the midst of a painfully rectilinear street plan, not a single vista for viewing a monument is afforded by the adjacent streets (except from a small one two blocks in length), for the center of the square, and therefore the necessary center of the shaft, is out of axis with the thoroughfares. This project, if here carried out, would be only another sad mistake in placing such as we find exhibited in the Washington Monument at the Green Street Entrance to Fairmount Park, and in a score of other errors recently made throughout the country in sporadic and short-sighted efforts at beautifying our cities. Says the Monument Committee's report to the Philadelphia City Councils, "Your Committee approved the award of the Board of Jurors, and recommend that in the event of the execution of the work Messrs. Lord & Hewlett be appointed the Architects, and we further recommend the importance of making an appropriation in the near future for the beginning of the work." It is quite improbable that the project will be hastened; and if it is ever carried out at all, it is to be hoped that an existing ordinance authorizing the site of Logan Square may be repealed or so amended that a more effective location can be obtained.

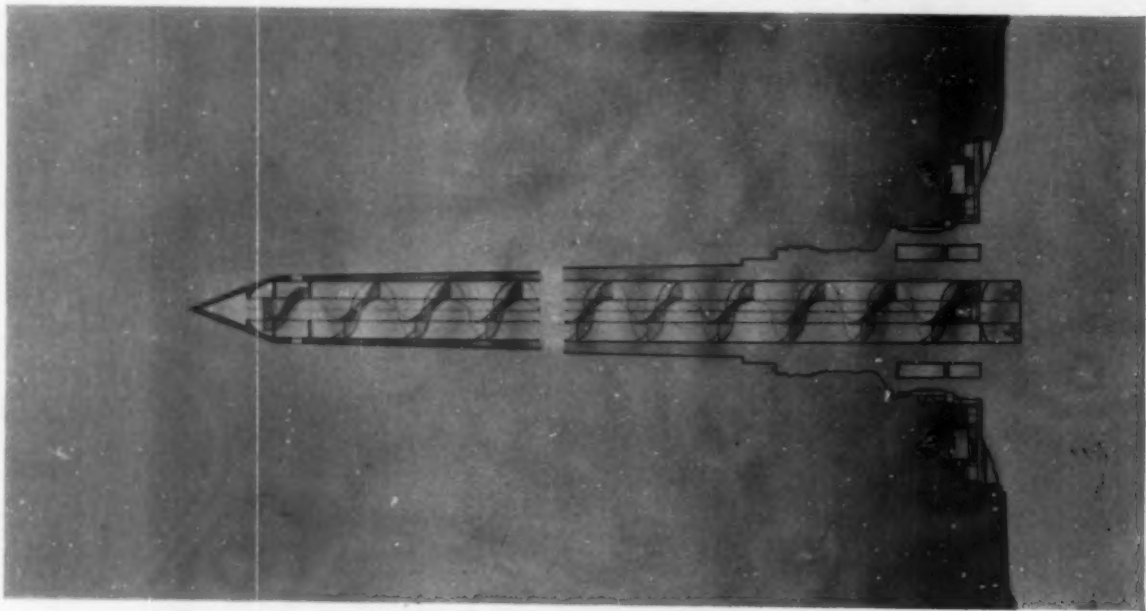


PERSPECTIVE OF FIRST PRIZE DESIGN
SUBMITTED BY LORD & HEWLETT, ARCHITECTS,
IN THE SOLDIERS' AND SAILORS' MONUMENT COMPETITION,
AT PHILADELPHIA

