

THE AMERICAN ARCHITECT AND BUILDING NEWS.

VOL. XIV.

Copyright, 1883, JAMES R. OSGOOD & Co., Boston, Mass.

No. 395.

JULY 21, 1883.

Entered at the Post-Office at Boston as second-class matter.

CONTENTS.

SUMMARY:—

The Murch-Hill Investigation.—The Master Plumbers' Convention.—The Influence of Sanitary Engineers on Practical Plumbing.—Building Small Houses in New York.—A Workman's School in New York.—Statues of President Garfield and General Burnside.—The Suez Canal and the System of Transit through it.—Current Rumors concerning it.	25
WATER-CLOSETS.—XV.	27
FROM BAYREUTH TO RATISBON.—X.	28
DRAINAGE OF THE VALLEY OF MEXICO.	30
THE ILLUSTRATIONS:—	
The Hildreth Building, Lowell, Mass.—Design for a \$3,000-House.—Designs for a Mechanic's House.	30
THE \$3,000-HOUSE COMPETITION.—XV.	31
THE COMPETITION FOR A MECHANIC'S HOUSE.—III.	31
RECOLLECTIONS OF FLEMISH ARCHITECTURE.—II.	31
COMMUNICATIONS:—	
"Building Superintendence."—Factory Chimneys.—Books.	
—The Responsibilities of Architects.	34
NOTES AND CLIPPINGS.	34

THE investigation at Washington drags along, the accusing party being apparently waiting for something to turn up in the shape of a plausible pretext for a new charge. The committee of investigation evidently regards evidence founded upon newspaper reports of pretended interviews with discontented persons with about the same favor that it would receive from other fair-minded persons, and there is little probability that any action will be taken reflecting upon the integrity of the present Supervising Architect. At the same time it has become sufficiently evident that the building affairs of the United States, unlike a manufacturing business, cannot be advantageously or economically carried on by a vast central bureau. Even leaving out of the question the artistic consideration, the mere administration of the expenditure upon a costly building requires, to secure strict economy, a personal attention to little details on the part of its designer, the place of which cannot be supplied by the care of a deputy, however competent. It is said that twenty thousand letters are sent out every year from the office of the Government Architect. Obviously, no one man can keep in his mind the particulars of so vast a business as this correspondence implies; and yet, as every architect knows, without such minute familiarity with work in progress, opportunities for saving in extras, and economies of various kinds, which often amount to a considerable percentage on the total cost of a building, must be lost. We do not agree with those who think that the Government ought to sacrifice the public money merely for the sake of employing private architects; but now that the experiment of economizing in the public expenditure by dispensing with the usual professional assistance in the construction of Government buildings has been fairly tried, we should like to know if the result has proved this system to be greatly superior to the old one, still followed in other portions of the civilized world, of openly entrusting the design and supervision of public buildings to those who show themselves most capable of carrying them out with credit to themselves and their country.

A SOMEWHAT remarkable meeting was held in New York two weeks ago, under the name of the First National Convention of Master Plumbers, which was composed of delegates from nearly all parts of the United States, and probably represented pretty fairly the whole plumbing trade. The proceedings of the Convention, therefore, must be regarded as illustrating the habitual thoughts and opinions of plumbers, and we are obliged to say that our respect for the trade has not been increased by the exhibition. The very first task of the Convention, after the nomination of officers, was to make a totally uncalled-for assault upon the members of a profession to which the business of plumbing owes, perhaps, most of its present prosperity, by means of a document, read and "spread upon the minutes of the Convention," in which "the old-time, steady and conservative plumber" was compared, much to his advantage, with the "new excrescence on the body politic," known as the sanitary engineer. The rage against these "excrescences," who are called in other portions of the official document "magniloquent braggarts," "book-taught experts," and "newspaper scientists," seems to have been excited

by the fact that "the unlucky plumber is relegated to the humble position of the mere fitter-up of whatever fantastic ideas or notions have been evolved from the brain of the sanitary expert;" and the "emphatic condemnation" of the Convention was expressed against "this abuse."

WE have no desire to malign the plumbers, for whom, as a class, no one can have a greater regard than ourselves, but it ought not to be necessary to point out that such attacks upon professional sanitarians, some of the best of whom, indeed, are, or have been, themselves plumbers, only discredit those who make them. Why was it, we should like to ask, that in thirty years of the practice of house-drainage by the "steady and conservative" plumbers, the art steadily degenerated, so that in nearly every respect the best plumbing of the year 1870, let us say, was inferior to that of 1840? Why was it, again, that about thirteen years ago a movement began which has already revolutionized the art, and has made the plumbing work of the day as much superior to that of forty years ago as that was to the foul tinkering of the last decade? How does the Master Plumbers' Convention account for the fact that the beginning of this modern reform, the most important movement of the present generation, was contemporaneous with the appearance among professional men of certain individuals who came to be known afterwards as "sanitarians," or sanitary engineers? Or for the other fact, that most of the best improvements in drainage appliances have been made either at the suggestion or in accordance with the direction of "book-taught experts," and have forced their way into use against the stolid resistance of nearly the whole plumbing trade, by the unceasing efforts of the "magniloquent braggarts," directed, not to the hopeless task of arguing with "practical skill and experience," but to the little less difficult enterprise of "pandering to the popular prejudice" in favor of clean and wholesome living?

THE fever for living in apartment-houses has not yet affected the whole community of New York, and two or three gentlemen have lately made some endeavor to counteract it by undertaking to build small houses in such a locality, and of such plan and external appearance, that people of education and taste can not only endure to live in them, but may, notwithstanding their small size and unpretentious character, even take pride and pleasure in occupying them. Until within a few years, as every one knows, a man with a family and an income of less than seven or eight dollars a day was obliged, if he desired to live in New York, either to board, or to hire a floor in some house planned without reference to such use, cramming his children and himself into the rooms as best he could. If he attained a somewhat improved financial position, and aspired to a house of his own, he was obliged to choose among rows of hideous habitations, varying in design only between helpless shabbiness and tawdry vulgarity. The fashion of apartment-houses brought a certain relief from this, and it became possible for a man, by coöperation with others, to secure a home in a part of a building designed with some appreciation of healthfulness, character and interest. The other alternative, of abandoning a cheap and ugly dwelling for an equally cheap but beautiful one, has only recently been presented to the modest householder, but the result has been most encouraging, and we may hope that the fashion will spread rapidly. So far as private houses are concerned, New York is architecturally perhaps the most uninteresting city in the world. It is quite time that this should be changed, and there is reason to suppose that if the example is once set, the demand for picturesqueness and expression in domestic building will soon make itself strongly and widely felt.

AN interesting experiment in education is in progress in New York, where a Workingman's School, intended, not for grown persons, but for children who expect to gain their living by manual labor, is now in successful operation. The children are received into the infant department of the school at a very early age, and trained under the kindergarten system, graduating from this department into a little workshop, where each pupil is furnished with a ruler and triangle, and set at work to draw an elevation of a house, from a model placed in view of the class. After drawing the square, surmounted by a triangle, which represents the gable end of the house, the

pupils are given pieces of moist clay, on which they lay out the same figures, by means of rule and try-square, and cut them to the form with wooden tools. As the children advance in age and capacity, they are allowed to use drawing-boards, T-squares, scales and compasses, reproducing as solids the forms which they draw on paper, by modelling them in clay or pasteboard. The clay, which is shaped by the hand, or with wooden tools, is exclusively used by the young children, who could not safely be trusted with sharp steel, but saws and chisels are added afterwards. Simultaneously with these manual exercises are given lessons in reading and writing, arithmetic and geography. With true charity, the little ones, instead of being abandoned to themselves during the summer vacation, have, in each of the two years since the school was established, been taken to spend two weeks on a farm in the country, where they are shown how to interest themselves in natural objects, and gain at once mental, moral and physical vigor for their next year's work. The influence of such school training as this upon the susceptible bodies and minds of young children must be of incalculable value, and it is only to be regretted that its advantages should be confined to so few, only one hundred and fifty being as yet provided for. We wish that every one who has money to spare, and the disposition to do some good with it, would study by actual observation the influence upon the character of the young of the depressing air, the foul sights and smells, the vicious associations, and the capricious discipline of the homes in which two-thirds of the next generation of New Yorkers are now being brought up, and compare these with the bright, sweet atmosphere of a good school for little children, with its gentle but steady control, wholesome surroundings, and varied but pleasant industry. If the benevolent community could once be brought to realize the dependence, for the formation of habits and modes of thought which will last them through life, of young children upon the external circumstances and influences which surround them, we should soon see all these little ones made the objects of the most anxious solicitude, kept through school-hours as protracted as possible under the best of care, and watched over even at home by special guardians; refreshed with pure country air at regular intervals, and attended in sickness by tender and skilful nurses. Such charity as this would be indeed worth its cost; and if each of the next half-dozen persons who think of endowing colleges to teach a thousand rich young men to read Greek will devote his funds instead to the maintenance of schools for giving ten times that number of little children a good start on the way of health and happiness, he will find the latter form of benevolence the less expensive of the two, and its rewards greater.

THE present year is to be marked by the commencement of work on two statues, which promise to be of considerable importance, — that of President Garfield, by J. Q. A. Ward, and of General Burnside, by Launt Thompson. It is some time since the latter artist has been called upon for any ambitious public work, and, indeed, the present commission promises to give him the best opportunity he has had for winning that permanent fame which even the highest degree of refined skill, devoted to private work, seldom gains for a sculptor. As it happens, Mr. Thompson is now engaged upon another statue, that of Admiral Dupont, which will in Washington, like the Burnside statue in Providence, have the benefit of being seen by a much larger number of persons than most of his previous work. Mr. Ward's commission comes, we believe, at the same time with that for the statue of Washington to be erected upon the steps of the Sub-Treasury in Wall Street. If that project is really to be carried through, Mr. Ward may congratulate himself upon having at once two opportunities such as fall to few sculptors more than half-a-dozen times in their lives.

LE GENIE CIVIL contains a description of the Suez Canal, by an engineer familiar with the work, which gives some interesting particulars of the management of the canal, and the present condition of the construction. It need hardly be said that the vast trench, cut in fine and shifting sand, needs constant dredging, while the banks are continually falling in at different points, and need revetment and repairs. The most common source of injury to the banks is the agitation of the water caused by the "swell" which follows the movement of large vessels through it. The width of the main channel of the canal being only about one hundred and fifty feet, the

passage of a steamer of three or four thousand tons measurement displaces an immense volume of water, which closes in again behind it in the form of a wave of considerable height, and capable, as engineers know well, of exerting a very serious effect upon the margin, even of a canal in hard ground. To this cause of erosion is to be added the violent abrasion of vessels, which are frequently driven against the shore by bad steering or unfavorable winds, in spite of the greatest care. To guard against all these, the sides of the canal are now being rapidly revetted with stone blocks laid in mortar, which, so far as the work is completed, effectually prevent further decay. A certain amount of sand, however, blows into the canal from the surrounding desert, filling it up in some places at the rate of three or four inches a year, and although the banks are so shaped as to intercept much of the deposit, enough reaches the water to make it necessary to dredge it out occasionally. Attempts have been made to establish some sort of vegetation by the sides of the canal, both for giving firmness to the banks by their interlacing roots, and as a barrier against the dust-clouds, but the cost of bringing the fresh water necessary in that rainless climate for keeping any kind of plant alive, is so great that little progress has been made.

THE system of regulating the transit of vessels through the Canal is the result of long experience and close observation. In order to avoid collisions, all movement of ships during the night is forbidden, except in cases of great necessity, and then only upon the condition that the commander of the ship shall sign a contract absolving the Canal Company from all responsibility for accidents. The speed of vessels is restricted to a maximum of six and one-half miles per hour, and at Suez, where strong currents are caused in the canal by the tides of the Red Sea, entrance is permitted only at suitable hours. Once in the canal, the vessel steers between two lines of buoys, about five hundred feet apart, and indicating a deep-water channel one hundred and thirty feet wide. A telegraph runs along the bank, and at each turn-out station is a signal pole, from which each pilot learns whether he must anchor and wait for a vessel coming in the opposite direction, or may advance to the next station. In the former case the pilot steers to the side allotted to those going in the same direction as himself, and sends boats ashore with hawsers, which, by the aid of the company's employés on the bank, are secured to great posts set in the sand. The turn-out basin is wide enough for three rows of the largest ships, so that a sufficient passage is left for those having the right of way between the others moored at each side. In order to admit of ready landing from boats at any point, the whole length of the canal is bordered on each side by a strip of shallow water from twenty to one hundred feet wide, according to the character of the ground, which has a bank in the form of a shelving beach, up which boats are easily drawn. The number of craft now passing through the canal is so great that the turn-outs are often occupied by ten or fifteen ships at a time, waiting their turn to proceed, and the time required for making the entire transit of a little more than one hundred miles has increased from the fifteen or sixteen hours needed at first, when the way was generally clear, to three, four, and even five days. It is rather remarkable that, aside from the injury which they cause to the banks, the largest steamers pass most safely and easily through the canal; their great length helping to keep them steadily pointed in the proper direction, while smaller vessels are blown or swung around, and come in contact with the banks.

THE subject of the new Suez Canal seems to cause a good deal of agitation both in England and France. The English Government, with what would appear to be a judicious regard to the circumstances of the case, recently entered into an agreement with M. de Lesseps, under which the latter, or rather, the company which he represents, undertook to construct a new canal, parallel with the first; and in return for this the English Government promised to make the Canal Company a loan of some forty millions of dollars, for fifty years, at three and one-half per cent interest, and also to exert its influence in obtaining a new concession of land from the Viceroy of Egypt. Unfortunately, the constitution of the English Government is such as to tempt politicians into rather unreasonable conduct about such matters, and the agreement has been violently denounced by all those who had no hand in making it, and may perhaps be abandoned altogether.

WATER-CLOSETS.¹—XV.

THE Gale Closet.—Among other closets manufactured by A. G. Myers, of New York, which belong to this class and type, is one invented by M. F. Gale, in 1880. The peculiarity in this closet consists in the arrangements for the overflow, and for washing the

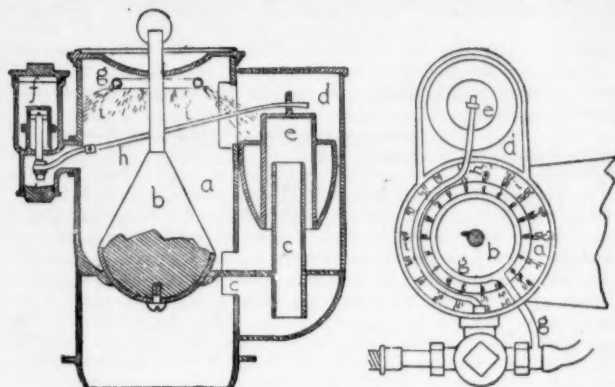


Fig. 152. Section and top view of Plunger-Chamber.

a, Plunger-chamber. b, Plunger. c, Overflow. d, Float-chamber. e, Float governing supply-valve. f, Supply-valve. g, Sprinkler for washing plunger-chamber. h, Lever connecting float and supply-valve. i, Small jets of water.

plunger-chamber. The overflow is through an upright pipe, while the float which governs the supply is in the form of a cylindrical cup slightly enlarged, and closed at one end, and it is placed with its open end downward over the overflow-pipe. In this manner a water-trap is formed between the plunger-chamber and the soil-pipe. The float is connected with the supply-valve by a crooked lever, while its chamber is separated from the plunger-compartment by means of a perforated partition. The overflow is again trapped by dipping into a small box of water, before it enters the soil-pipe. The plunger-chamber has a small pipe connected with the supply-pipe encircling it, around the circumference of which are a row of small holes, through which small jets of water are thrown over different parts of the plunger-chamber. In this manner it is proposed to keep this part of the closet clean. The bowl of this closet is porcelain, while the iron parts are all enamelled and are connected with the bowl by means of set-screws.

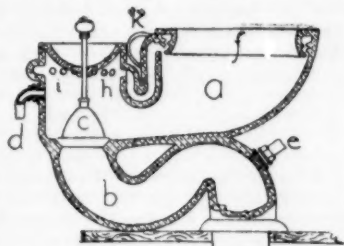


Fig. 154. — Section. — Myers's All China Closet.

a, Bowl. b, Trap. c, Plunger. d, Overflow. e, Vent-pipe coupling. f, Flushing-rim. g, Plunger-chamber. h, Holes for letting water into plunger-chamber. i, Supply-pipe.

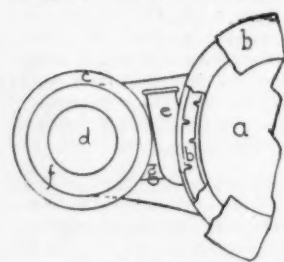


Fig. 155.

Flushing-Rim, All China Closet.

a, Bowl. b, Flushing-rim on bowl. c, Flushing-circle for plunger-chamber. d, Plunger. e, Plunger-compartment. f, Supply. g, Connection between the two flushing-rims.

A vent-pipe may be soldered. An opening for a vent-pipe should at the least be two inches in diameter. The same closet is supplied with a simple offset instead of a trap.

Myers also manufactures the "Egg Oval" Closet; the peculiarity of which consists in the shape of the outlet from the bowl. This outlet in cross section is egg-shaped.

Moore's Closet.—A solid-plunger closet was invented in 1881, by C. H. Moore, of Philadelphia, Penn. This closet is made in one piece of earthenware, and the novelty consists in the float being so arranged that when the water falls to a certain point in the bowl and plunger-chamber, the closet is flushed from the tank. The

float in falling, pulls down the long arm of a lever that is bolted to it. The short arm of this lever is connected with a long upright rod, and the head of this rod projects up into the tank, where it forms a valve which governs the supply to the closet. The necessity for an overflow in this closet is obviated by an enlargement of the arm of the plunger; this enlargement being too great to pass through the float, the plunger would be necessarily lifted from its seat, when the water had risen above a certain height.

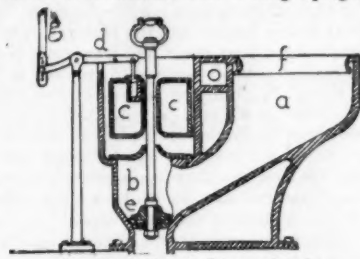


Fig. 156. — Moore's Plunger-Closet.

a, Bowl. b, Plunger-chamber. c, Float. d, Lever. e, Flushing-rim. f, Supply-valve. g, Rod connecting with tank.

Milne and Gaut's Closet.—In 1880, letters patent were issued to Milne and Gaut, of San Francisco, for a solid-plunger closet.

This closet has plunger and float chambers, just large enough for the plunger and float to move up and down in them, and they are connected with each other only by small openings. The overflow in this closet rises from the top of the float-chamber, just below the top of the bowl, and enters the offset before it joins the soil-pipe. Although the compartments, as in the Ingleton Closet (Fig. 147), are simply large enough for the purpose they are intended to serve, still the small conduits connecting them would make the scouring and cleaning received from the water passing through it even less effectual than if everything were contained in one large compartment.

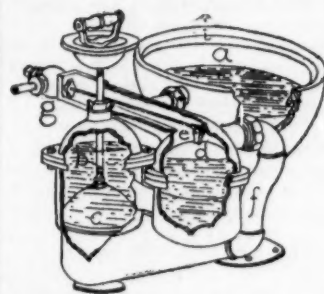


Fig. 157. — Milne & Gaut's Closet.

a, Bowl. b, Plunger-chamber. c, Float governing the supply-valve. d, Lever. e, Flushing-rim. f, Supply-valve. g, Overflow.

Budde's Closet.—A plunger-closet was invented in this country, in 1882, by J. Budde. The arrangement of the mechanical valve in the overflow is the new feature of this closet.

The overflow is through a tube attached to, and parallel with the plunger-chamber. At the bottom of the overflow there is a ball-valve; this ball is connected by a rod with a hinged float, that covers the top of the plunger-chamber; when the water rises to the top of this chamber, it fills the overflow, raises the valve by means of the float, and passes into the soil-pipe. Neilson, 1873; Gilchrist, 1874; Keyser, 1876; Moellmann, 1882, invented slight and unimportant improvements either in the form and position of the overflow or supply-valve, in connection with which each used a plain solid plunger.

E. S. Hutchinson's Closet has the plug in the same compartment that forms the bowl, in this respect being similar to closets that were in use more than one hundred years ago.

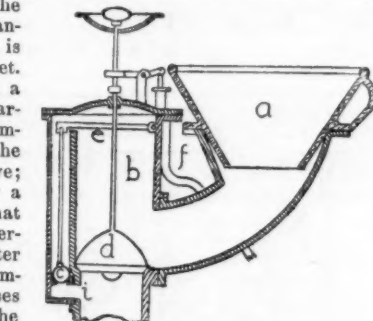


Fig. 158. — Budde's Closet.

a, Bowl. b, Plunger-chamber. c, Ball-valve in overflow. d, Plunger. e, Float for overflow. f, Supply-pipe. g, Overflow.

DEDUCTIONS.

It will have been noticed by those who have read the foregoing descriptions, that the mechanical faults and the sanitary objections to the plunger-closet are almost identical to those mentioned in connection with valve-closets. The utility of the plunger in a closet of this class depends upon its taking a water-tight seat. All the useful plunger-closets have a rubber flange or ring around the bottom of the plunger, and this form of plunger is generally effective, as long as the vulcanized rubber retains its elasticity; when it gets hard the plumber must be called in to put on a new one.

This form of closet is liable at any time to lose the water in the bowl and plunger-chamber, by foreign matter lodging between the plunger and its seat; so it is never safe to have a closet of this kind connected to the soil-pipe without a trap; although the patentees usually claim it as one of the advantages of their closet, that it does not need a trap between it and the soil-pipe. The plunger takes and retains its seat by the action of gravity, and for this reason it is more simple, and a better mechanical device than the valve; requiring no levers, weights, or cranks to operate it, or keep it in position.

It is necessary for a plunger to be heavy, so it can take and keep its seat properly; this weight is often a decided inconvenience and objection where the closet is to be constantly used by delicate women and small children.

¹ Continued from page 15, No. 394.

Taking a sanitary view of the subject, the greater number of the different patterns of plunger-closets should be considered inferior to the valve-closets, the plunger-chamber being — as with a few exceptions it is — larger than the receiver of a valve-closet, and containing the plunger, float, lever, and frequently the supply-valve, upon the different surfaces of which filthy matter is liable to collect and decay.

Mr. E. S. Philbrick says of closets belonging to this class, "The construction of these (supply) valves is various, and their action is not always reliable, which has at times caused considerable annoyance. If these valves can be made more certain in their action, and the float-chamber made more accessible for frequent cleaning, the apparatus can be made a very satisfactory one; but it needs careful treatment and good care."¹

The supply-valves not being reliable, closets of this class must have overflows.

Where the plunger is hollow, the overflow is carried off through the plunger, but where the plunger is solid, a separate conduit has to be provided: and where this is trapped by a water-seal, the water is liable to be drawn from the trap by siphon action, whenever the closet is used. To prevent this siphon action, a vent must be coupled to the closet, somewhere between the seat of the plunger and the point where the closet is connected with the soil-pipe.

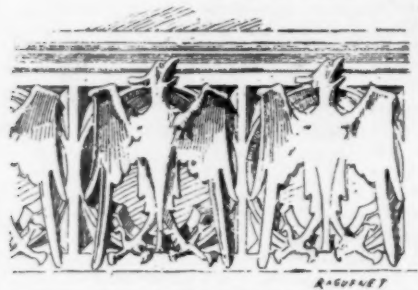
If the closet is connected with the soil-pipe without the intervention of a siphon-trap, the breaking of the seal in the overflow would put the occupants of the house in direct communication with the soil-pipe, as the covers to the plunger-chamber are not intended to have their joints air-tight, except in one or two instances. In selecting a closet of this class, care should be taken to get one with a plunger-chamber at least enamelled, while a bowl and plunger-chamber in one piece of earthenware is the best. The mechanism should be simple, the plunger-chamber small, and with a top or cover that can be easily removed.

The closet should be supplied with water from a cistern or tank, and should be admitted to the bowl through a flushing-rim. There should be a branch-supply for washing the plunger-compartment and plunger, admitted through a ring or sprinkler.

A hollow plunger simplifies the question of the overflow. It is necessary for the plunger to have a vulcanized-rubber ring or flange around its bottom.

The closet must have a siphon-trap under it, with a coupling or hub at its crown, to which a pipe may be soldered, or into which a pipe may be caulked; the vent must not be less than two inches in diameter.

FROM BAYREUTH TO RATISBON.—NOTES OF A HASTY TRIP.²—X.



CALVARY AT THE CHAPEL CHATEAU DE PIERRE
FONDS: FRANCE. VOLLET LÉDUC ARCHT.

—how it was a place of importance in the Middle Ages and in Renaissance days, but one which, from the lack of good building materials, had not held a high architectural rank; how, when Bavaria was raised to a kingdom at the beginning of this century, and a fresh wave of interest in artistic things was rising in Germany, its rulers sought to enlarge and adorn it, and how they worked over it with lavish expenditure and vast enthusiasm, and with the aid of what was unquestionably the best German talent of the time. But no one who has not seen it can realize how utterly they failed to make it a beautiful or imposing, or even a comfortable-looking town. Their hope was to give the world examples of how buildings of all sorts should be erected; but the result is that a stay in Munich, and an examination of its structures is the most forcible possible object-lesson in the art of how not to build a city. Were all their love and labor lost, then? Did nothing result from it but an ugly, pretentious city, standing as a warning to future princes that art cannot be "encouraged" unless it has a vital and fertile root of its own to grow from? I think not. Their architectural work itself was in vain, but not their precept and their example. If they did not create good works they at least impressed upon the German mind, at a period when such a lesson was peculiarly necessary, the fact that to aspire to artistic creation was a worthy aim for a nation, and to foster earnest aspiration and effort a worthy task for a nation's chief. To-day we respect their will if not their deed, and we acknowledge that very much of the interest taken in art to-day in Germany, and

many of its best results are due to the munificent patronage and the unmistakable love of Maximilian and Ludwig, of Bavaria.

Maximilian the First, the contemporary of the great Napoleon, was the first to move toward the would-be improvement of his capital. Karl Fischer was his chief architect, and worked, as might be expected, in the current French style of the time. No man ever had a finer opportunity, for, as Boisseree wrote to Goethe, there is a whole quarter of the town which may justly be called the "Fischer Quarter." He built the Karolinen Platz, and the Karlstrasse, the hospital, and the theatre — the last named very French in feeling, with great detached columns, a massive gable, and pilasters and lunettes *ad libitum*.

After Maximilian came Ludwig, and after Fischer, Klenze. In 1825, when Ludwig came to the throne, taste was working back from French to classic models, and Klenze built chiefly in what seemed to him a pure Grecian style. He built the Glyptothek (1816–1827); the Walhalla, at Donaustauf, some miles from the city, a Doric peripteral temple destined as a pantheon for the heroes of Germany (and a queer lot they are, by the way, whose monuments have been enshrined within its walls); the Ruhmeshalle in a suburb of the town (in front of it being the huge statue of Bavaria), which is the pantheon of Bavaria proper, and is a horseshoe-shaped Ionic building, flanked by a "temple" at either end; and the Propylæa between the Glyptothek and the Exhibition Building, whereon is recorded in sculpture the union of Bavaria and Greece at the accession of Otto the First — a union destined to be as short-lived as has been the admiration of this monument. Then in the "Roman-Renaissance" style he erected the "Old Pinakothek;" in the Grecian, the "New Pinakothek," finished in 1853; in the "Florentine-Renaissance," the new palace, and in the "Byzantine-Italian," the chapel of All Saints. It is safe to say that he came no nearer the spirit of his model in one case than in another, and that all his essays are equally cold, formal, uninteresting and depressing. Ludwig's idea was to place in his capital examples of all the great building styles to serve as lessons for the public, and as encouraging models for the architects of the future. But all that the student could gain from them to-day would be the impression that no man in any age or country had ever built anything beautiful, and that the architect of the future must needs go on producing works rivalling each other only in dreary inanition and ugliness. Good materials are hard to get in Munich, and these many structures are merely stuccoed and painted in imitation of styles originally conceived in stone. To-day the colors are faded, the plaster is cracking and peeling, and a general air of undignified, sulky shabbiness pervades these buildings, which are not fifty years old — which were unbeautiful when new, and are unsanctified in their so premature decrepitude.

After Klenze, or rather as a somewhat later contemporary, came Gärtner, contributing still more to the architectural medley and dreariness. He was the friend and fellow-worker of the band of German painters and sculptors who lived together at first in Rome, who were so deeply admired in their day, but whose only interest now is of an historical and not an artistic sort — whom we examine and respect for the same reasons that we respect their royal patrons — because they loved so well, if not very wisely, the crafts they practised, and because they drew public attention to the worth and dignity of art, and gave it an impulse which has profited later generations more than one might think did one look at their works alone, and not know how or when they were produced — after a period of such apathetic deadness, and in the teeth of such utter indifference, such Philistine ignorance on the part of their countrymen. These men — Cornelius, Overbeck, Schadow, Veit, Koch, Führing, and the rest — were, like the architects I have named, inspired with the utmost enthusiasm, learned, cultivated, industrious, devoted almost beyond compare; but they were not artists born, and their works all put together have less intrinsic value for the artist or art-lover of to-day than a single hasty sketch by one who had the true spark of divinity — yes, though this one were ignorant, lazy, careless, as have been so many of the guild.

Gärtner built what is perhaps the most depressing structure in all this depressing mass of costly, ambitious and unsuccessful works — the great open *loggia*, which was an imitation of the Lanzi *loggia*, in Florence — an imitation which would make one laugh if it did not make one weep, and which to this day contains but two of the many statues which were intended to commemorate the great Bavarian dead. Gärtner marks another stage of local taste — after the French had come the classic fashion, and now he threw his weight in the scale against classic tendencies and in favor of the art of the Middle Ages. Here of course he was at one with the painters and sculptors who were his friends, and who brought about the romantic reaction in Germany. The Ludwig's Kirche is his most important work — a great uninteresting church which aimed at reproducing the style of the Italian Romanesque, but which has not a particle of its effect or spirit in either plan or detail. The likeness is further lessened by the fact that he made the apse square-ended to give room for a huge fresco by Cornelius. But enough of these mechanical, uninteresting, uninteresting buildings — for works of architecture they are hardly to be called.

The painters of the time do not, as I have said, afford us much more pleasure. Cornelius was the greatest, but looking at the immense fresco in the Ludwig's Kirche it is hard to realize that this was the man whom his contemporaries looked upon as a god in art, and whom a famous German art-critic, Hermann Grimm, can even

¹ American Sanitary Engineering: Edward S. Philbrick, New York, 1881.

² Continued from page 305, No. 392.

to-day laud as a second Michael Angelo. He was a perfect draughtsman, it is true, learned, conscientious, and correct to a hair's breadth; and he had great ideas, but being ideas of a literary, intellectual, philosophical rather than a pictorial, artistic sort, they hampered rather than helped his art. We need a commentary in words to grasp all his intentions, and even then his painted work does not reveal what he must have felt. In composition he was learnedly mechanical, without a particle of spontaneity or grace of any sort. In color he was without a ray of genius. One cannot regret with Grimm that the cartoons for the Berlin *Campo Santo* were never executed in color, for, as now shown in that city, they are far preferable to these completed color-works in Munich.

The "New Pinakothek" — the adjective does not apply to the building, but to its contents, which are modern pictures — is full of the works of his fellow-laborers. A more dreary collection could hardly be imagined, and it would be interesting to know how many art-lovers passing through Munich, or dwelling therein have ever entered its doors a second time. Very few pictures have been bought in recent years, and the current Munich School is represented by but one or two examples. After seeing the first room, with Piloty's Death of Wallenstein and his immense Triumph of Germanicus (superbly painted, but a scene or a panorama rather than a picture proper), one finds nothing on the walls but the dry and tedious relics of the generation I have noted. An immense respect fills one's mind as one gazes — respect for those who could have loved art so passionately and so truly during long and earnest lives, when art must have appeared to them — their own art at least — so formal, so dead, and so mechanical. I suppose it did not so appear, but when one recollects that the greatest painters of past days were their adoration, and that they compared themselves conscientiously with these, one can hardly understand a state of blindness that would hide the defects of their own productions. They were good draughtsmen and that is all. Their color is harsh, and crude, and savorless; their handling hard, dull, monotonous, painstaking and over-elaborate; of tone they have no notion; in composition only the precepts of formality have guided them; in life, in character, in expression, their pictures are totally deficient. One becomes more and more depressed in passing from room to room. If the pictures were only worse the pilgrimage would be more lively, but it is impossible to laugh. The correctness of the drawing, the learning and sincerity displayed, lift them out of the domain of the ludicrous without bringing them into the domain of the artistic. If only they were not so painfully correct and careful, then there would be some interest in the thought that perhaps under other circumstances they might have done somewhat better; but evidently every man knew all he could ever learn, and did his very best. They are not painters, that is all; but that is enough to make one wish, on leaving the building, that one might never see a picture of any sort again in life. And even when this mood passes over, one registers a vow that should fate prescribe a future residence in Munich, yea, though of a dozen years, one's feet would never again cross the threshold of the New Pinakothek. The only works of any interest it contains, beyond the two Pilotys already mentioned, are Rottman's Greek landscapes, and these are valuable less for artistic than for topographical reasons. They are carefully chosen and painted scenes, which give one a really vital idea of the most famous sites in Greece — minus the local atmosphere and color — and so are not unworth attention and recollection. One other work excites interest, however, chiefly because one is so surprised to find it here — a little landscape by our own Washington Allston. I wish I could say it stood out with any prominence from the dull average of its similar surroundings.

Maximilian II, who came after Ludwig, did not keep in the old path of architectural imitation but took a novel turn — aiming not to copy any one style exactly, but to form a new one from the combined elements of the old. As was said at the time, "he wished to secure the solidity, the picturesqueness and the aspiration of the Gothic, with the charming decorative forms of Renaissance, and even of Rococo days." In the Maximilian Strasse, now the chief street of the town, his architects had full swing. When one looks at the details of its tedious elevations one finds that though the effect is of great monotony scarcely two houses are alike; all sorts of queer forms, combinations and amalgamations having been tried, with it, it is safe to say, not a single successful outcome. At this time was also built the "Maximilianeum," a great classic building crudely colored, which stands on high ground across the end of the street, between it and the "English Garden." And it is not very long since there was completed on this street the National Museum, which (however one may delight in the beauty and variety of its contents) is none the less distressing in the unbeautiful variety of the forms which have been applied to its would-be decoration. Latest of all the buildings of Munich is the new Rath-Haus, in which the sad idea of amalgamation was abandoned, and the architect went back to the careful copying of a single style. It is certainly the most satisfactory of modern Munich edifices — a careful, scholarly, and not unbeautiful, if rather cold essay in late Gothic forms. Here we see again what I have already noted as the characteristic of all the best decorative work done in Germany to-day — slavish adherence to precedent in the minutest as well as the most important features. Every detail of the ornamentation, every chair and table, and bit of iron-work, even the very towels which hung on the racks in the dressing-rooms, and the pitchers and mugs beside them, were proudly pointed out as being exact duplicates of objects executed in the given century, and

now enshrined in the museum of the city. Only in the glass windows was there an attempt at original designing. These showed rather interesting groups personifying the various activities over which the city fathers watch, and were quite good in color.