The Soldiers' and Sailors' Monument Competition

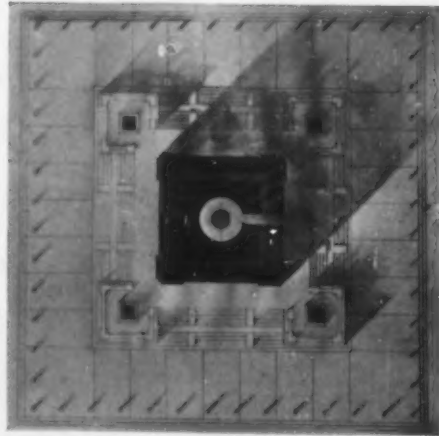


ELEVATION



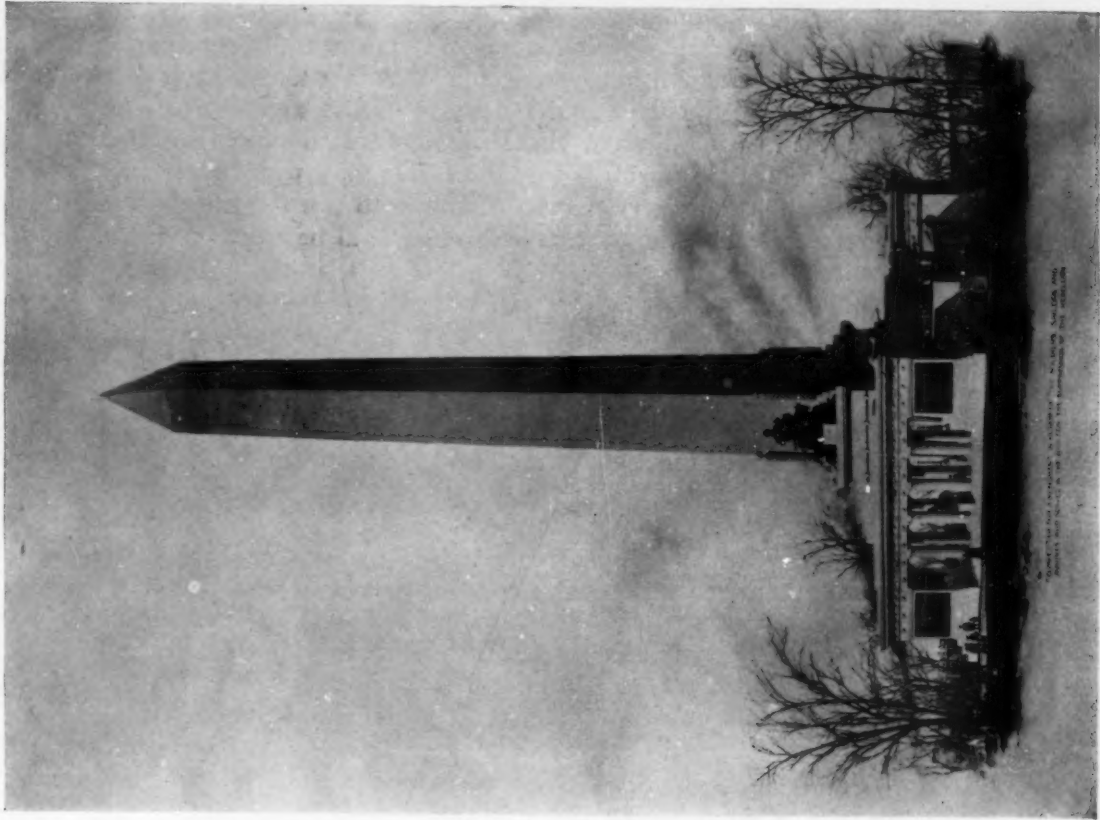
SECTION

THE
SOLDIERS' AND SAILORS'
MONUMENT COMPETITION,
PHILADELPHIA



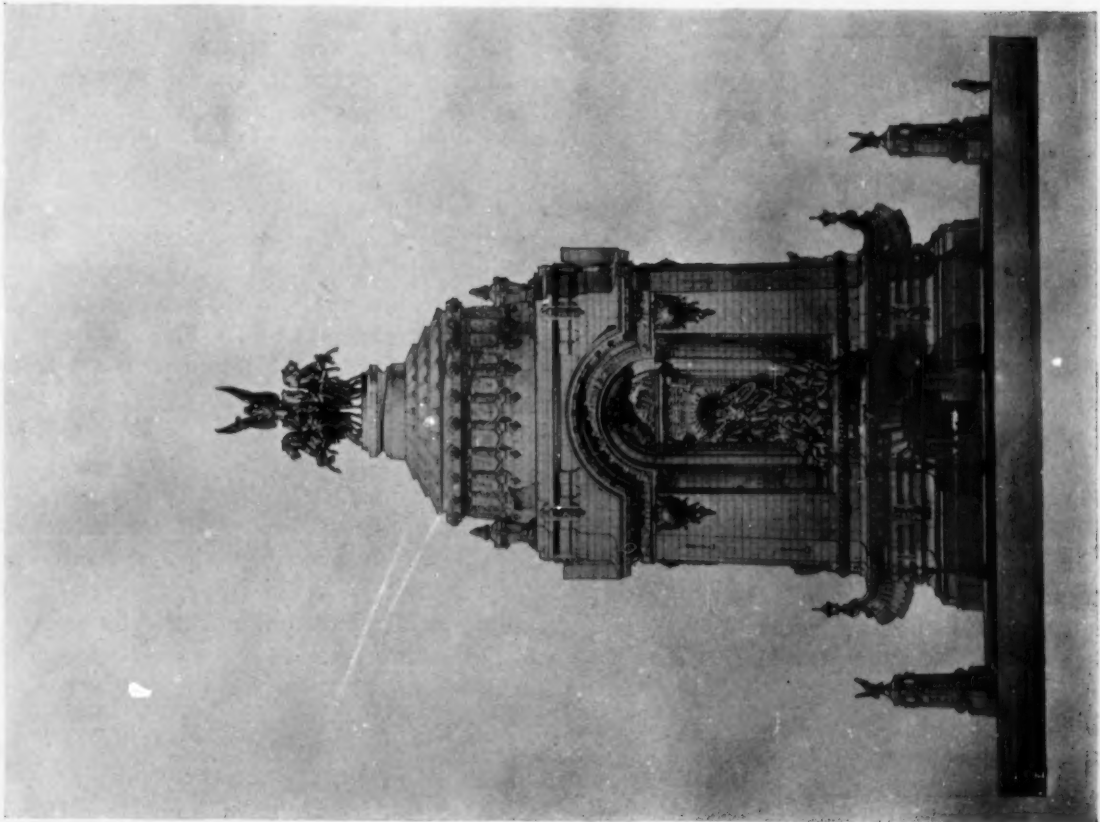
THE PLAN

THE FIRST PRIZE DESIGN
SUBMITTED BY
LORD & HEWLETT
ARCHITECTS
NEW YORK CITY



BY W. L. COTTRELL, ARCHITECT

THIRD PRIZE DESIGN
THE SOLDIERS' AND SAILORS' MONUMENT COMPETITION



BY C. F. ROSBORG, ARCHITECT

SECOND PRIZE DESIGN

WE have been requested to announce that the Fourth Annual Convention of the Architectural League of America will be held at Toronto, Canada, on Thursday, Friday and Saturday, May 29, 30 and 31, 1902. The Architectural Eighteen Club of that city, one of the fifteen progressive organizations of young architects which comprise the League, will be host for the visitors, and it has planned to make the occasion both profitable and interesting. The topics for discussion this year are to be chiefly those of municipal improvement, architectural education in America and the various departments of club work. It is the custom at these conventions that all sessions, except the closing banquet, are open to the public; and unless this year's gathering falls far below the previous ones held at Cleveland, Chicago and Philadelphia, there are certain to be addresses not only of intimate concern to practising architects but of a keen general interest. The subject of municipal improvement alone has unusual possibilities in interesting outsiders in the work of the Convention. A stirring and beneficial part of these yearly meetings of our club men has been the after-dinner addresses at the banquet by which the sessions have been closed. Memory of the inspiring words of Mr. Sullivan at Chicago and Mr. Cass Gilbert and Mr. Blackall at Philadelphia is sufficient to tempt all those who heard them to repair to Toronto this month in expectation of similar pleasures.

"THE Book of Bulbs"¹ is the fifth of the little volumes called "Handbooks of Practical Gardening." Its author is himself a practical gardener, being a canny Scot from the county of Kirkcudbright, and a frequent contributor to the English gardening periodicals. The little book covers the whole alphabet of bulbous plants from Aconite to Zephyranthes. It describes the several species and gives cultural directions. It includes a far wider range of plants than it is possible to grow here in any but our southern states. Indeed, it is a great pity that many of the admirable English books on gardening cannot, for our own use, be Americanized. How highly useful to us

would be, for example, such a work as Robinson's English Flower-Garden were it subjected to such changes as would fit it to the needs of those who live in the United States and Canada. Such an undertaking would call for very wide experience on the part of one who essayed the task. Still the experiment would be worth trying.