There are, of course, earlier relics in Munich than those of which I have thus far spoken — but none of prime artistic importance. Chief among them is the Marienkirche — an immense late Gothic church, begun in 1468 on the site of an earlier building. It is of brick throughout, and is not wanting in great dignity of feeling, due to its proportions and not to any worth or charm of detail. The very sparsely-applied ornamentation is worked in sandstone, but it does not relieve the exterior from an appearance of coldness and baldness. Inside, however, things are much better. The brick pillars are enormous in size, and rise straight to the roof, branching without capitals into the vaulting, thus forming one of the *Hallenkirchen*, with nave and aisles of equal height, of which I have already spoken as so beloved of later German architects. I have never seen the type displayed in such huge proportions as here, and the effect is certainly most imposing. The windows rising to the roof are of enormous size, and the wide aisles continuing around the choir give great breadth and dignity to the plan. The custodian does not fail to take the visitor to a certain spot near the western door, where a footprint is carved in the pavement. One notes with something more than mere curiosity that from this particular point of view the huge columns hide every window from sight. The impression as of a vast expanse full of towering shafts, lighted from one sees not whence, is not without its charm.

The Old Palace, built in the seventeenth century, would be an interesting example of the time were there more of stone and less of plaster about it, and the interior of the small theatre is said to be one of the most elaborate and charming examples extant of Rococo decoration. It was closed for the summer, however, and I was unable to compare it with its contemporary sister at Bayreuth.

The surroundings and situation of Munich are as unattractive as its architectural effect. It stands in a flat, almost treeless plain, and though the Isar runs through it, "rolling rapidly," a flood of foamy water of the most beautiful light-green color, it does little to enliven the scene. The English Garden, as the park is called, is very pretty, but lies so low that it is damp and rather depressing. The Ruhmeshalle, of which I have already spoken, with the huge statue of Bavaria in front of it, was placed out of town with the idea that the best quarter of the city would spread in its direction, but such has not been the case. The drive to it takes one through second-rate suburbs, and it has the air of looking into the back-yard of the city. As for the "Bavaria" itself, and all the other countless works with which Schwanthaler filled the city, what shall I say? They may be scholarly, they are certainly not artistic. This colossal figure, which dwarfs the building behind it in the most unfortunate manner, is huge without being grand, heavy in pose, ugly in drapery, lifeless, altogether wanting in every sculptural quality. One seeks in vain, either far or near, for a point of view whence it composes well or comes in an agreeable outline against the sky. Each new view shows it as more hopelessly awkward than before. It is the very incarnation of the studious, earnest, but inartistic quality which pervades every work of the period to which it belongs, and Schwanthaler's smaller works are not much better. He turns up at every corner, and in every public building — with the result that one grows to feel one could accept the rest of Munich if only Schwanthaler had never been born. There is nothing grotesque, nothing stupid, nothing silly about his work, — only those most tiresome and discouraging things in art — learned mediocrity, inartistic conscientiousness. One is almost driven to exclaim after a few days' acquaintance with these Munich painters, sculptors, and builders of two generations past, that learning and conscientiousness are the worst foes to art; — better the wildest extravagance, better the naivest blundering, better the most childishly unsuccessful if spontaneous daring.

M. G. VAN RENSSLAER.

THUNDERSTORMS. — Thunderstorms have for the last four years been the subject of careful observation both in Bavaria and Wurtemberg, where the dangers which result from them, and still more from hail showers, make the farmer take a keen interest in the weather. The number of weather stations being found insufficient, the Meteorological Office proposed that people in all districts should undertake to send in regular reports immediately after each storm. For this purpose post-cards were issued, on which the exact time of first thunder and lightning observed; wind direction before, during, and after the storm; rain and hail period, and further observations were to be stated. The appeal was most readily responded to, and there are at present two hundred and seventy-nine regular observers, who have been found quite reliable in despatching their cards, which pass free of charge. The statistics thus gained show that thunderstorms principally arise in localities which favor local differences of temperature, so that certain places may be considered their breeding grounds. They affect most intensely the ridges between two local centres of barometric depression, and move in long, narrow fields, different points of which, even if far apart, being visited at exactly the same time. The storms proceed in a direction vertical to the front of the field, independently of local winds. By far the greater number take place between 2 and 4 p.m., and again between 1 and 3 a.m. It is somewhat strange that during the year 1882 both these maxima were delayed by about an hour. In one case sheet lightning was perceived at a distance of one hundred and fifty miles. This system of observation was first introduced in Bavaria, but soon adopted by Wurtemberg. — *Engineering*.

THE DRAINAGE OF THE VALLEY OF MEXICO.



IN THE NAÏVE OF LYON (CATHEDRAL, FRANCE) (M. CEN. 1868)

ENGINEERING NEWS thus epitomizes a very interesting paper on the drainage of the Valley of Mexico, read by Señor Francisco de Garay, C. E., before the American Society of Civil Engineers, in October last. The paper was published in full in the *Proceedings* of that Society:—

The drainage of this valley of 1,800 square miles in area is a difficult subject to deal with. It is a basin receiving the water of 2,500 square miles of mountain and valley surrounding it, and prevented by natural barriers from discharging these waters into the Gulf of Mexico, through the Moctezuma River. At present the table-land of the valley is mostly occupied by different lakes, the principal and lowest of all being Lake Texcoco, with an area of ten to twenty square leagues. As these lakes have no outlet, the waters of the most of them are saturated with the natural salts of the soil.

When the Aztecs or native Mexicans became masters of the land and founded the city of Mexico, the chief problem presented to them for solution was the prevention of the periodical inundations from the lakes. About one hundred years before the Conquest, under the reign of Montezuma Ilhuicamoir, the great dike of Mexico was built by his nephew, the King of Texcoco, who, while famed in history as a wise legislator and a poet, should also be remembered as a daring and successful engineer.

This structure was eight miles long, and built of rubble crowned with masonry. It ran north and south, and divided the lake into two great parts; the eastern half took the name of Lake Texcoco, and the western half was called the Lake of Mexico. By this dyke the fresh water from the southern lakes of Chalco and Xochimilco were confined to the Lake of Mexico, and washed the shore of the city of Mexico, separated from the salt waters of the Texcoco, and the city was saved from the danger of inundation from the River Cuautitlan, the chief cause of trouble.

The Spaniards, under Cortez and his successors, not realizing the true value of the great engineering work, suffered it to fall into decay, through the agency of man and the slow work of nature. They denuded the hills of their forests, to rebuild the capital and other cities, and to deprive the natives of a refuge. The rains washed the soil into the lakes, and gradually raised their level to such a degree that they again flooded the city of Mexico. To guard against this later evil, new dikes were run in all directions and the surface of the valley soon converted into pools of stagnant waters, regardless of the public health. In 1580 a general survey was made of the valley, with the view of opening a direct outlet for the water, but no actual work was accomplished. In 1605, under the pressure of new calamities, Enrico Martinez, cosmographer, mathematician and printer, came to the rescue of the threatened city, and proposed to get rid of the waters of the lakes by means of a tunnel passing through the hills to the north of Mexico. This tunnel was more than six miles long, ten feet wide, and ran through a formation of hard-pan, with strata of sand and marl; it was finished in the short space of eleven months, in 1608. A temporary lining of timber was at first put in it, afterward replaced by masonry. Soon after its completion it became obstructed from some unknown cause, the upper lakes were filled, and the city of Mexico once again totally flooded, and remained so for four years, during all of which time the unfortunate engineer was confined in a prison. After the floods had subsided it was determined to replace the tunnel by an open cut, a most unwise and unfortunate decision, as events proved. The same Enrico Martinez was ordered to execute this monstrous work, and died after thirty-five years' labor. For one hundred and fifty years this great cut of Nochistongo was the main occupation of the people of Mexico, and was at last finished; its greatest depth is 200 feet. Millions of money were expended, and from one hundred thousand to two hundred thousand Indians perished in the undertaking.

This work, begun in 1608, was never properly finished, and to this day requires constant care and labor to keep it even in tolerable service. Rapid changes are taking place in the valley of Mexico, partly due to the direct action of nature, partly due to the agency of man, and the city of Mexico is yet periodically visited by disastrous inundations. As illustrating the changes that have taken place within the city, an Indian pavement made of cement, with a polished surface, was lately discovered twenty feet below the present ruins of the convent of Santo Domingo, showing a constant rising of the surface by sedimentary deposit. This pavement must have been laid centuries before the Spanish Conquest; the sand employed in its construction is no longer found in the streams of the valley. A large quantity of pumice-stone was also used in its composition. Cortez found Lake Texcoco an important body of water forty or fifty feet deep, and, to assist in capturing the city of Mexico, he constructed four brigantines on the water of this lake from material saved from his ships

when he burned them in the Gulf. These same vessels were again taken to pieces and, reconstructed, were launched on the waters of the Pacific, at Sihuatanejo, to continue the exploration of the south coast. Lake Texcoco, the place of the famous naval victory of Cortez over the native Mexicans, is now a barren, swampy plain.

Señor de Garay many years ago presented a complete and comprehensive plan for the drainage of this valley. His plan was approved and work commenced, but practically little was accomplished. His paper is accompanied by a map showing the details of the system proposed. Briefly outlined, this plan consists of a number of properly located connecting canals, of small section, emptying into a main canal lying in the lowest part of the valley, about thirty-three and one-half feet wide at the bottom, fifty-three feet wide at the top, and ten feet deep. This main canal begins at the Gate of St. Lazaro, on the eastern side of the city, and runs northeast by east, until it reaches the centre of Lake Texcoco, thence toward the north, following the general direction of the lakes Cristobal, Xaltocan and Zumpango. On reaching the slope of the hills which close the valley to the north, the canal leaves the old line of Nochistongo to the left, on the western slope of the Citlaltepec Hill, and cuts through its eastern slope under the pass of Tequisquiatic. At this place a tunnel about 27,566 feet will be necessary to reach the ravine of Amatlac, that communicates with the River Tequisquiatic. The total length of the main canal, from the gates of the city of Mexico to the last-named river, will be thirty and one-half miles; the fall in the canal will be one in eight thousand. The tunnel is in form a horseshoe, with an inverted arch and about 194 square feet in section, with a fall of one in one thousand. Ten million dollars was the original estimate of cost, though the present increased price of labor in Mexico will add materially to this sum.

THE ILLUSTRATIONS.

THE HILDRETH BUILDING, LOWELL, MASS. MESSRS. VAN BRUNT & HOWE, ARCHITECTS, BOSTON, MASS.

COMPETITIVE DESIGN FOR A \$3,000-HOUSE, SUBMITTED BY "Colonna."

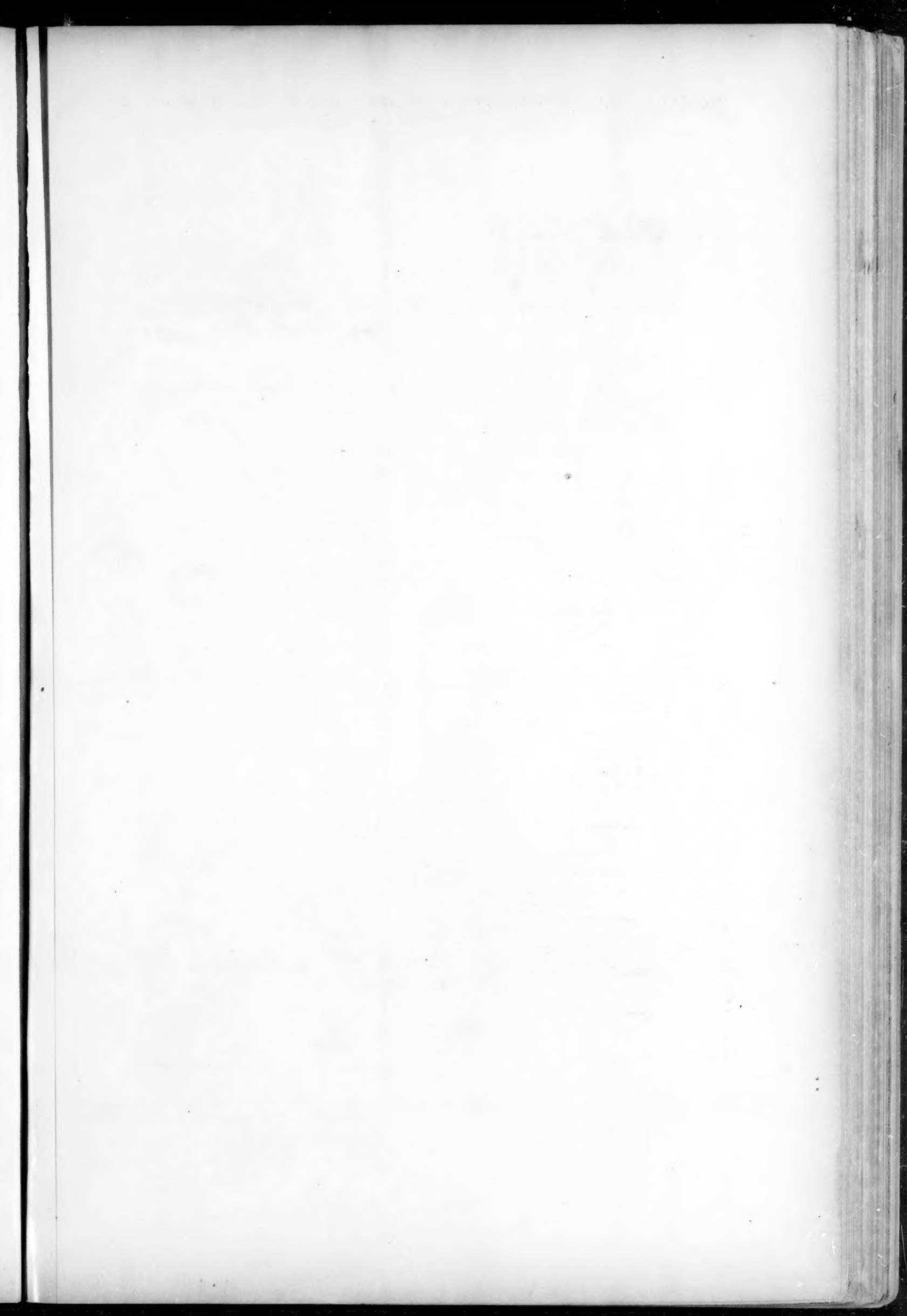
"*COLONNA*" presents a novel and ingenious plan kept within a rectangular outline. He has made several marked economies of varying value. Thus, while providing flues, except in the 'den' he has no fireplaces. This recourse to stoves would have been less intolerable a generation ago than now. Another economy, which would effectually prevent the house from finding an occupant of the kind intended, is the omission of a bath-room. More successful is the arrangement by which the front stairs meet the back stairs on a common landing projected out as a handsome bay. Nothing indicates the use the space under this landing is put to, and no door nor window opens into what might be valuable space. The elevation, with its gambrel roof, cannot be counted a success; it is clumsy, and the lines do not mass well. The plumbing item of \$35 is of course too low, and to this should be added the cost of a well-appointed bath-room. The drawings are treated with a spotty exaggeration of light and shade which defeats its own purpose."—*Extract from Jury's Report.*

COMPETITIVE DESIGNS FOR A MECHANIC'S HOUSE SUBMITTED BY "Peregrine White" AND BY "Country."

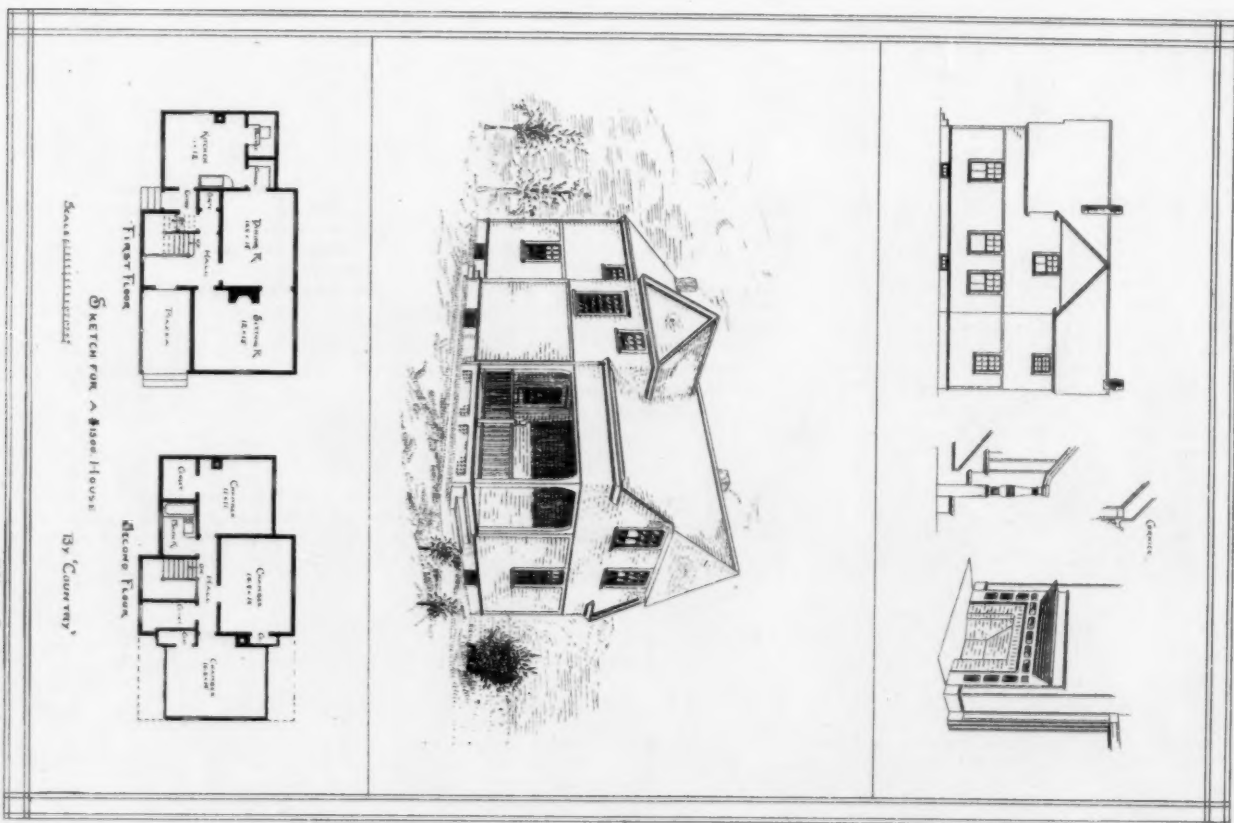
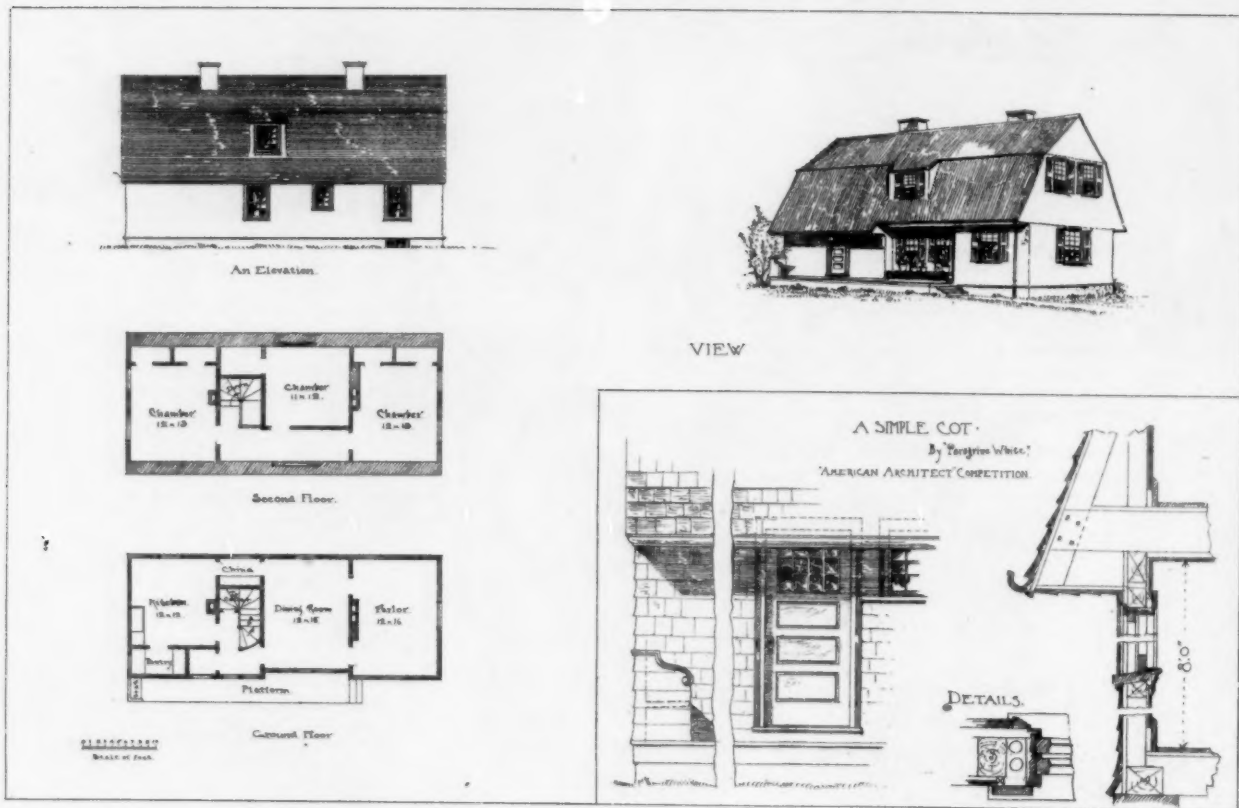
"*Cassius*" and "*Peregrine White*." These two sketches are so much in the same spirit that the same remarks apply to both. They have a much better feeling in the design of the exterior than any of the other drawings, but it is fair to say that this is gained by a plan that gives small rooms and a long hall, and which makes two chimneys necessary. Although a long and low exterior is thus gained, the plans are not such as would be most useful to a mechanic. The front door in "*Cassius*'s" design seems oddly placed, possibly by reason of the effect added to the outside by the porch roof at the end of the group. "*Peregrine White*'s" drawing is simple and choice, and the finish of the eaves is knowing and good. Both drawings seem to have been mainly made with a view to an attractive exterior, and in this both are successful."

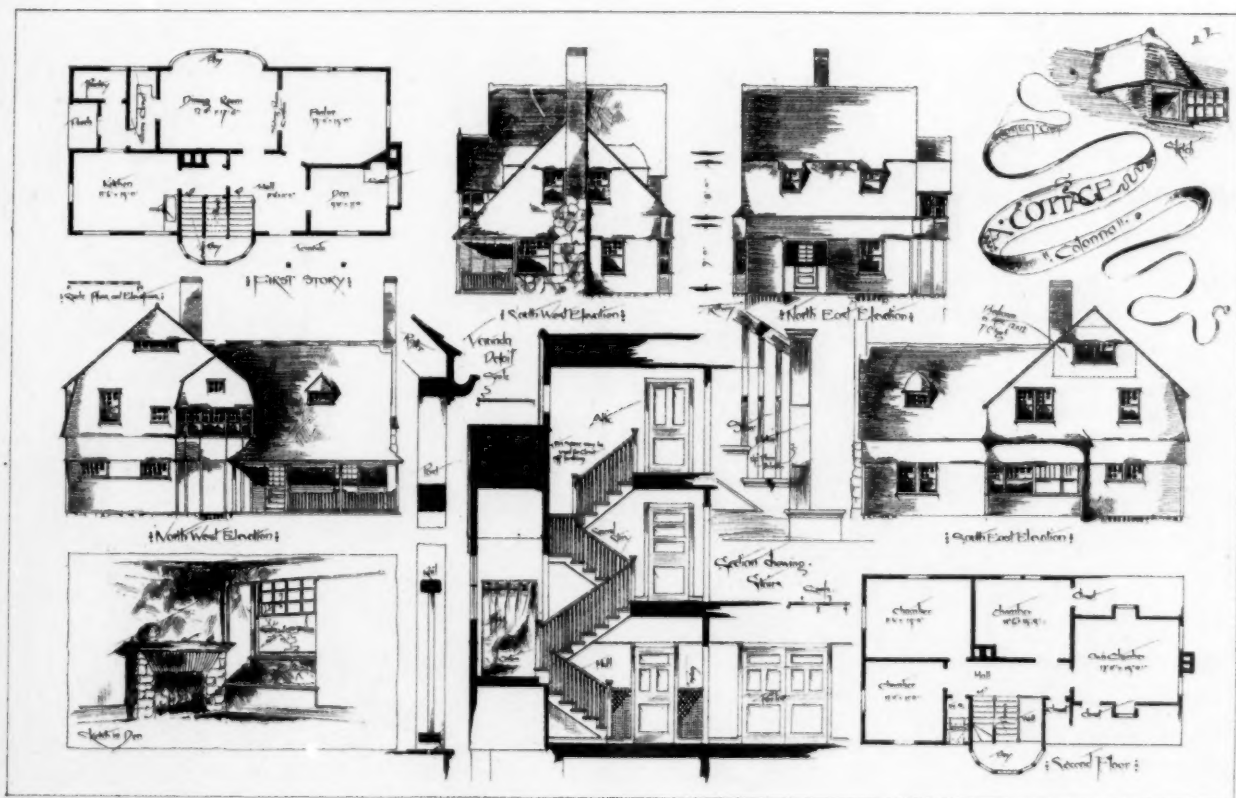
"*Country*." Very good plan indeed; good enough for a better class of house. Good mantel. Fair exterior, but not especially attractive; not nearly up to the level of the plan."—*Extract from Jury's Report.*

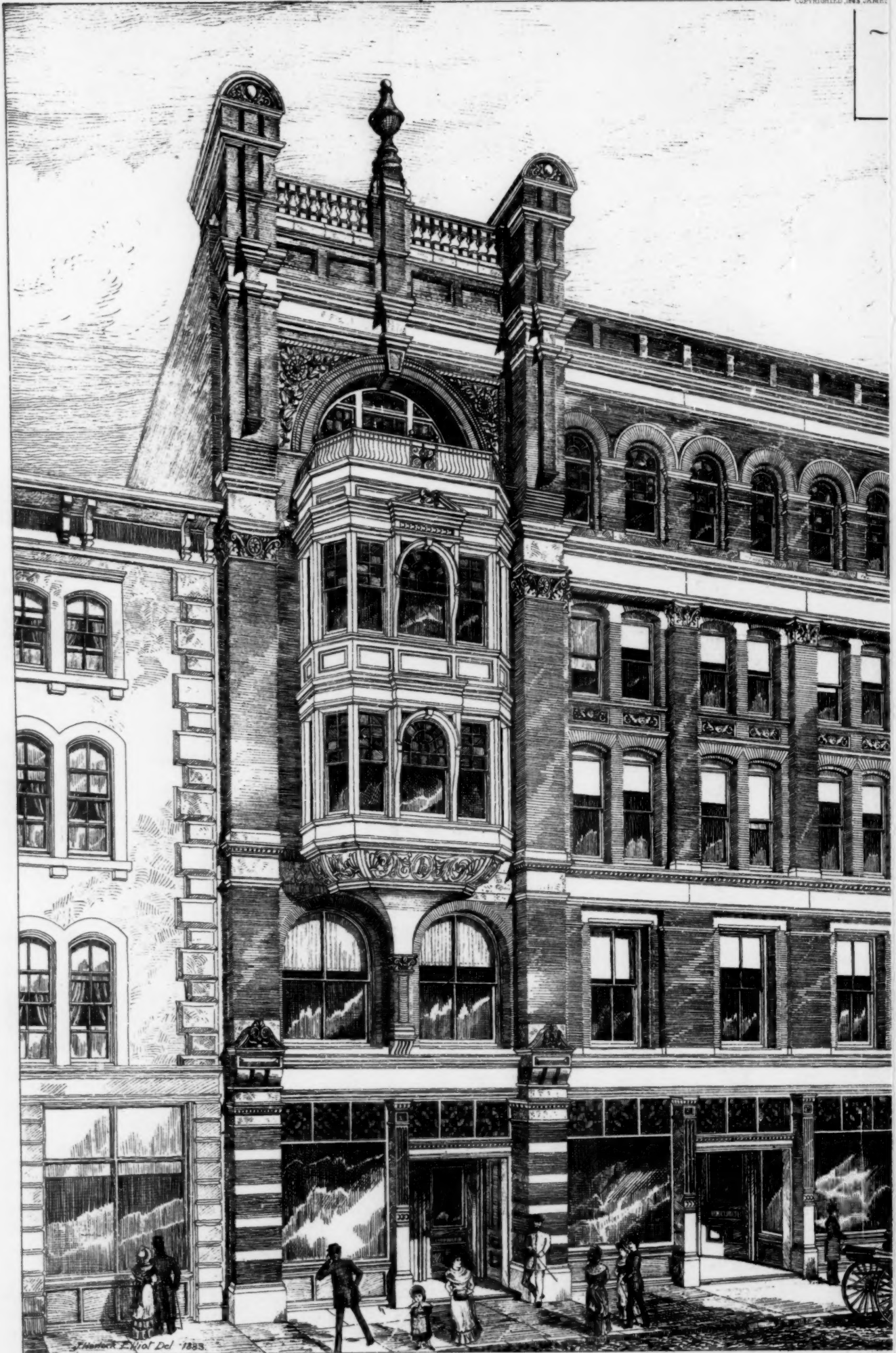
KILLED BY A TOMBSTONE.—The story of the sculptor at Ayr (Mr. Smith) who is reported to have been crushed to death by a heavy monument on which he was at work, and which he somehow brought down upon himself from the platform on which it had been raised, recalls several similar stories of antiquity and of the Middle Ages, in which the sculptor is represented as struck to the ground and killed by his own creation. Sometimes, too, a statue will fall in an independent manner on a person who had taken no part in creating it, but who had been guilty of some offence generally toward the statue itself. A statue, for example, having been erected during his lifetime to the wrestler Theagenes, a jealous rival approached it one night, and, after insulting it by word of mouth, seized it by the beard and pulled it down upon himself with crushing effect. An endeavor, too, has been made to explain by a like affront, followed by like consequences, the legend of Don Juan and the statue of the commander. Unhappily, in the case of Mr. Smith the story is true. The monument that crushed him was a tombstone weighing upward of half a ton. — *St. James's Gazette.*



COPYRIGHTED 1883, JAMES H. BASSOOD & CO.







Hildreth Building, Lowell, Mass. for Hens of Fisher & Hildreth Esq
Van Brunt & Howe Architects. 6^o Devonshire St. Boston



THE \$3,000-HOUSE COMPETITION. — XV.

SPECIFICATION SUBMITTED BY "Colonna."

W. MAGUILEN, CORNER
Oxford, Eng.

CELLAR:—Foundations of rubble-stone to sill, 18" thick. Cellar will consist of store-room and coal-bin. About one-half the space will be excavated. No finish; stone wall whitewashed.

Ground Floor:—Finish on ground floor of pine, to paint, with the exception of the first run of stairs, which is of ash. In hall there will be a dado of matting; none elsewhere. Plain base moulding 7½" high. Door architraves 4" x 3". Mantel in "den" consists of a simple moulded shelf. The fireplace is of rough stone (the only one in the house). Seat in "den" to have cover to lift. China-closet and pantry will have shelves and pegs only; no cases. One row of hooks in coat-closet. A curtain may be used in connection with the sliding-doors between parlor and dining-room, and may be furnished by the owner, as may also the one on stair-landing. Picture-moulding in parlor, dining-room and "den."

Second Floor:—The closets of the chamber floor are to be provided with one shelf, with one row of hooks under. Common base-board in all the rooms.

Attic:—Attic consists of one bedroom, 12' x 12', and 7' 6" high, and store-room under roof.

Exterior:—Architraves consist of a simple thumb moulding, and water-table and string-course are simply a lapping of shingles. The exterior windows will be painted white (sashes and frames) and blinds black; all the trimmings of the house will be painted in black and white. Shingling on the walls will be covered with creosote. Clapboards not painted, but oiled.

Stairs:—5" square newel, with corners rounded, moulded cap; other parts same, out of 4" stock. Rail, 3" x 3½", plain moulded. Balusters out of 1½", plain, square, with corners rounded off, three on a tread. Stairs painted in black and white.

Doors:—Front, 1½" thick, glazed as shown; other doors on ground floor 1½", four-panelled, without mouldings; all other doors 1½" thick. They are 7' high on ground floor, and 6' 8" elsewhere.

ESTIMATE OF QUANTITIES AND PRICES RULING AT BOSTON, MASS.

CARPENTERS' WORK.

9,000 ft. of spruce lumber, @ \$17.00.....	\$153.00
4,500 " partition stock, @ 16.00.....	72.00
7,029 " hemlock boarding, @ 15.00.....	105.00
900 " clear spruce clapboards, @ 30.00.....	27.00
25,000 pine shingles, sawed, @ 4.00.....	100.00
1,200 ft. of outside finishing stock, @ .12.....	50.00
100 " wood gutter, @ .12.....	12.00
Windows complete.....	200.00
Doors (including furniture).....	175.00
Front porch.....	75.00
Inside finish, pine to paint.....	200.00
Upper floors, clear spruce.....	98.00
Stairs (part ash).....	135.00
Hardware and nails.....	125.00
Mill-work and carting.....	75.00
Carpenters' work (including commission).....	650.00
Total.....	\$2,252.00

MASON'S WORK.

20 squares of excavation, @ \$2.50.....	\$50.00
60 perch of stone, @ 1.75.....	105.00
Laying and pointing same, @ 1.25.....	75.00
5,000 bricks for chimney, @ 10.00.....	50.00
Labor, including sand and lime, @ .50.....	75.00
7 stone timbers, @ .25.....	35.00
1,000 yds. of plastering, @ .25.....	250.00
One fireplace and hearth, @ 35.00.....	35.00
Total.....	\$643.50

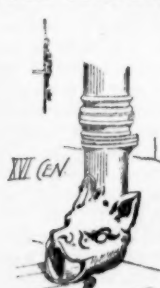
MISCELLANEOUS.