IN the case of Miss Jekyll's "Lilies for English Gardens"² such a change, though less necessary than in "The Book of Bulbs," would be a welcome one. The uncertainty as to whether a lily that is described as perfectly hardy in an English garden will stand the frosts of one of our northern states makes it necessary to refer to some reliable American treatise before deciding whether it is or is not worth while to plant it. But apart from this difficulty, Miss Jekyll's latest book, like all of hers, is an admirable one. It tells amateurs in the plainest way just what they want to know about lilies. The information is condensed, and put as briefly as possible. The arrangement is a simple one, and reference to any statement is easily made. Only such lilies as are worth growing and may be grown in England are described in the book. It is therefore not a botanical treatise, yet the author, contrary to her usual custom, enters upon the subject from its botanical side, devoting her first chapter to the classification of the genus *Lilium*, and making the subdivisions admirably clear, not only by her descriptions but by drawings in outline which show the characteristics of each. The very abundant and beautiful illustrations are most acceptable. Only about half the book is given up to the description of the several species. The remaining pages cover such subjects as lilies in pots in outdoor groups, lilies in the rock-garden, lilies as cut flowers and the most beautiful ways of growing lilies. Needless to say that all this, being by Miss Jekyll, is readable in the extreme and full of the most admirable suggestion.

¹ The Book of Bulbs by S. Arnott. 114 pp.; 11 half-tone plates: 5'' x 7½''. London and New York, John Lane, 1901. Price \$1.00.

² Lilies for English Gardens: A Guide for Amateurs, by Gertrude Jekyll. 72 pp.; 63 half-tone plates; 5½'' x 9''. London, Geo. Newnes; New York, Charles Scribner's Sons, 1901. Price \$2.50.

THE "VULCAN" LOCKS



The age of Iron is past and the age of Steel is fully born. This new material, and the latest machine processes, have been utilized by the Yale & Towne Manufacturing Company of New York and Stamford, Conn., to create a new American product, viz., the

"Vulcan" line of Builders' Door Locks, formed wholly from wrought materials, machine-made throughout and interchangeable in all its parts. The "Vulcan" lock, first introduced in 1897, embodies new principles, new materials, new designs, new mechanism and new results.

The case, cap and internal mechanism are all of cold rolled steel; the front is formed of a base-plate of the same material, over which is drawn a heavy skelp of wrought bronze or brass; the bolt-heads are of swaged bronze; and the keys, shown by Figure 1, are of cold forged steel.