Painting (not including glazing).....	\$200.00
Conductors.....	15.00
Plumbing.....	35.00
Architect's commission.....	150.00
Total.....	\$400.00

TOTALS.

Carpenter.....	\$2,252.00
Mason.....	643.50
Miscellaneous bills.....	400.00
Total.....	\$3,295.50

THE COMPETITION FOR A MECHANIC'S HOUSE. — III.

FROM CHARLES
FRANCE..

LABOR and materials required for the erection of a dwelling in accordance with a design conceived by "Peregrine White."

Cellar under space comprised in stairway and dining-room.

Foundation and underpinning to be of common ledge stone, 16" thick at top, 20" at bottom. Drainage to sewer with proper traps.

Chimneys of common brick, plastered outside and inside.

Frame, spruce; sills, 6" x 8"; posts, 4" x 6"; plates, 4" x 6"; rafters, 2" x 5"; floor-joists, 2" x 8", etc.

Boarding of walls and roof and under floors, hemlock; sheathing-paper on walls. Outside finish, good seasoned pine. Walls to be covered with good quality sawed cedar shingles. Roof to be covered with first quality sawed cedar shingles. Gutters, V-shaped; wooden round conductors. Windows: frames to have hard-pine pulley-stiles; sash to be 1½" thick; glazed with first quality single-thick German glass. Blinds where practicable.

Upper floors to be of mill-planed spruce.

Inside finish to be of good quality seasoned pine. Architraves to be 4" wide, plain; base-boards, 5" high, bevelled top.

Stairs to be pine finish, on spruce plank stringers; balusters, posts and rail, all of pine.

Doors to be four-panelled, mill-made, 1½" thick. Hardware to average in cost \$2 per door.

Twenty dollars for mantel-shelves and brackets.

Plastering to be two-coat work; the first coat to be thoroughly seasoned before the skim-coat, which is to have a light-brown tint, shall be applied. Walls to be left unpapered.

Painting:—Wall shingles to receive a coat of powdered slate in raw linseed oil; then another coat of raw oil. Outside finish and blinds to have

three coats of brown olive paint. Inside finish to have three coats of paint, of warm cream color.

ESTIMATE FURNISHED BY MILLER, LADD & CO., OF BOSTON, MASS.

Excavation, 100 yds. excavating, @ 20 c.....	\$20.00
Cellar wall, 45 perches stone wall, @ \$3.00.....	135.00
Piers, and 2300 bricks, laid.....	46.00
Chimneys, 560 yds. plaster, at 20 c.....	112.00
Sills and outside frame, including roof.....	
Flooring-joists.....	
Partitions: 6 M. spruce lumber, @ \$16.....	96.00
Rough boarding of walls.....	
Lower floors.....	
Roof boarding, 5 1-10 M. hemlock boards, @ \$13.....	66.30
Shingles, 24 M., @ \$3.50.....	84.00
Outside finish, including gutters, etc.....	50.00
Top flooring, 2 M. @ \$30.00.....	60.00
Nails.....	20.00
16 doors, @ \$6.50.....	104.00
18 windows, @ \$5.50.....	99.00
Inside finish.....	25.00
Pantry and china-closet.....	35.00
Stairs.....	55.00
Sink and plumbing.....	35.00
Painting.....	100.00
Labor.....	325.00
Total.....	\$1,491.30
Builder's profit.....	62.00
Architect's commission.....	80.00
Total.....	\$1,633.30

MEMORANDA FOR HOUSE DESIGNED BY "Country."

This house is supposed to be built near Haverhill, Mass.

Foundations to be of pasture-stone, with 8" brick underpinning. Frame to be "balloon;" sill, 5" x 6"; joists, 2" x 8" and 2" x 7"; rafters, 2" x 6"; inside studding, 2" x 3".

Hemlock boards are used for walls, roofs, and under floors.

Roof is covered with good sawed cedar shingles.

Outer walls are covered with spruce clapboards up to top of first-story windows, and with spruce shingles above.

Sashes ready-made, glazed with second quality German glass, except staircase window, which is to have cathedral glass, as is also the upper part of front door. All doors, except the front, to be mill-made.

Inside finish:—The entire house is to be finished inside with whitewood, which in some of the rooms will be stained, and in others finished in the natural color. The floors to be of country pine.

Plastering is to be one-coat work on walls and two on ceilings. Fireplace and hearth of pressed-brick.

ESTIMATE.

Excavation, 168 cu. yds., @ 22 c.....	\$36.96
Cellar wall, 46 perch, @ \$3.50.....	161.00
Brick underpinning, 3 M., @ \$12.....	36.00
Chimneys and fireplace.....	50.00
Frame in place, 7100, @ \$17.....	120.70
Hemlock boards, 4750, @ \$13.....	61.68
Outside finish.....	25.00
Clapboards.....	23.00
Spruce shingles for walls, 10 sqrs.....	16.68
Cedar shingles for roof, 10 sqrs.....	34.50
Windows and blinds.....	80.00
Doors.....	95.00
Staircases.....	125.00
Nails.....	35.00
Upper floors, 1476, @ \$20.....	30.00
Lath and plastering, 496 yds., @ 18 c.....	91.28
Tin conductors, 38 ft., @ 6 c.....	2.28
Mantel.....	20.00
Painting.....	125.00
Plumbing.....	150.00
Total.....	\$1,309.08
Builder's profit, 10 %.....	130.90
Architect's commission, 5 %.....	71.99
Total.....	\$1,511.97

HAVERHILL, MASS., April 19, 1883.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

I will build the house designed by "Country" for the sum of \$1,439.98.

I. E. WASHBURN, Builder.

RECOLLECTIONS OF FLEMISH ARCHITECTURE. — II.

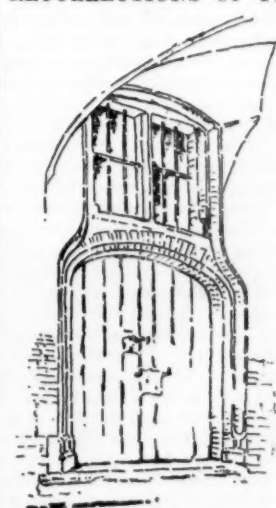


Fig. 1.

with large baskets filled with cut flowers. A band of music parades the street, and people occupying shops and hotels round

KNOWING from information in the invaluable Baedeker or Murray that Ostend is in possession of an English church, we had previously decided to spend Sunday here in preference to Bruges. The Sabbath morn, instead of dawning peacefully, is heralded by a continuous hammering proceeding from the far side of the square opposite the hotel windows. Our attention is arrested, and the interval elapsing between dressing and breakfast is beguiled by watching the performance going on outside. By slow degrees a stage is erected, draped with gay hangings inclosing an altar with the usual accompaniments of vases, flowers, candlesticks and crucifix. Next we see several girls dressed in white with long white veils, hurrying across in the direction of the principal church, small boys carrying banners, and women

¹ A paper read before the Leeds Architectural Association, by W. H. Thorp, and published in the *Building News*. Continued from page 19, No. 394.

the square display the tricolor flag of Belgium striped with red, blue and yellow. What does it all mean? An inquiry elicits the information that the day is to be devoted to the celebration of one of the numerous church festivals, this being about the most popular of the series, St. Peter, the patron saint of fishermen, being the saint honored on this particular occasion. It being Sunday, we are supposed to shut our eyes to mundane affairs; thoughts architectural should be excluded, and a description of this ecclesiastical ceremony may not come amiss as an oasis in the desert of technical detail and description. We wend our way through crowds of people lining the streets to the central object of attraction, the church of St. Peter and St. Paul, at the end of the Rue de l'Eglise, and succeed with difficulty in effecting an entrance. A fugue is being played on the organ, and it is thundering out its loudest notes while Monsieur le Curé is marshalling the procession in the centre of the nave. The interior is not easily discernible, what light there is being made still more dimly religious by the cloud of incense which wreathes itself into fantastic shapes as it rises upwards. By degrees, and with the light afforded by some candles which are guttering in their sockets alongside one or two side chapels dedicated to favorite saints, the inside of the church reveals its proportions, and the misty outlines assume form and color. There is really little to see or to claim attention—merely the usual kind of thing you expect to find in many of the Roman Catholic churches abroad. Architecture and detail of that early, sprawling Rococo kind of art (if art it can be called) that sometimes goes by the name of Jesuit style—gorgeous altar-pieces resplendent with lace, candlesticks, and gaudy accessories, gaily painted representations of saints, the ten Stations of the Cross on either side of the nave, gloomy, cavernous-looking confessionals, side chapels with separate altars hung round with votive offerings, and to comprise everything an atmosphere of tawdriness and lack of cleanliness, which even the reflected lustre of costly marbles, the wealth of color from painted glass windows, and the mellow tone of some old masterpiece by Rubens or Vandyke are unable to counteract or dispel. To return to our subject. The procession is at last drilled into something like order, late arrivals hastily join the ranks, proud mothers administer finishing touches to the festive attire of their children, and subdued exclamations of admiration are heard, such as, "Voilà, la petite Célestine, comme elle est très belle," as one after another of the youthful contingent attracts attention. All is at length ready; a louder series of notes from the organ than before signals departure, and the procession slowly files its way outside through the portals. The military band strikes up a lively march and heads the troupe. First of all come girls clothed and veiled in white, bearing flowers, bannerets, and symbols, followed by boys of tender age clad in curious costumes of blue and white, carrying long poles terminated with silver spades gaily decorated with ribbons fluttering in mid-air; next come men bearing painted and gilded representations of the Infant Jesus, the Virgin and Child, and Christ when grown to manhood. After these, acolytes in white surplices grasping white poles terminated by gilded lanterns enclosing lighted candles next attract attention, succeeded in their turn by other acolytes carrying incense burning within silver vessels suspended by long chains, who swing their censers at arm's length in splendid style. The lower clergy, chanting Latin psalms, bring up the rear, the procession ending with the Bishop, with Host uplifted, robed in vestments embroidered with gold, under a gorgeous canopy held by men at the four corners. As they move along fishermen's wives strew the street before them with flowers, and the people standing at their shop doors have crucifixes displayed and candles lit in their windows. Leaving them on their way to the altar, in the Place d'Armes, we hasten to the English church, and there attend service, a very small congregation being present, and the whole proceeding a rather dull and lifeless one. In the afternoon we walk along the shore to the Mariakerke, and see a similar procession, only on rather a smaller scale than the one in the morning, the temporary altar being put upon the top of the sea-wall, where a mass is performed, the priest in conclusion holding up the Host in front of the sea and pronouncing his benediction upon it. The scene is most impressive, and would form a capital subject for an artist. We must not linger longer in Ostend, but must transport ourselves to Bruges, where our sketching work is to commence in good earnest. The distance is only some twelve or fourteen miles, the journey being accomplished in half an hour. The country improves as we leave the coast and travel farther into the interior, the flat, low-lying sandy expanses devoid of vegetation giving place to rich pastures, thickly-wooded plantations and fields of grain already turning yellow, although the season is not yet far advanced. We alight at the old Marché du Vendredi. Passing the Cathedral, and traversing the Rue des Pierres, we at length find ourselves in the Grand Place facing the world-renowned belfry towering above a picturesque building of red brick, known by the name of Les Halles, one wing of which was intended for a cloth hall, the other being used as a flesh market. On the opposite side of the Place is the Hotel Panier d'Or, a genuine old-fashioned Flemish hostelry, where we take up our quarters, and are favored by the landlady with a room on an upper floor, with a capital large low window commanding a splendid view of the belfry, as well as an extensive prospect of the square and the buildings in its vicinity. The Flemish name for Bruges is "Brügge," signifying bridges, the city being intersected by canals in all directions. When Ghent and Antwerp were yet in their infancy Bruges was at the height of its wealth and importance, and during the fourteenth century was one of the principal seats of commerce in Europe. This accounts for nearly all

of the buildings being Gothic in character, many of them of a rather Late period, and also for the lack of the Renaissance element as compared with the other two cities, whose prosperity was of a rather late date, where curved and pedimented gables are met with in great profusion. A preliminary walk round and survey of the place reveals something of interest at almost every step. Charming pictures of quaint gables, traceried fronts, eccentric turrets, their reflections mirrored in the still waters of the canals, meet our vision wherever curiosity leads us. Such a profusion of architectural tid-bits is, to say the least of it, embarrassing. How are we to make a selection for our sketch-books, and when that selection is made, how can we possibly leave so many suggestive examples of detail with no permanent record save that of the memory, which, alas, is too often apt to prove a treacherous friend? However, something must be done; so after ascending the belfry, seeing the panorama of town and country spread like a map at our feet, examining the complicated machinery which plays the carillons, said to be the finest in Europe, we grope our way down again in the darkness and emerge into daylight once more, in the interior court-yard of the building. Here we find a museum of antiquities, replete with stores of old, carved furniture, elaborate iron-work, stained glass, stamped and gilded leathern hangings, antique tiles, ornamental blocks of terra-cotta, arquebuses, old armor, and other things too numerous to mention. How we feast our eyes upon these treasures! Outside the sky is overcast, rain is commencing to fall, and the wind blows rather cold. Here we are under shelter. May we sketch? The question put to a superannuated old piece of antiquity in the shape of an elderly woman, a fitting custodian of so many relics of a bygone age, elicits the answer that it is forbidden, and not wishing to transgress the rules and so get into trouble, we depart with many expostulations. The court-yard is not devoid of interest, and sheltered in a recess from the rain, two or three hours are devoted to jotting down particulars of the series of windows with an outlook thereon, the lower ones having low elliptical arched heads, and those above the stone mullions, sills and heads inclosed within arches of Tudor outline, the tympana being filled in with brickwork. To give height to the wall, and in order to avoid horizontality of treatment, both ranges of windows are enclosed within recessed bays or wall-spaces with $4\frac{1}{2}$ -inch reveals, the angles being of brickwork, and rounded off with an ogee-shaped moulding. The interior reveals of the windows are chamfered, and are also carried out in bricks, the double order having moulded stops before the lowermost sill is reached. This method of enclosing two or three sets of windows in long vertical recessed panels is a very common feature in Flemish work, and nearly always looks effective. The mouldings of the arches finishing these recesses are often worked out into tracery and cusplings of quaint and uncommon outline, and where it is desirable to narrow the widths of the windows, as the upper stories are reached, the space is curtailed by means of an ingenious expedient in the form of an ogee-shaped shoulder-piece, in moulded brick, like the reveals, which, if somewhat odd in appearance, is thoroughly characteristic.

This feature (Fig. 1) we met with over a doorway in a vaulted recess at the end of the court-yard. On account of the springing of the groining points, it was undesirable to have the fan-light as wide as the doorway. Therefore at the level of the transom this ogee-shouldered corbel (if such it may be called) is introduced and answers the purpose admirably. The corbelled cornice round the eaves of the court, and a dormer, with pointed projecting hood to its hipped roof, have been added at a later period than the windows below, being early Renaissance in character, and fac-similes of the same find their way into our sketch-books before leaving the building. The weather still continuing unfavorable, we make our way to the cathedral dedicated to St. Sauveur, guided thither by its massive, low-roofed, Romanesque tower, which was added to the building within the present century, when the whole fabric underwent the process of restoration. The greater portion of the structure dates from the thirteenth or fourteenth century, and is built of brick. The chapels radiating from the apsidal choir form an effective bit of grouping, and the gable-ends of the transepts, flanked at the ends with octagonal turrets, corbelled out from the upper weatherings of the buttresses, are happy in their general proportions and detail. The large transept windows still retain their elaborate tracery, though whether it is ancient or was inserted at the time of the restoration, I do not feel prepared to say, and the upper wall-space of the gables is enriched with small two-light traceried windows carried out in brickwork, the apex stone being surmounted by a metal cross. Internally the church is lofty and well-proportioned; but, unfortunately, the effect is marred to a large extent by the gaudy coloring which has been introduced, covering both walls and vaulting, the surfaces being dissected all over with black horizontal and vertical lines to represent masonry. Two fine paintings are shown by the sacristan, one representing the martyrdom of St. Hippolytus, and the other a Lord's Supper by Pieter Pourbus, and some good well-engraved monumental brasses are worthy of attention.

The choir possesses some elaborately carved stalls (Fig. 2), adorned with the armorial bearings of the order of the Golden Fleece, which are capital examples of Late Gothic work, and whilst my companion sketches one of the ends, I occupy myself with a measured drawing of some heavy oaken doors of seventeenth-century character, whose upper panels are open, save for the insertion of turned, polished brass balusters, displaying exquisite contour of moulding in their sections. Returning in the evening to the hotel, we make a détour and pass the church of Notre Dame, where we find abundance of artistic material to take in hand on the following day. The serious business of

the day, to wit, the *table d'hôte* dinner, being an accomplished fact, we find our way as best we can to our room, traversing tortuous passages, finding series of steps, both up and down, where we least expect them, and finally making for the door of the apartment by scrambling up a flight of stairs of step-ladder gradient. The *chambre à coucher* we improvise into a studio, and make it answer both purposes during the week of our tarriance in Bruges. Who could desire a more congenial spot in which to invoke the spirit of the Middle Ages and depict on canvas picturesque scenes, radiant with life and color, of times gone by? What an outlook from the windows! The sky has cleared, the square assumes a more lively aspect, and is crossed by groups of peasant women, enveloped in long, black cloaks with silk-lined hoods, their heads covered with closely-fitting muslin caps. A gang of young men sing a glee or popular melody as they return homewards from their work, children in their wooden *sabots* are clattering across the pavement, and a detachment of soldiers in baggy blue-gray trousers are mustering in front of the arcades of the halls before turning in for the night.

The old brown tower opposite is suffused with golden light, as the sun is sinking behind the distant roofs; to the right the finely proportioned tower and crocketed spire of Notre Dame stands out clear and distinct above the crow-stepped gables and fantastic dormers, while on the left the turrets and elaborately worked chimneys of the Hôtel de Ville reveal themselves in openings between the intervening buildings. A few more minutes and the glow has departed; a misty blue haze seems to rise from the ground, and the belfry wraps itself round in sombre shadows. The sky assumes a cold, translucent green tint shading off into orange-red on the horizon, while the young crescent moon glitters like a polished sickle in the heavens as the square is gradually shrouded in darkness. The music of the carillons is almost incessant, and is rendered still more noticeable as the busy hum outside gradually subsides. It is possible to have too much of a good thing, and music, however excellent it is in its way, is not always desirable, as Mr. Comyns Carr, the talented author of "Art and Letters" was unfortunate enough to find out a week or two ago; and unaccustomed as we are to a continual concert all day and all night long, it is many hours before sleep can be tempted to visit our weary eyelids. With the return of daylight we rise, and commence work before sitting down to breakfast, and for the rest of the week, and in fact for the remainder of the time we spend abroad, our routine for the day, with little exception, is as follows:—Rise at six o'clock, do two hours' work before breakfast. Breakfast over, work from nine to half-past one, then lunch of a very light description. Sketch again from two until five, when we return to the hotel to dine. Afterwards do another hour or two's work in our room, generally finishing sketches and filling in repetitions of detail, which can be done indoors as well as on the spot. Eight o'clock in the evening having arrived, we feel justified in setting off for a brisk walk for the sake of exercise, our rambles usually taking us in the direction of the outskirts of the city, where we come across many charming bits of canal scenery, and quaint old fortified gateways commanding the leading approaches from the country. In one of our evening strolls along the canal-banks a picturesque turret attracts our attention, and we find it is a portion of the house of the Guild of Archers of St. Sebastian. From one of the ramparts adjoining a wind-mill, a capital view of it is obtained, and notwithstanding the fast-departing daylight, a sketch soon finds its way into our note-books. From this point of sight the turret composes admirably with the panelled and traceried gable end, crow-stepped as usual, the expanse of foreshortened roof, and the foreground of foliage. What fertility of invention and originality of design is displayed in this conspicuous feature of the building, which one of the local guide-books informs us goes by the name of "la délicieuse tourrelle." Delicious it may be according to the taste of the critic, but, whether or no, it is certainly eccentric. As it rises from the roof it is first square, then circular, and finally octagonal, its stages increasing in width as the roof is reached, the arched corbellings out and moulded finishes to projecting angles being nearly all carried out in brickwork. A measured drawing of the garden front of the building, including the tower, made by Mr. Gotch, is to be found in one of the past numbers of the *British Architect*, which shows the style of architecture in considerable detail. In the interior are to be found a bust of Charles II of England, who was, while resident in Bruges, elected king of the archers, together with a portrait of the Duke of Gloucester, his brother. A day or two are occupied with a sketch of the elaborate florid Gothic baptistery, which goes by the name of "Het Paradis." We set up our three-legged stools against the walls of a neighboring *estaminet*, where we are sheltered from the wind, and then, with many interruptions, proceed with our work. There are several difficulties to contend with, the principal one being that our presence soon gets noised about in the neighborhood, and during certain hours of the day we are sur-



rounded with crowds of children from a school near by, whose interest in our efforts remains unabated and unsatiated. I am the first object of attack, and am greeted with guttural welcomes in the Walloon dialect, and then my friend's presence being observed with cries of "ein andere" (another), they leave me in peace for awhile, but not for long, and confine their attention to him and his belongings. This is but a foretaste of what we may expect everywhere, when working out of doors, an interested crowd of idlers being always collected around us. The baptistery is built of stone, whereas the rest of the church, which is much earlier in date, is of brick, and being of an extremely ornate description, it does not look to have anything in common with the plain brick walls of the church in the background; but taken by itself it is a *multum in parvo* of architectural perfection. It was originally intended as a portal, and has four entrances which are now walled up.

A picturesque pile of building, with high-pitched roofs, to the left, is chiefly noticeable for its range of beautiful stone dormer windows (Fig. 3), with crocketed gables, oval-shaped terminals, and stepped footstones, with a massive octagonal turret at the end. Formerly it was the residence of a wealthy old Bruges family, lately it has been used as a pawnbroker's establishment, here called a "Mont-de-Piété," and we hear that it is shortly to be converted into a museum of antiquities. Why a pawnshop should be called a Mount of Piety is an enigma I cannot attempt to unravel, and must leave it in your hands for solution. While busy here, an elderly gentleman who seems very much interested in our drawings gives us the information that if we cross the canal and turn up a little-used narrow foot-way, between some high buildings, we shall come to a façade well worthy of observation. We act on his suggestion, and find, fronting upon the canal, one of the most suggestive, and at the

same time characteristic examples of Flemish work that we have yet met with. Unfortunately we cannot see it to advantage, and the only view we have from the end of the path leading up to the canal side is in very oblique perspective. A capital illustration of the building appears in Ernest George's book of etchings of Belgian architecture. The front to the water consists of two gable-ends, one much larger than the other, the larger one noticeable for several ranges of windows, one above another, having boldly-cusped heads, spanned on the top by a pointed arch having several orders of mouldings in brickwork, the lower ones spreading out into fantastic cusped and foliated tracery. The smaller gable is terminated by a square-shaped piece of brickwork, capped with stone coping in place of an ordinary saddle stone. This mode of treating a small dormer or gable is commonly metwith. It is as if a stepped gable were shorn of all the steps on either side except those at the springing and the solitary one at the top, the intermediate raking sides being coped with brickwork on edge, or having tabling in the ordinary manner. In this building, brick which has turned a mellow russet-brown color, with patches here and there of yellow lichen, and splashes of mossy green, is the material, and almost entirely, stone only being adopted for mullions, transoms, and a few lintels. In close proximity to the western portals of Notre Dame is the celebrated hospital of St. John, containing Hans Memling's masterpieces within its chapter-house.

Time is too precious to spend over pictures, except as an occasional relaxation, so we jot down particulars of part of the front of the building facing the street, of red brick, as usual, with bays of mullioned and transomed windows (Fig. 4), quaint cusped brick tracery, the characteristic shouldered brick corbels to narrow the panelled recesses, Tudor arched doorways, and a dormer or two of the usual description.

Fig. 5. We must not leave Notre Dame without making mention of the fine tourelles of splendid proportions which flank its western gable end. They are circular on plan, enriched with attached brick shafts of small diameter, bound together at intervals with horizontal brick string-courses, dividing the surface into long vertical strips, finished at the top with stone capitals, the recessed spaces spanned with cusped arcadings. The spirelets are covered with slates, and are terminated by leaded maundrils or finials, the slate being tilted forward at the eaves in a slightly curved line. Lit up by the sun, the charm of these turrets is beyond description, and nothing can excel them for subtle effects of light and shade and wealth of artistic color. But we must not linger longer in Bruges, unwilling as we are to leave it, and must leave undescribed the Hôtel de Ville, the Palais de Justice, commonly called the Palais

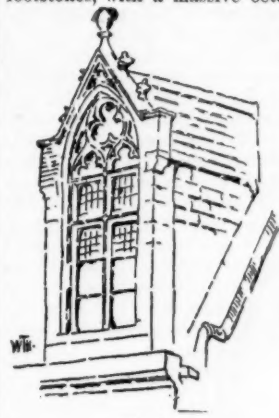


Fig. 3.

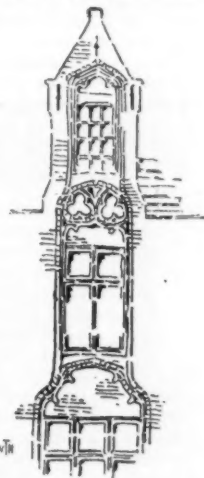


Fig. 4.

du France, with its magnificent carved chimney-piece and its turreted gable-ends facing the canal opposite the fish-market, also the Chapelle du Saint Sang, with its rich Flamboyant Gothic exterior. We vacate

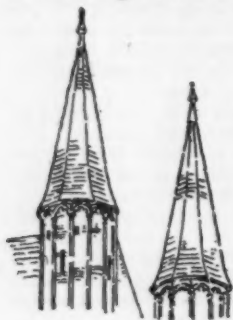


Fig. 5.

our room in which many happy hours have been spent sketching the belfry opposite, bid adieu to the buxom landlady, have a last word with François, our attentive and facetious waiter, who can speak a little English in a squeaky, high-pitched voice, and hasten to the station to catch the train for Ypres. We arrive there in the evening, and make our way to the principal inn in the place, the Hotel Tête d'Or, situated in Rue de Lille. It being rather dark, we have difficulty in seeing the buildings we pass, but are able to recognize the well-known Cloth Hall, with its fine tower, a visit to which we put off until the following day. Rising betimes in the morning, and breakfast being over, our landlord, who is somewhat of an antiquarian, hearing that we are architects, brings one or two valuable volumes relating to the antiquities of Ypres, and converses at considerable length. He can only talk in French, and as my knowledge of the language is somewhat limited, he has much the largest share in the conversation. Finding that we can appreciate the mediæval beauties of the place, he gets quite enthusiastic, and forthwith sends us out, under guidance of a hotel porter, to look round the Cloth Hall before the hours of admission are over. A description of the exterior of this building, which, no doubt, is well known to you by drawings and photos., is unnecessary, and it must suffice to say that the building is rather low, and is noticeable for its unbroken façade, 436 feet in length, with no recessed portions or projecting gables to give light and shade wherewith to relieve the monotony of effect. The wall surface is enriched with good decorated Gothic traceried windows and an elaborate parapet, but the most pleasing portions of the building, to my mind, are the fine tourelles at either end, and the splendid belfry tower which has provided a motif of design to more than one of our modern architects. The Salle des Mariages in the interior, although small, is of the most elaborate and ornate character, and has recently been restored in very good taste, regardless of expense. The room is vaulted in wood of a reddish-brown tint, the ribs being brought out tastefully in subdued color. The wall-space above a richly-carved linen-fold panelled dado is covered with fine frescoes, representing a visit of the Count of Flanders to Ypres. A fine open fireplace, with carved wooden canopy, occupies the centre of one side of the room, and at the end is a raised dais, on which are placed a long, narrow, carved black-oak table and some high-backed chairs, with antique stamped leather seats and backs. The great hall with open-timbered roof on the first floor, extending the whole length of the front, is now little used, but is interesting on account of the series of fresco paintings, of great merit, by Swerts and Guffens, on the walls opposite the windows, representing historical scenes in which Ypres has taken an important part. In its way, almost more picturesque than the Cloth Hall is a fine Early Renaissance building, carried on vaulted arcading abutting upon it, designed by Jan Sporeman, date 1575.

The quaint curvilinear gable ends (Fig. 6), decorated with strap-work ornament and carved arabesques, and the semi-circular panels above the first-floor range of mullioned and transomed windows, filled in with richly-carved cartouche work, are unique in their way, and some dormers in the rear, together with an ogee stepped



Fig. 6.

gable-end, and a charmingly-designed chimney-stack, are not to be excelled for old world grace and mellow color imparted by the kindly hands of time. This building may be considered as one of the typical examples of Early Flemish Renaissance, and abounds in detail of the kind and quality which is being adopted in the present day by R. Norman Shaw, Ernest George, L. Peto, T. E. Collcutt, and one or two others, whose artistic predilections are well known.

It may here be remarked that this style of work is commonly called Queen Anne by an ignorant public, including many architects who ought to know better, who apparently are unable to detect the difference between the work of 1570 and that carried out in England nearly one hundred and fifty years afterwards. Taken as a whole, the buildings of Ypres are later in character than those of Bruges, and we do not see so much domestic Gothic work, although there are still one or two timbered houses to be seen, a fine example existing in the Rue de Lille, near our hotel, possessing a well-proportioned

range of pointed traceried windows, and the remains of an elaborately-decorated parapet, with the springing of an angle-turret.

(To be continued.)

"BUILDING SUPERINTENDENCE."

OSWEGO, N. Y., July 9, 1883.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Sirs,—Do you intend to publish in book form the valuable series of articles on "Building Superintendence?"

This, with your series on "Builders' Scaffolding," would make a book of much practical value.

Respectfully,
W. P. JUDSON, U. S. Asst. Engineer.

BUFFALO, N. Y., July 9, 1883.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Are the articles on "Building Superintendence" recently completed in the *American Architect* to be published in book form? It is very inconvenient to hunt up old numbers of the paper, and I have tried in vain to find a simple and practical book such as your articles would make if published.

It seems to me there would be no doubt of a book of the kind meeting with excellent success.

Yours very truly,
G. F. H. BARTLETT.

[The papers on "Building Superintendence" are to be published as soon as the series is completed. — EDS. AMERICAN ARCHITECT.]

FACTORY CHIMNEYS.

CHICAGO, July 5, 1883.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Can you refer me to any work on the subject of the construction of factory or boiler chimneys?

Yours truly,
S. A. TREAT.

BOOKS.

INDIANAPOLIS, IND., June 31, 1883.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Whose works could you advise as best for a superintendent to make monthly reports from, which would be accurate for plumbing, gas-fitting, and cut-stone, steam-heating, etc. You will greatly oblige by answering a reader.

S. W.

[For plumbing work, W. P. Buchan's "*Plumbing*" may be useful, and for gas-fitting and steam-heating work Baldwin's "*Steam-Heating for Buildings*" would be the best book we know. Mr. Buchan's book costs about \$1.00. It is one of Lockwood's Series, and can be had through any bookseller. Mr. Baldwin's book costs \$2.50, and can be had through any bookseller, or of Wiley & Sons, New York. — EDS. AMERICAN ARCHITECT.]

THE RESPONSIBILITIES OF ARCHITECTS.

KANSAS CITY, MO., July 2, 1883.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Gentlemen,—Through the columns of the *American Architect*, I should like to ask its many readers, if any of them can cite any decisions of the higher courts regarding the responsibility of architects. 1. Whether an architect as general superintendent is peculiarly responsible for a building, although his drawings and specifications are correct, and he promptly rejects improper work and materials, and the contractor (of the owner's selection) proves to be incompetent and irresponsible, and refuses to make his work right? 2. Is an architect responsible for work done under a contract made by the owner, and rejected by the architect, and for which the owner pays, without the knowledge or consent of the architect? 3. Is an architect responsible for work done where the owner is to furnish certain materials and neglects to do so, although notified by the architect that such materials were necessary to make the job as set forth in his specifications? The work progresses partially before his own eyes, without said material and he pays for the same without the knowledge or consent of the architect. 4. Is an architect responsible where the work is proven by the architect and found correct and in accordance with contract, and he issues his certificate for the amount then due, and afterward the contractor changes this work without the knowledge or consent of the architect?

S. E. C.

[THERE are not many decisions in this country respecting the responsibility of architects, but the most important of them may be found referred to in the papers on the "*Legal Responsibilities of Architects*," published in Nos. 154 and 155 of this journal, together with other information on the subject. — EDS. AMERICAN ARCHITECT.]

NOTES AND CLIPPINGS.

HEIDELBERG.—The architects and engineers who are considering the proposed restoration of Heidelberg Castle have agreed upon certain general propositions. These are to so repair the Otto-Heinrich wing by roofing, propping, and internal strengthening as to make it capable of being actually used; to render the Friedrich IV wing accessible by means of sufficient repairs; to restore in the same way the Octagon Tower; to protect the Rudolf and Ruprecht wings by roofing; to carefully preserve the other towers in their present condition; to restore the Friedrich II wing, and to let the so-called English wing remain a ruin in its present state. In point of architectural style, it is agreed that the restorations shall conform strictly with the original, every admixture of modern ideas being carefully avoided. — *Exchange*.

BUILDING INTELLIGENCE.

(Reported for The American Architect and Building News.)

[Although a large portion of the building intelligence is provided by their regular correspondents, the editors greatly desire to receive voluntary information, especially from the smaller and outlying towns.]

BUILDING PATENTS.

[Printed specifications of any patents here mentioned together with full detail illustrations, may be obtained of the Commissioner of Patents, at Washington, for twenty-five cents.]