The Cycloid Knob Action, for transmitting motion from the knob to the latch bolt and consisting of inter-gearred levers with pivotal motions, as shown by Figure 2, is substituted for the sliding action heretofore generally in use. The construction provides two springs, one acting on the latch-bolt only and both acting on the knob, thus giving the most perfect "easy spring" action. All of the working parts are provided with broad bearings, accurately fitted by machine processes.



Fig. 1

The Bracket Bearing, shown by Figure 3, substitutes for the loose and inefficient thimble heretofore used a bearing which perfectly guides and supports the knobs. A lock spindle is practically a short piece of shafting, with a wheel or pulley (the knob) on each end. Obviously the bearings of such a shaft should be as far apart, and as near to its ends as possible. In common locks, on the contrary, they are at the surface of the door and therefore near together. The bracket bearing has long been used with the Yale Locks and is now associated also with the "Vulcan" locks. It consists in a construction of the knob shank and its supporting thimble, such as to bring the bearings or points of support as close to the knobs, and therefore as far apart as possible.

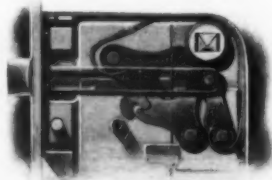


Fig. 2

The illustration herewith (Figure 3) shows the old and the new constructions, the dotted lines indicating the play or "wobble" of the common knob, with its clumsy adjustment by means of a row of screw holes in the spindle, supplemented by tin washers in a loosely fitting thimble close to the surface of the door.

The Triplex Spindle, first introduced with the Yale Locks, was adopted also for use with the "Vulcan" Locks.

As shown by Figure 4, the spindle consists of three triangular rods which, when united, form a square spindle, to one end of which one knob is permanently pinned. The other knob carries a set-screw which bears on the central piece, or wedge, of the spindle, and the tightening of the screw expands the spindle, forcing it into frictional

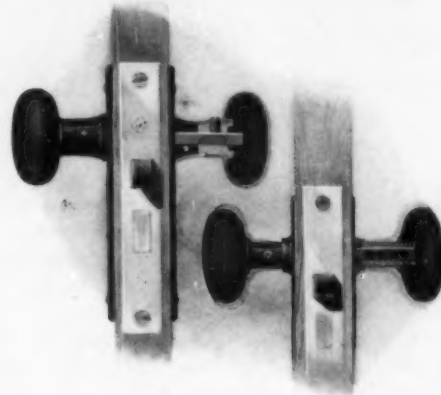


Fig. 3

engagement with the knob shank, thus holding the knob securely at any point, affording perfect adjustment without resort to washers, and eliminating all looseness or rattle of the knobs.

The mechanical combination thus formed comprises the triplex spindle, admitting of perfect longitudinal adjustment of the knobs, and the bracket bearing, which supports and guides the two ends of the spindle close to the knobs. The result is a perfect mechanical assemblage, easy to apply, eliminating all causes of future disturbance and certain to give permanent satisfaction.

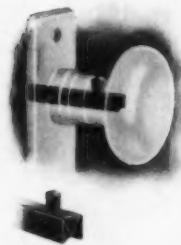


Fig. 4

Exhibit rooms for the convenience of architects and their clients are provided at the Company's General and Branch Offices. These offices are located as follows: General Offices, 9, 11 and 13 Murray Street, New York; Branch Offices, 131 Wabash Avenue, Chicago; 630 Witherspoon Building, Philadelphia; and 12 Pearl Street, Boston. The works are at Stamford, Conn.



Fig. 5



“SUNNYSIDE”

THE HOME OF WASHINGTON IRVING.

This quaint old mansion is one of the literary and historical shrines of America, and when it became necessary to enlarge the house and build new stables, a few years ago, the worshippers were fearful that an incongruous result would be unavoidable. The delicate problem was entrusted to Architect William H. Mersereau, of New York, who worked it out so successfully that the wails of the antiquarians were silenced. The house roof is covered with old Dutch tiles, and the difficult task of reproducing the same effect on the shingled roofs of the stables was accomplished by the manufacturer of Cabot's Creosote Shingle Stains, who compounded a Special Stain which imitated exactly the red of the tiles. Mr. Mersereau is only one of many architects who have found Mr. Cabot's willingness and ability to produce these special shades of great assistance, and every architect (and owner) should bear the fact in mind. Cabot's Shingle Stains were the first made, and after twenty years they stand higher in the favor of people who appreciate artistic and reliable effects than ever before. "Sunnyside" additions were made warm and the floors sound-deadened, by lining with Cabot's Sheathing and Deafening Quilt, another of Mr. Cabot's scientific and ingenious products.

The Willner Wood Co., 52 Wall Street, New York, are turning out very handsome carvings on solid wood by patent process, thus being able to reproduce very elaborate designs at comparatively small cost. This work is being largely used by piano manufacturers for panel work, cabinet and furniture manufactures and for interior decorating. Even with increased facilities their works at Rahway, New Jersey, have been working overtime getting out special orders.