- 289,785. DOOR.—James D. Benson and R. Bruce Fogle, Cranberry, W. Va.
 289,793. PIPE-WRENCH.—A. Wells Case, South Manchester, Conn.
 289,801. NAIL.—Henry S. Cushman, Milford, Mass.
 289,808. WINDOW-SHADE ROLLER.—Benjamin F. Fox, Philadelphia, Pa.
 289,831. DIVIDERS.—Carl Johnsen, Christiansia, Norway.
 289,841. ANGLE-IRON.—William Lorey, Philadelphia, Pa.
 289,845. SCREW-DRIVER.—Angus McLellan, Portland, Oreg.
 289,856. PAINT-MIXTURE FOR ROOFS AND OTHER PURPOSES.—Arthur G. Peuchen, Toronto, Ontario, Can.
 289,877. DOOR-KNOB ATTACHMENT.—Oscar Stoddard, Cincinnati, O.
 289,892. SASH-FASTENER.—William F. Bailey, St. Paul, Minn.
 289,906. ELECTRIC FIRE-EXTINGUISHER AND FIRE-ALARM APPARATUS.—Charles E. Buell, New Haven, Conn.
 289,908. HOT-WATER HEATING-APPARATUS.—William Burlingame, Exeter, N. H.
 289,924. GONG-BELL.—William S. Foster, Richmond, Va.
 289,928. HAND-SAW.—Herman F. Hoffmann, Torrington, Conn.
 289,930. ORAL ANNUNCIATOR.—Joseph Ireland, Cleveland, O.
 289,935. FASTENER FOR MEETING-RAILS OF SASHES.—Hiram T. King, Rochester, N. Y.
 289,957. FIRE-ESCAPE.—George W. Looney, Sr., Rushville, Ind.
 289,946. REMOVABLE BAY-WINDOW.—Charles A. Nordyke, Cincinnati, O.
 289,950. FASTENER FOR MEETING-RAILS OF SASHES.—Geo. E. Parmelee, Circleville, N. Y.
 289,957. FIRE-ESCAPE.—Joseph Ripczynski and Charles Tisch, Jr., Wausau, Wis.
 289,987. SASH-FASTENER.—William H. Wolfarth, New York, N. Y.
 281,016. SAFETY-STOP FOR ELEVATORS.—Felix P. Canfield, Boston, Mass.
 281,027. VENTILATION.—William T. Cottier, Napa, Cal.
 281,029. KILN AND FURNACE FOR BURNING BRICK, TILE, ETC.—James C. Culbertson and William A. Eudaly, Cincinnati, O.
 281,036. LATCH.—Henry C. Doughty, Gray, and Daniel Hall, Auburn, Me.
 281,054. DOOR-HANGER.—William Grace, Chicago, Ill.
 281,082. APPARATUS FOR VENTILATING BUILDINGS AND CHIMNEY-STACKS.—Arnold W. Kershaw, Lancaster, County of Lancaster, England.
 281,086. SPIRIT-LEVEL.—Samuel H. Lemon, New York, N. Y.
 281,092. BUSH-HAMMER.—Henry D. Martin, Ypsilanti, Mich.
 281,105. REAMING-SAW.—Geo. Meyer, New York, N. Y.
 281,109. KNOB-LATCH.—John Milton, Hamilton, Va.
 281,131. PAINT-COMPOUND.—Arthur G. Peuchen, Toronto, Ontario, Can.
 281,133. DRAIN-TILE DITCH-LEVEL.—Lyman F. Pontious, Adair, Ill.
 281,135. STONE-CHANNELING MACHINE.—Almire H. Rapp, Paris, France.
 281,136. FIRE-ESCAPE.—Henry Rensch, Quincy, Ill.
 281,142. DOOR-LOCK.—Joseph Savoie, St. Marcel, Quebec.
 281,148. PNEUMATIC DOOR-OPENER.—Adolph T. Smith, New York, N. Y.
 281,154. FIRE-ESCAPE.—Edward Solomons, Sumter, S. C.
 281,169. FIRE-EXTINGUISHER.—Caleb C. Walworth, Boston, Mass.
 281,181. AUTOMATIC FIRE-EXTINGUISHER.—Christopher L. Delmage, Woonsocket, R. I.
 281,198. FIRE-PROOF SHUTTER.—Robert P. Manly, Philadelphia, Pa.
 281,211. STONE-DRESSING MACHINE.—John T. Turner, Sing Sing, N. Y.
 281,217. HAMMER.—Heinrich Wiedmann, Nuremberg, Germany.
 281,219. HEATING-DRUM.—Henry G. Williams, Jersey City, N. J.

SUMMARY OF THE WEEK.

Baltimore.

ADDITION.—Two-sty brick, with stone finish, Sunday-school room to Franklin Square Baptist Church, Calhoun St., near Lexington St., 20' x 60', and to cost \$2,500; from designs of Messrs. J. A. & W. T. Wilson, architects; H. C. Smyser, builder.

BUILDING PERMITS.—Since our last report fourteen

permits have been granted, the more important of which are the following:—

Dreide & Bro., two-sty brick building, w s Swan Alley, between Bank St. and Eastern Ave.
 Chas. E. Willis, 9 three-sty brick buildings, w s Mount St., commencing s w cor. Saratoga St.; and 10 two-sty brick buildings, e s Bruce St., commencing s e cor. Saratoga St.

S. Kahn, 2 three-sty brick buildings, Nos. 154 and 156 Broadway, e s, between Eastern and Canton Aves.

Antonio Carter, two-sty brick building, n e cor. Fort Ave. and Hull St.

Wm. G. Wamsley, 6 two-sty brick buildings, w s Ann St., s of Biddle St.

Boston.

BUILDING PERMITS.—Brick.—Madison Court, opp. Mechanics St., Ward 22, for Gasperina Hansen, dwell. and store, 27' x 32', one-sty flat; David Angell, builder.

Jackson Court, rear, near Dorchester Ave., Ward 15, for Lawrence H. Daloz, cleaning-house, 15' x 20', one-sty flat; Ira A. Medbery, builder.

Bromfield St., Nos. 7-9, Ward 10, for Alpheus Bigelow heirs, offices and stores, 24' 7" x 32', four-sty flat; ell, 13' x 20' 3"; J. E. Stuart, builder.

Hamilton Pl., Ward 10, for W. S. Dexter, Trustee, offices and stores, 70' 9" and 75' 8" x 80', six-sty flat; Neal & Preble, builders.

Marlborough St., No. 272, Ward 11, for N. S. Bartlett, dwell., 26' x 68', four-sty mansard; D. Connery, builder.

Elm Pl., Nos. 3-4, Ward 7, for A. D. Puffer, manufacture soda water, 39' 6" x 50' 6", four-sty mansard.

Clarendon Park, Nos. 24 and 26, Ward 18, for John Carlton, 2 dwells., 18' x 45', three-sty flat, John Carlton, builder.

Crescent St., near Hadley St., Ward 4, for Horatio Williams, 2 dwells., 25' x 52', two-sty mansard, Horatio Williams, builder.

Wood.—Parker St., near Hadley St., Ward 4, 2 dwells., 25' x 52', two-sty mansard; Horatio Williams, builder.

Putnam St., No. 161, Ward One, for Eugene Luipold, dwell., 17' 6" x 18' and 14' x 14', two-sty flat; J. C. Frame, builder.

Ashland St., near Albion St., Ward 23, for Wm. A. Davis, dwell., 22' and 27' x 29', one-sty pitch; Enoch A. Carter, builder.

Jamaica St., near Carter St., Ward 23, for Wm. Kelley, dwell., 22' x 29'; two-sty pitch; John Gately, builder.

Granville Pl., near Brook Ave., Ward 20, for Guy A. Clifford, dwell., 19' x 28' and 13' x 14', two-sty pitch; Guy A. Clifford, builder.

Brooks Ave., near West Cottage St., Ward 20, for Guy A. Clifford, dwell., 30' 6" x 31', two-sty pitch; Guy A. Clifford, builder.

Cottage St., near Humphrey St., Ward 20, for Nathaniel Bolden, dwell., 35' 6" x 36' and 14' x 23', two-sty pitch; Edw. McKechnie, builder.

Boylston Ave., near Green St., Ward 23, for Patrick Magee, dwell., 22' x 30', two-sty pitch; Dugald McDonough, builder.

West Fifth St., Ward 13, for James V. Devine, 5 dwells., 20' x 32', three-sty flat; James V. Devine, builder.

Erie Ave., near New Seaver St., Ward 24, for W. H. Wallace, 2 dwells., 16' x 35', three-sty flat; John H. Gigle, builder.

Bower St., Nos. 59 and 61, near Laurel St., Ward 21, for Anna W. Flint, 2 dwells., 27' 6" and 24' 6" x 45', two-sty flat; Thomas J. Tobin, builder.

Blue Hill Ave., Ward 23, for Highland Railway Co., passenger station, 40' x 40', one-sty hip; G. W. Woods, builder.

Temple St., Ward 23, for Frank E. Smith, dwell., 22' x 33', two-sty pitch; J. Wason, builder.

Jarvis Place, near George St., Ward 20, for F. J. Fortunato, mechanical, 22' x 30', two-sty pitch; F. J. Fortunato, builder.

Sigourney St., near Glen Road, Ward 23, for S. G. Thaxter, dwell., 32' 4" x 34' 4", two-sty pitch; J. L. Batchelder, builder.

Tremont St., Ward 24, for E. F. Petersilea, dwell., 12' x 14' and 22' x 28', two-sty flat; F. Hopkins, builder.

West Cottage St., Ward 20, for Silas Potter, 2 dwells., 20' 6" x 58'; three-sty hip.

Heath Pl., Ward 22, for Cornelius Van Der Wall, dwell., 21' x 30', two-sty pitch; C. J. Pennick, builder.

West Fifth St., near D St., Nos. 139 and 141, Ward 13, for Bridget Brady, 2 dwells., 22' x 34', three-sty flat; Wm. T. Eaton, builder.

Gaston St., rear, near Warren St., Ward 21, for Thomas F. Furber, stable, 31' x 39', one-sty mansard.

Anawan Ave., near Beach St., Ward 23, for Henry Schultenkorf, dwell., 21' and 24' x 26', and 19' x 19', two-sty pitch; G. F. Renney, builder.

Milton St., near Granite Ave., Ward 24, for John Lawled, green-house, 12' x 100', one-sty pitch; Greenville Spear, builder.

Washington St., rear, near Keyes St., for Boston Thread & Twine Co., storage of flax, 25' x 34', one-sty pitch; C. H. Lewis, builder.

Waverly St., south side, Ward 25, for Charles W. Sandersson, dwell., 10' x 18' and 22' x 30', three-sty pitch; J. C. Wadleigh.

Richmond St., near Pope St., Ward 24, for James Pope, owner and builder, 4 dwells., 19' x 27', two-sty pitch.

Grove St., rear, near Dedham line, Ward 23, for Association Tipareth Israel, tool-house, 16' x 22', one-sty pitch; G. Galef, builder.

Neposet Ave., near Taylor St., Ward 24, for Patrick and Michael Finnigan, dwell. and store, 24' x 30', two-sty flat; Michael Ryan, builder.

Brooklyn.

BUILDING PERMITS.—Fourth Ave., n e cor. Fifty-fourth St., two-sty frame dwell., tin roof; cost, \$3,500; owner, Mrs. M. A. Moss, Pearl St., New York; architect, T. Engelhardt; builder, J. Rueger.
 Grinnett St., No. 138, s s, 140' e Harrison Ave., three-sty frame double tenement, tin roof; cost,

\$3,600; owner, Anton Miller, 30 St. Marks Pl.; architect, E. Schrempf; builder, J. Schoch.

North Henry St., No. 37, w s, 40' s Herbert St., three-sty frame double tenement, tin roof; cost, \$3,800; owner, August Winkler, 33 North Henry St.; architect, J. Moesmer; builder, J. Schoch.

Broadway, Nos. 305 to 311, 4 four-sty brick stores and tenements, tin roofs, iron cornice; cost, each, \$8,500; owner, John McCormick, 277 South Fourth St.; architect, A. Herbert; builders, W. & T. Lamb and Jenkins & Gillies.

Quincy St., n s, 287' e Tompkins Ave., 2 two-sty brownstone front dwells., tin roofs; cost, each, \$4,000; owner, G. De Revere, 663 Greene Ave.

Chauncey St., s s, 100' w Ralph Ave., 2 two-sty frame dwells., gravel roofs; cost, each, \$2,500; owner, architect and builder, Baldwin Pettit, 285 Chauncey St.; mason, E. Satterline.

Clifton Pl., No. 275, n s, 275' w Nostrand Ave., two-sty brick dwell., with one-sty extension, tin roof; cost, \$3,100; owner, architect and builders, John J. Cyphers, 355 Kent Ave.

Greene Ave., s s, 248' e Grand Ave., 2 two-sty basement and attic brownstone front dwells., metal roofs; cost, each, \$3,500; owner and builder, Elbert Smedeker, 391 Greene Ave.

Greene Ave., s s, 152' e Grand Ave., 4 four-sty brick flats, metal roofs; cost, each, \$12,000; owner, etc., same as last.

Eagle St., No. 89, n s, 175' e Franklin St., three-sty frame tenement, tin roof; cost, \$3,350; owner, Mrs. Shaar, on premises; architect, F. Weber; builders, Hafford and Post & Walker.

Eagle St., No. 87, n s, 150' e Franklin St., three-sty frame double tenement, tin roof; cost, \$3,500; owner, Kenney, on premises; architect, F. Weber; builders, Hafford and Post & Walker.

Johnson St., s s, 40' w Raymond St., three-sty brick tenement, tin roof; cost, \$3,500; owner, P. Barrett, Navy St., cor. Raymond St.; architect, F. Ryan.

Lafayette Ave., n s, 60' e Stuyvesant Ave., two-sty and basement brick tenement, tin roof; cost, \$4,500; owner, H. C. Fortmeyer, Lafayette Ave., cor. Stuyvesant Ave.; architect, H. J. Growtag.

Wallabout St., n s, 150' w Harrison Ave., two-sty frame dwell., tin roof; cost, \$3,000; owner, Glaeser, Morrell St., cor. Debevoise St.; architect, Hildebrandt; builder, J. Rueger.

Morrell St., e s, 75' n Debevoise St., two-sty frame store and dwell., tin roof; cost, \$3,000; owner, David Hood, Morrell St., cor. Debevoise St.; architect, G. Hillenbrand; builders, G. Welsh and J. Rueger.

Fourth Ave., s w cor. Eighth St., 3 three-sty brick stores and tenements, gravel roofs; cost, each, \$4,000; owner, Geo. Harvey, Luzerne, Greene Co., New York; architect and builder, Theo. Pearson.

Broadway, Nos. 707 and 711, about 50' n Park Pl., three-sty brick building for stores, etc., with two-sty extension, tin roof; cost, \$13,000; owner, Amancio Rodriguez, 19 Whipple St.; architect, T. Engelhardt; builder, J. Rueger.

Tenth St., n s, 80' e Sixth Ave., two-sty and basement brownstone front dwell.; tin roof; cost, \$4,300; owner and builder, Geo. Wessel, Sixth Ave., cor. Tenth St.; architect, L. J. Wells.

Nineteenth St., n s, 168' w Sixth Ave., 5 two-sty frame tenements, tin roofs; cost, each, \$2,000; owner, architect and builder, Bernard Casper, 397 Fourteenth St.

Pearl St., w s, 237' s Concord St., three-sty brick stable and storage building, tin roof; cost, \$9,000; owners, Dixon & Wilson, 290 Fulton St.; architect, J. G. Glover; carpenter, J. S. McRae.

Bushwick Ave., n s, 25' w Varet St., three-sty frame double tenement, tin roof; cost, \$4,000; owner, L. Hoffmann; architect, F. Hahnberg.

Ross St., s s, 236' w Wythe Ave., two-sty brick factory, gravel roof; cost, \$4,000; owner, Oscar F. Hawley, 105 Bedford Ave.; architect, E. F. Gaylor; builders, W. & T. Lamb, Jr.

Floyd St., n e cor. Throop Ave., three-sty frame tenement, tin roof; cost, \$3,100; owner, Louis Weil, 199 Throop Ave.; architect and builder, H. Loeffler.

Clifton Pl., n s, 225' e Classon Ave., two-sty and basement brick dwell., gravel roof; cost, \$4,500; owner and builder, Daniel Boyle, 125 Clifton Pl.; architect, M. J. Morrell.

Broadway, e s, 45' n Suydam St., three-sty frame store and dwell., tin roof; cost, \$3,700; owner, Wm. Stewart, 13 Lawton St.; architect and builder, W. H. Nicolls; mason, S. V. Hyer.

Wallabout St., No. 376, three-sty frame double tenement, tin roof; cost, \$4,200; owner, A. Meth, 374 Garett St.; architect, A. Herbert; builder, F. Kuehne.

Leonard St., w s, 50' s Powers St., three-sty frame dwell., tin roof; cost, \$4,000; owner, Edward J. Carroll, 32 Jackson St.; architect, E. F. Gaylor; builders, J. Lahey and J. J. Brennan.

Reid Ave., n e cor. Van Buren St., three-sty brick store and tenement, tin roof; cost, \$8,600; owner, Mrs. J. M. Lobart, on premises; architect and builder, H. J. Brown; masons, Ashfield & Son.

Fourth Ave., n w cor. Eighth St., three-sty brick store and tenement, gravel roof; cost, \$4,000; owner, Geo. Harvey, Luzerne, Greene Co., New York; architect and builder, T. Pearson.

South Tenth St., between Third and Fourth Sts., four-sty brick tenement, tin roof, metal cornice; cost, \$12,500; owner, Wm. Grundy, Wilson St.; builder, Thos. Gibbons.

Suydam St., n w cor. Central Ave., three-sty frame store and double tenement, tin roof; cost, \$4,500; owner, Herm Schultz, Central Ave.; architect, T. Engelhardt.

Olive St., No. 29, w s, 75' n Ainslie St., three-sty frame double tenement, tin roof; cost, \$4,200; owner, Stephan Hodum, on premises; architect, T. Engelhardt; builders, L. Fuchs and C. Hoffmann.

Tenth St., s s, 300' e Fifth Ave., 2 two-sty and basement brick dwells., gravel roofs; cost, each, \$4,500; owner, Mrs. O'Brien; architect and builder, T. Corrigan; mason, W. Corrigan.