THE BURROWES INSECT SCREENS

RECENT VALUABLE IMPROVEMENTS.

The E. T. Burrowes Company of Portland, Maine, has recently invented a sliding screen that can be adjusted for the varying widths of the windows and fitted without cutting or planing the screen. This New Century Screen is easily regulated to slide more easily or more tightly by means of a metal fixture operated by a special screw leading through the screen frame and turned handily. All bearing parts are of metal, the screen is workable in all weathers, and slides most smoothly.

They also have an improved method of wiring, using no tacks. They fasten each and every strand of the netting. This is in the way the frame is made. The screen is also molded on both sides, giving a complete and handsome finish, while at the same time allowing for the screen to be easily re-wired with simple tools. The Burrowes Copbronze Netting is offered for "rustless screens," and is strictly guaranteed never to rust or corrode in any climate. It has a rich, statuary bronze appearance, is stiff, strong, and springy, therefore will not dent or bag easily. It is a most elegant netting, and The Burrowes Company will send samples upon request.

They also furnish estimates to architects and house owners for their screens, and have branch offices and salesmen in nearly all the cities in America.

N. & G. TAYLOR CO.

GENERAL OFFICES NOW IN THE MARINER AND MERCHANT BUILDING.

The N. & G. Taylor Company announces the removal of its general offices to the Mariner and Merchant Building, Chestnut and Third Streets, where it has had spacious offices fitted up for its use. This change is necessary for its rapidly growing business in the enlargement and development of its tin plate plant; for its trade in open hearth, soft steel sheets for stamping purposes, and for its business in plate, iron and steel, from its works at Cumberland, Md. Its minor offices are transferred to its tin plate works at Tasker and Swanson Streets, where it has also erected spacious warehouses for the proper handling of goods. Its tin plate departments have also been enlarged, and a new smelting works, to meet the increased demand for its fine makes of solder, babbitt metal, etc., has been built.

This house was established in 1810, doing business at that time in the old district of Kensington; subsequently it removed to Second Street, above Race, then to Third Street, above Race, when in 1845 it built the premises on Branch Street, which it is now vacating. It has had a continuous existence as a firm for ninety-two years, being the oldest firm in its line in the United States. It is the sole manufacturer of the celebrated "Taylor Old Style" brand of hand-dipped roofing tin. This old-fashioned tin is made the same as the first roofing tin that was ever made, which was in 1830, in Philadelphia, and sold by it at that time. The "Taylor Old Style" brand covers most of the

prominent buildings throughout the United States, and is justly held by architects and the trade as the standard of the highest quality.

It received medals for tin plates of high grade manufacture at the Franklin Institute Exposition in 1874, at the Centennial Exposition in 1876 and also at the National Export Exposition, held in Philadelphia in 1899.

THAT EASY MOVEMENT

Quiet and ease is what we seek in the home, be it country or city. The best people, those that know, are using either the Bommer Spring Hinge or the Bommer Ball Bearing Floor Hinge. They work noiselessly, a slight push with the foot from either side causes the door to open either way. Bommer Spring Hinges have become famous for that "easy movement." It is their peculiarity. They do their work calmly; no after-claps and their appearance is elegant and the finish perfect.

"Practically Unbreakable," says the World's Fair award, Chicago, 1893.

Gold Medal awarded, International Exposition, Paris, 1900.

Gold Medal awarded Pan-American Exposition, 1901.

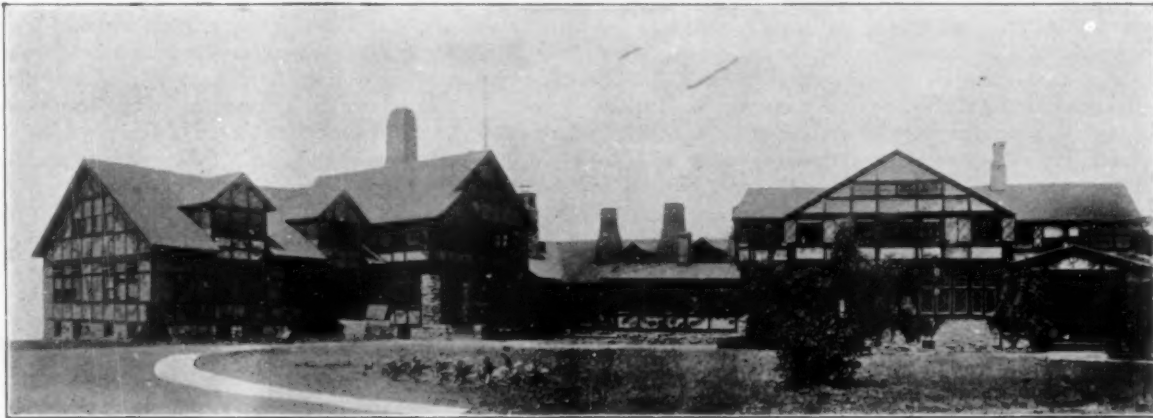
Your hardware dealer can furnish Bommer Spring Hinges. They are manufactured by Bommer Brothers, 257 to 271 Classon Avenue, Brooklyn, N. Y.

"S. B. Church, Seymour, Conn., branch office, Boston, Mass., has recently removed from 21 South Market Street to 38 South Market Street, Boston, where he has a large store fitted up in a most attractive way. This change became necessary on account of his increased business.

Mr. Church's specialty is contracting for complete suburban pumping plants, including artesian wells, wind mills or pumping engines, with ornamental tank towers some of which are very elaborate in design.

He also erects a large number of tank tower outfits for fire protection for factories.

Mr. Church installed the water plant in connection with 'Bellefontaine,' Lenox, Mass., the beautiful suburban residence which our readers have become familiar with through the articles issued in our January and February numbers."



FACTORY OF THE ROOKWOOD POTTERY CO.

CINCINNATI

Is illustrated with the idea or showing that because a building is used for manufacturing purposes it need not be otherwise than artistic. The grouping of the several buildings is interesting in the extreme and conveys the impressions of a large country house rather than a factory.

MERRIMAC POTTERY

It is but a little over a year that the Merrimac Potteries of Newburyport, Mass., have been offering fictile products adapted to the interior and exterior decoration of homes, yet the capacity of the pottery is fully taxed to supply the demand which has come for its ware. The graceful shapes and fine texture of the enamels characteristic of the ware made for beautifying the interior of houses is better known than the class of large garden pottery in red terra cotta and white clays which they are producing in large quantities this Spring. Several extensive gardens in Newport, New York, in the vicinity of Boston, along the North Shore and in the South and West are being fitted up by this Pottery.

The shapes of the vases are on the lines of old Greek or modern Italian models or from designs which have had the approval of the Jury of The Society of Arts and Crafts in Boston. There are few ways in which a moderate amount of money can be more advantageously used in the decoration of large gardens or smaller grounds, than by the use of growing trees and shrubs in terra cotta pots.

Following up the idea of producing work of a classical character at a moderate cost. The Merrimac Potteries have this month brought out reproductions of the Arrhetian, or, so-called Samian, ware in clays of light red and ivory colors, from the original molds or pottery. These pieces are in the shape of modelled flower bowls and cups and are by far the most exquisite of old Greek modelling.

This ware was made from molds which were taken from vases of the finer metals, and give us, consequently, a good idea of the decoration of the gold and silver vases used by the Roman patricians, especially in the time of Augustus.

JOHN LUCAS & COMPANY

This well-known paint and varnish concern have recently issued a number of the most attractive circulars under the general title of "Lucas' Helps to Solid Prosperity," in which are given many valuable suggestions upon the proper use of Fresco color, oil stains and floor paints. These circulars not only give a general description of the process of manufacturing these products but contain as well samples of the various colors, shades and tints thereby giving much valuable information and useful suggestions to prospective customers. The constant and increasing demand for the Lucas goods have necessitated them increasing their Power Plant and Manufacturing and Warehousing Departments. This increase is particularly marked in their West Indies and South American Business.

COLUMNS AND COLUMNS

The old say that "Imitation is the sincerest form of flattery" is just as true of wood columns as of anything else. That the Koll's Patent Lock Joint Columns, manufactured by the Hartmann Bros. Manufacturing Company, Mount Vernon, New York are now imitated by more than a score of concerns is pretty sure evidence that the original must possess exceptional merit. It does not follow, however, that the original and the imitations are alike: The Hartmann Company's orders have increased 100 per cent. during the past year, and in value over 200 per cent., and the mill is kept running to its fullest capacity, even in the dull season. The capacity of the factory has constantly been increased to meet the growing demand for these columns. The construction of one of these columns, from the rough staves which form the column, through the shaping machine, through the assembling, glueing and turning departments, and through the finishing department, until it comes out graceful in appearance and constructed so firmly that it never comes apart, is an interesting process. Much special machinery and appliances are required, and these are the result of many years of experience in this particular line. Columns 30 feet long and 36 inches in diameter are now made and turned by the Company, and it is possible to vary the shape to give them any taper or swell desired.

Among the orders which the Company have recently filled are columns for a new building for Dartmouth College, Hanover, N. H.; the Home for Intemperate Men at Mt. Vernon, N. Y.; Chas. Whitney's new residence, at Centerport, L. I.; a Colonial residence in Lenox, Mass., built by James Clifford's Sons; another built by the Gale Lumber Co. at Pittsfield, Mass.; residences for P. D. Gwaltney and R. F. Berryman, Smithfield, Va. Some of the more recent orders: For W. F. Cotter and W. T. Hadlow, Jacksonville, Fla.; Hamilton Terrace Land Co., Shreveport, La.; Forest Glen Seminary, Forest Glen, Md.; Mount Washington Hotel, White Mountains, N. H.; a residence in Brewster, N. Y., for H. H. Vreeland, President of the Metropolitan Street Railway of N. Y.; the Carnegie residence in New York, and for many Long Branch, Elberon and Rockaway residences. Residences of Mr. Fletcher, Mr. Hartshorn, Claus Spreckles, Mr. Bixby.

A new catalogue has been prepared by the Company and is ready for distribution, showing in detail how the columns are made.

THE "BARDSLEY" CHECKING SPRING HINGES

FOR SWING DOORS.

These hinges are especially adapted to banks, churches, public buildings, butler's pantry and other doors in dwellings, and all doors where automatic closing, combined with gentle, silent action is desirable. Many thousands are now in use.

These are thoroughly practical double acting spring hinges, combined with a perfect device for checking the sudden action of the spring.

The mechanism, very strong and simple, and designed with a view to great durability, is contained in a closed iron casing which is let into the floor or sill, under the door; a brass plate covers this, and is all that is seen. The casing is nearly filled with a specially prepared non-freezing oil, which serves as a checking medium as well as lubricant.

The working parts are of hardened steel, and being constantly submerged in the oil, the wear is very slight. The parts are entirely of metal; no leather packings are used.

These hinges possess the following advantages over the ordinary spring hinges:

They do not swing the door violently, but close it gently and without noise, and stop it at once at the center.

There are no unsightly projections on the door or frame.

The springs are not twisted, but compressed, and do not break or set.

The door cannot sag, being hung on pivots.

The greatest pressure of the spring is at the closing point.

C. SCHRACK & COMPANY

This firm was established in 1816 to manufacture varnishes, etc. The merit of their product was instantly recognized and they at once assumed the foremost place in the confidence of architects and builders, and, during the eighty-six years of their business it has been their constant aim to retain this confidence, with the result that the foremost architects of the country are specifying their goods. Their claim that their varnishes and oil finish must have decided merit to retain their lead in the face of all competitors during all these years is not without weight.

THE YANTACAW CHEMICAL FIRE EXTINGUISHER

Marks a new departure in the line of Chemical Fire Extinguishers, doing away with the objectionable features of the old style apparatus, and adding many new and very valuable features of its own, chief among which the following may be mentioned :

Extreme simplicity of construction as well as of manipulation.

Constant and immediate readiness for use.

No gas generated in the cylinder.

Entire absence of danger from chemical.

Durability of chemical.

Damage by water reduced to a minimum.

Equal efficiency for outside as well as inside fires.

Applicability to incipient fires as well as to large conflagrations,

The apparatus is designed for Dwellings, Factories, Hotels, and all Public Buildings, and consists of a cylinder, into which is inserted a perforated metal cartridge, filled with a dry chemical in crystal form. The cylinder is to be attached at any desirable point in the building to the ordinary water supply pipe, so that the water upon entering it, flows through and dissolves the chemical, and passes from the nozzle of the attached hose, a perfectly saturated chemicalized stream.

One quart of this chemicalized water will extinguish 200 square feet of flame area in one second.

As the Yantacaw requires no skillful handling, and as there is no heavy weight to carry to the conflagration, and as there is absolutely nothing that can get out of order, a child can manage the Yantacaw as well as a grown person. There are no instructions to be read and memorized, and there is no cumbersome and heavy machine to be carried around and dexterously manipulated when the fire is reached. With the Yantacaw, simply turn on the water, point the nozzle at the fire, and the chemicalized stream will do the rest.

Another great advantage the Yantacaw has over other machines is that it is stationary, always ready for instant use, and always to be found in the same place. Frequently, when a fire occurs, it is found that portable extinguishers have been moved and cannot be found in their accustomed places; and when found they will not work on account of deterioration of chemical or corrosion of nozzle. With the Yantacaw there need be no fears on this score, as there is no possibility of such defects.

These extinguishers are made in various sizes from 14 in. to 36 in. in height, containing sufficient chemical to charge either 25, 50 or 100 gallons of water each, or by employing two connected cylinders can be so arranged as to give a continuous charged stream.

The chemicalized stream is entirely harmless to the human system as well as to all fabrics. It can be imbibed with impunity and, even on the finest fabric will leave no stain other than such as would be caused by plain water.

Catalogue and information on request. THE YANTACAW MFG. CO., 800 Land Title Building, Philada., Pa.

STANDARD PORCELAIN ENAMEL WARE

The enviable position achieved by the "Standard" Porcelain Enamel Ware in the field of sanitary equipment is a very good illustration of what may be achieved in the way of improvement by taking advantage of every suggestion offered in criticism and in the constant study of conditions.

The Porcelain Enameled Bath was long ago acknowledged to be superior to anything in the line it represented that had up to the time of its advent been produced, but it has remained for the Standard Sanitary Manufacturing Company to bring this particular fixture and the material of which it is made to its present state of perfection. Some years ago when first manufactured, it seemed almost impossible to secure uniformly satisfactory results, as there was always more or less tendency for the enamel to flake off the iron. This disagreeable feature, however, has been entirely obviated by securing an equal elasticity of the various materials used and a perfect amalgamation by a new process, so that the fixtures now combine the purity and daintiness of china with the strength and durability of iron.

The surface provided by Porcelain Enamel is the hardest, smoothest and most absolutely non-absorbent that it is possible to produce, and the particular value of this feature in sanitary equipment is easily apparent.

The new pattern lavatories made of this material are designed particularly to have as few cracks and crevices as possible and as few separate pieces, thereby reducing to a minimum the possibility of contagion through germs.

"Standard" Porcelain Enameled Ware has attained a world-wide reputation for its excellence and has received the highest awards at all World's Fairs and Expositions. Added to this the full and absolute guarantee that covers this material, makes it desirable to have specifications for bath tubs, lavatories, water closets, kitchen sinks, laundry trays, etc., stipulate particularly "Standard" Porcelain Enameled Ware, to avoid the annoyances inseparable from the inferior and non-guaranteed brands.

THE PROBLEM, TO PREVENT THE BURSTING OF FROZEN WATER PIPES, SOLVED

Prominent among the recent meritorious inventions is the Pneumatic System for Preventing the Bursting of Frozen Water Pipes by Freezing.

It is unnecessary for one to be possessed with a theoretical or practical knowledge of mechanical matters to at once realize the value of an invention which makes the costly and annoying bursting of water pipes a thing of the past.

The system is based upon sound acknowledged principles, and has the important advantage of extreme simplicity.

It is well known that water in freezing increases in volume, and that the bulk of the ice formed is approximately ten per cent. greater than the original liquid water.

This irresistible expansion of the ice causes the pipes to split open, or burst, manifesting the damage done at the time of the thaw by flooding and damaging property, necessitating immediate and costly repairs, often including plastering and decorating. It is held by many that pipes burst with the thaw, but in fact the melting of ice gives the first evidence of the damage done.

The system, which is now being satisfactorily introduced all over the country, simply depends upon small malleable iron domes, or chambers placed upon the pipe at intervals to compensate for the usual destructive ice expansion. These domes contain "cushions" of compressed air, and virtually render the entire system elastic, allowing the pipes, to which they are attached, to freeze any number of times without strain or injury to the installation.

There is one automatic inspirator to every house, or complete system, which supplies a small quantity of air to the plumbing at all times, and which "cushions" the pipes in such a manner, through the agency of the domes, that they are absolutely burst proof, and in addition, free from the annoying "water hammer" so common when spigots are opened and closed. The system can be attached to old as well as new work.

The present ingenious system was awarded the John Scott Medal after a series of the most severe tests by the Franklin Institute, of Pennsylvania, for the promotion of the Mechanic Arts.

For further information address the Anti-Bursting Pipe Company, Pittsburg, Pa.

New Photogravure Books

London: Historic and Social. By CLAUDE DE LA ROCHE FRANCIS. Illustrated with 50 full-page photogravures from original negatives.

Two volumes, crown 8vo, cloth gilt, gilt top, with cloth jackets, and in a cloth box - - - - - \$5.00

"This is no ordinarily superficial account of London, nor yet a mere catalogue of its monuments, history, traditions, and topography; but an interesting presentation of the results of exhaustive study, not only in libraries but on the ground."—*Press*, Philadelphia.

"In this estimable book we penetrate beneath the surface, discover the by-ways of London life, its hidden churches, its relics of the monastic age, its bits of mediæval architecture."—*Times*, Buffalo, N. Y.

"Whether one wants historic London or social London, ancient London or up-to-date London, the London of speculation or the London of the guide-books, it is all in the two volumes here presented."—*World*, New York.

Ireland: Historic and Picturesque. By CHARLES JOHNSTON. Illustrated with 25 full-page photogravures and a map.

Crown 8vo, cloth gilt, gilt top with cloth jackets, and in a cloth box - - - - - \$3.00

"It is a gem. It is the only book of its kind, and will be the despair of anyone who may wish to imitate it."—JOHN HABBERTON.

"In 'Ireland, Historic and Picturesque,' the author has supplied a real want of the ordinary reader. For the average Englishman and American, Ireland has no history before the time of Cromwell, and the old traditions of Switzerland are better known to him than those of Ireland. From that remote past, in the ages before the advent of St. Patrick, Mr. Johnston lifts as much as he may of the veil of time."—*Church Standard*, Philadelphia.

"Mr. Johnston has succeeded admirably in condensing into one volume a delightful study of the salient features of Irish history from the earliest period down to the present century."—*Advertiser*, Trenton, N. J.

Scotland: Historic and Picturesque. By MARIE HORNOR LANSDALE. Illustrated with 50 full-page photogravures and a map.

Two volumes, crown 8vo, cloth gilt, gilt top, with cloth jackets, and in a cloth box - - - - - \$5.00

"The author has read diligently and wisely. Nobody and nothing of consequence to be found in books seem to have escaped her."—*Post*, Chicago.

"Handling her theme with a light touch, she gives us very readable pages."—*Tribune*, New York.

"In easy, fluent style she combines history, romance and descriptions of landmarks, ancient and modern."—*Ledger*, Philadelphia.

Henry T. Coates & Co., Publishers
Philadelphia