Ellery St., n s, 125' e Delmonico Pl., 2 three-sty frame tenements, tin roofs; cost, each, \$4,200; owner, Wm. Kolb, Ellery St., near Delmonico Pl.; archi-

tect, T. Engelhardt; builders, J. Kuhn and J. Rueger.

Lewis Ave., e. s. 40' s Van Buren St., 2 two-sty brownstone front dwells., tin roofs; cost, total, \$10,000; owner, architect, and builder, M. J. McLaughlin, 101 Kosciuszko St.

Hall St., No. 119, e. s. 224' n Myrtle St., two-and-one-half-sty brick dwell., tin roof; cost, \$14,000; owner, Jno. I. Godby, 117 Hall St.; architect, T. Hanlon; builders, Lynch & Gornaley and T. Hanlon & Son.

South Second St., n. s. about 100' from First St., extending westerly to the East River, three-sty brick storehouse, gravel and paper roofing; cost, about \$15,000; owner, Brooklyn Sugar Refining Co., First St. and South Second St.

Fifth Ave., n. w. cor. Sackett St., 2 three-sty brick stores and flats, tin roofs; cost, total, \$18,000; owner, Jacob Berg, 94 Fifth Ave.; architect, I. D. Reynolds.

Reid Ave., w. s. 20' s Van Buren St., 5 two-and-one-half-sty brownstone front dwells., tin roofs; cost, each, \$4,000; owner and builder, Edward Webb; architect, W. Godfrey.

Quincy St., s. s. about 100' e Stuyvesant Ave., two-sty brownstone front dwell., tin roof; cost, \$4,500; owner, Wm. Tartor, Quincy St.; builder, J. W. Stewart.

Hart St., s. s. 285' w Stuyvesant Ave., 2 two-sty frame tenements, tin roofs; cost, each, \$2,800; owner and builder, Wm. A. Schmittbender, 399 Hart St.; architect, J. Herr.

South Ninth St., n. s. 150' e First St., five-sty brick factory, tin roof; cost, \$7,000; owner, Wm. Vogel, South Ninth St., near First St.; architect, E. F. Gaylor; builders, J. Rodwell and J. Meyding.

Raymond St., w. s. 97' 11' n De Kalb Ave., two-sty brick stable and dwell., tin roof; cost, \$7,000; owner, A. H. Booms, 14 Portland Ave.; architect, W. A. Mundell; builders, T. B. Rutan, and L. W. Seaman, Jr.

Greene Ave., n. s. 240' e Throop Ave., 14 two-sty brownstone front dwells.; cost, each, \$6,500; owner, architect, and builder, Jno. E. Ryan, 187 Hewes St.
ALTERATION. — *Lafayette Ave., n. w. cor. North Elliott Pl., four-sty brick extension, tin roof, interior and cor. of present building altered; also, new roof; cost, \$9,000; owner, Chas. Koruder, 849 Fulton St.; architect, C. F. Eisenach; builders, Ashfield & Son and W. Zang.*

Cincinnati.

BUILDING PERMITS. — John Goke, three-sty brick dwell., 139 East Front St.; cost, \$6,500.

Butchers' Meeting Association, one-sty brick build., cor. Findlay St. and Central Ave.; cost, \$3,500.

H. Kempe, three-sty brick dwell., 140 Betts St.; cost, \$5,000.

Este Estate, three-sty brick dwell., 351 Main St.; cost, \$3,500.

A. Lowbitz, two-sty brick dwell., Wheeler St., near Vernon St.; cost, \$3,500.

John Houcke, three-sty brick dwell., Central Ave., near Poplar St.; cost, \$5,000.

Josephine Ward, two-sty brick dwell., 312 Central Ave.; cost, \$6,000.

W. M. Van Bant, 4 three-sty brick dwells., Longworth St., near Smith St.; cost, \$3,500.

Henry Whitaker, three-sty brick dwell., Sherman Ave., near Western Ave.; cost, \$5,500.

Smith, Meyers & Co., three-sty brick build., Front St., near Smith St.; cost, \$12,000.

John McVain, 2 three-sty brick dwells., 34 Pike St.; cost, \$5,000.

Mrs. Ella K. Platt, 4 one-sty frame dwells; cost, \$4,500.

18 permits for repairs; cost, \$20,000.

Total permits to date, \$10.

Total cost to date, \$1,878,950.

For same time last year the total permits were 414, and total cost \$1,073,900.

Chicago.

FLATS. — C. L. Stiles, architect, has completed plans for three-sty flats, at No. 500 West Madison St., for Mrs. L. Burroughs, 24' front, of white and Bedford stone; cost, \$8,000.

HOUSES. — Mr. Geo. S. Spohr is architect of 2 two-sty houses for Dr. Case, to be built on Seminary Ave.; cost, \$6,000.

Also, by same architect, house for James Sullivan, n. e. cor. of Wells and Whiting Sts., two-sty; to cost \$7,000.

SCHOOL-HOUSE. — Messrs. Bauer & Hill are architects for school-house, cor. West Indiana and Paulina Sts., pressed-brick and stone finish, three-sty, 73' x 85' 6"; cost, \$40,000.

BUILDING PERMITS. — T. H. Gault, 4 three-sty and basement dwells., Congress St.; cost, \$12,000; architects, Denson & Townsend; builder, T. H. Gault.

Eich Bros., 3 two-sty dwells., 1094-1098 West Monroe St.; cost, \$9,000; architect, Wm. Strippelman; builder, R. E. McKay.

Eich Bros., 3 two-sty dwells., 1093-1093 West Monroe St.; cost, \$9,000; architect, Wm. Strippelman; builder, R. E. McKay.

James Sullivan, three-sty and basement dwell., 238 North Wells St.; cost, \$4,100; architect, E. Spohr; builder, Martin Zipprich.

U. P. Smith, two-sty dwell., 3108-3210 Groveland Park Ave.; cost, \$6,000; architects, Wheelock & Clay; builder, Chas. Buteker.

U. P. Smith, two-sty dwell., 3214 Lake Park Ave.; cost, \$6,000; architects, Wheelock & Clay; builder, Chas. Buteker.

U. P. Smith, 2 two-sty dwells., 3263-3265 Groveland Park; cost, \$12,000; architects, Wheelock & Clay; builder, Chas. Buteker.

Mrs. L. K. Smith, two-sty dwell.; cost, \$30,000; architects, Cobb & Frost; builders, Clark & Fuller.

Chas. Hottinger, four-sty flats, 312-314 Sedgwick St.; cost, \$15,000; architects, Furst & Rudolph; builder, Leo Kabel.

Wm. Schroeder, two-sty dwell., 699 North Park Ave.; cost, \$5,000; architect, W. H. Arant; builder, N. Gersten.

G. Thompson, two-sty dwell., 334 Hubbard St.; cost, \$3,000.

W. A. Fuller, additional story, 116-118 La Salle St.; cost, \$18,000; builder, C. Busby.

O. De Luce, two-sty dwell., 195 California Ave.; cost, \$5,000.

Wm. Jackson, 3 three-sty dwells., 3111-3115 Forest Ave.; cost, \$10,000; architect, H. P. Harned.

E. Saltsman, two-sty dwell., 3350 Calumet Ave.; cost, \$6,000; architect, J. R. Willet; builders, Agnew & Cox.

D. A. Titecomb, 2 two-sty dwells., 42 and 44 Spruce St.; cost, \$6,000; architect, W. B. Hunter; builders, Agnew & Cox.

Geo. Kigheimer, three-sty store and flats, 23' x 77', 480 Union St.; cost, \$7,500.

Hewitt & Crewhurst, 3 cottages, 3221-3225 Wallace St.; cost, \$3,600.

H. Wilke, three-sty dwell., 431 Lincoln St.; cost, \$4,000.

Schobinger & Grant, additional story, 2101 Indiana St.; cost, \$5,000; architect, N. L. Beers; builder, H. White.

Chas. Vennard, two-sty and basement flats, 790 Carroll Ave.; cost, \$3,000.

M. McAuley, two-sty and basement store and dwell., 3109 Halsted St.; cost, \$6,000.

Peter Schoenhoffen, two-sty flats, 2506 Prairie Ave.; cost, \$10,000.

American Varnish Manufacturing Co., two-sty factory, 309 to 315 North Branch St.; cost, \$6,000; architect, Ichnold; builder, Fred Hanson.

P. M. Cardy, two-sty store and dwell., 927 North Halsted St.; cost, \$5,000.

Wm. Scott, two-sty dwell., 855 Adams St.; cost, \$4,200.

L. Burlingham, four-sty and basement stores and flats, 351 and 353 North Clark St.; cost, \$20,000; architect, A. Smith; builder, J. G. Ditz.

Helen P. Hubbard, three-sty and basement dwell., 377-379 Elm St.; cost, \$14,000; architects, Treat & Foltz; builder, Jno. Martin.

L. Huck, malt-house, 57 to 61 Eighteenth St.; cost, \$4,000.

F. Klotz, two-sty and basement flats, 386 Maxwell St.; cost, \$3,000.

P. G. Dodge, two-sty and basement dwell., 21' x 71', 3117 Forest Ave.; cost, \$8,000; architects, Dixon & Townsend.

Rev. P. Kierdon, two-sty and basement school-house, Wabash Ave.; cost, \$18,000; architect, J. J. Eagan; builder, Jas. Cowley.

J. W. Kindt, two-sty dwell., 383 Mohawk St.; cost, \$3,500.

Mrs. B. Heffron, two-sty and basement flats, 1474 Indiana Ave.; cost, \$3,000.

H. Ridlick, three-sty factory, Oak St.; cost, \$6,000.

S. D. Stanbro, 2 two-sty and basement dwells., Ashland Ave.; cost, \$18,000; architects, Van Osdel & Co.; builder, S. Seick.

J. D. McNab, three-sty and basement store, 200 Michigan St.; cost, \$11,000.

Mrs. E. Lordiner, two-sty and basement dwell., Centre Ave.; cost, \$4,500.

F. Holz, two-sty flats, 111 Jay St.; cost, \$3,200.

F. Weber, three-sty and basement dwell. and store, 521 and 523 Halsted St.; cost, \$16,000; architects, Furst & Rudolph; builder, Henry Appel.

John Kruse, two-sty store and dwell., 338 May St.; cost, \$3,000.

Rev. Thos. Burke, three-sty and basement school-house, 5 to 11 Runsey St.; cost, \$25,000; architects, Bauer & Hill; builders, J. M. Dumphy & Co.

Thos. Enright, three-sty and basement store and dwell., 371 and 373 Thirty-first St.; cost, \$12,000.

A. W. Adeock, two-sty and basement dwell., Warren Ave.; cost, \$6,000; architects, Dixon & Townsend.

C. F. Yerkes, two-sty barn, 243 Thirty-second St.; cost, \$4,000.

Joseph Mansky, three-sty dwell., 146 Pacific Ave.; cost, \$6,000.

F. Kouffman, three-sty and basement store and dwell., 233 Lincoln Ave.; cost, \$10,000.

M. McFadden, three-sty store and dwell., 3436 Halsted St.; cost, \$3,300.

A. Hogue, two-sty and basement addition; cost, \$3,000.

C. & N. W. R. R. Co., two-sty warehouse; cost, \$5,000.

Wm. R. Baker, three-sty flats, 211 South Sangamon St.; cost, \$6,000.

D. Mahon, three-sty and basement flats, 103-105 Walton Pl.; cost, \$12,000.

M. Schmitts, three-sty and basement dwell., 547 Larabee St.; cost, \$7,000.

Mrs. Baldwin, two-sty store and flats, 658-660 Madison St.; cost, \$7,000.

Wm. Burmeister, two-sty and basement factory, 776-778 Clybourn Ave.; cost, \$3,000.

Mrs. M. E. Rich, two-sty dwell., 407 Warren Ave.; cost, \$5,000.

Detroit.

BUILDING PERMITS. — The following permits costing over \$4,000 have been granted since our last report.

Topping & Fisher, block of 4 three-sty brick dwells., Nos. 121-7 Alfred St.; cost, \$20,000.

Joseph Guton, frame store, Tremont St.; cost, \$7,500.

A. C. Varney, brick house, Edmund St.; cost, \$10,000.

A. C. Varney, 3 brick houses, Macomb Ave.; cost, \$17,000.

A. C. Varney, brick house and barn, No. 259 Putnam Ave.; cost, \$5,000.

A. C. Varney, brick house, Canfield Ave.; cost, \$6,000.

John Finn, brick house, Garfield Ave., No. 82; cost, \$4,400.

Woodward Ave., block of 4 stores; cost, \$28,000; A. G. Holland, contractor.

New York.

FLATS. — On the n. w. cor. of First Ave. and Eighty-eighth St., 2 five-sty flats, brick, with stone and terra-cotta finish, 50' 8" x 90' and 50' x 83', for Mr. Thos. Patten and Mrs. M. C. King, respectively, are to be built from designs of Mr. Geo. Martin Russ.

Four four-sty brownstone flats, 25' x 68' each, are

to be built on the north side of One Hundred and Twenty-seventh St., between Sixth and Seventh Aves., by Mr. C. Bonckamp.

STABLES. — For Mr. Chas. Miller, a stable, 25' x 86', with apartments above, is to be built at No. 26 West Forty-fourth St., at a cost of about \$20,000, with a brick and terra-cotta front, from designs of Mr. E. Gandolfo.

For the Edward Clark Estate, a three-sty stable, 50' x 212', is to be erected on the cor. of Broadway and Seventy-fifth St., at a cost of about \$50,000. It is to be in connection with the "Dakota," and is to be built of brick, with terra-cotta finish; Messrs. C. W. Homeyn & Co. are the architects.

Messrs. M. G. & G. A. Reussens are to have built, from designs of Mr. R. Mook, 2 three-sty brick and granite stables, 25' x 65' each, on the south side of Fifty-sixth St., 270' e of Seventh Ave., to cost about \$40,000.

STORES. — On the east side of Greene St., n. of Grand St., 2 six-sty stores, 85' x 100', with iron fronts, to cost about \$100,000, are to be built for Messrs. G. Schwab & Bros., from designs of Mr. Richard Berger.

OFFICE-BUILDING. — It is now announced that the cost of the "Potter" building, on Park Row, will be about \$700,000. Mr. N. G. Starkweather has perfected the plans of the building, which will be eleven stories high, the first two being iron, and the upper ones brick, with terra-cotta finish.

ALTERATION. — The box-office of the Madison Square Theatre is being altered and improvements to be made, at an expense of about \$3,000, from designs of Messrs. Kimball & Wisedell.

BUILDING PERMITS. — *Sixth Ave., n. e. cor. One Hundred and Twenty-second St., 5 three-sty and mansard brick dwells., slate and tin roofs; cost, each, \$20,000; owner, Jno. H. Sherwood, One Hundred and Fifteenth St., cor. Sixth Ave.; architect, J. E. Terhune; builders, E. Vreeland & Van Doran.*

One Hundred and Seventeenth St., n. s. 275' e Second Ave., 3 five-sty brownstone front tenements, tin roofs; cost, each, \$21,000; owner, Wm. Henderson, 511 East Eighty-second St.; architect, John C. Burne.

Tenth Ave., s. w. cor. Twenty-first St., 4 four-sty brick tenements and stores; cost, total, \$60,000; owner, Clinton Sutphen, 20 Nassau St.; architect, Geo. B. Pelham.

Pitt St., No. 121, five-sty brick tenement and stores, tin roof; cost, \$14,000; owner and builder, Peter Schaeffer, 96 Second Ave.

West St., 25' s Houston St., three-sty brick mission-house, slate roof; owner, Protestant Episcopal Missionary Society, by John Davidson, 218 West Thirty-eighth St.; architect, Alfred H. Thorp; builder, Terence Kiernan.

One Hundred and Twenty-fourth St., s. e. cor. Fourth Ave., 3 five-sty brick flats, tin roofs; cost, each, \$20,000; owner, Geo. H. Rogers, 327 East One Hundred and Twenty-fifth St.; architects, Cleverdon & Putzel.

West Forty-fourth St., No. 26, three-sty brick stable, tin roof; cost, \$20,000; owner, Chas. Miller, 14 East Forty-fourth St.; architect, Emanuel Gandolfo.

Fifth Ave., s. w. cor. Twenty-third St., seven-sty and basement brick and stone office-building, slate and tin roof; cost, \$100,000; owners, Western Union Telegraph Co., 195 Broadway; architect, H. J. Hardenbergh; builders, Jas. G. Smith & Progers.

Sixth Ave., w. s. between One Hundred and Thirtieth and One Hundred and Thirty-first Sts., 4 three-sty brick dwells., slate and tin roofs; cost, \$20,000 to \$25,000; owner, H. M. Blasdel; architects, Lamb & Rich.

East Seventeenth St., No. 231, four-sty brick dwell., slate and tin roof; cost, \$28,000; owners, St. John Baptists Foundation, Francis H. Weeks, Treasurer, 11 East Twenty-fourth St.; architect, Chas. C. Haight; masons, Robinson & Wallace; carpenter, not selected.

Second Ave., s. w. cor. Ninety-ninth St., five-sty and basement brick factory, tin roof; cost, \$20,000; owner, Alphonso Beaudet, 135 Manhattan Ave., Brooklyn; architect, J. H. Valentine; builders, J. O'Hare and Steinmetz & Beaudet Bros.

Second Ave., w. s. 42' s Ninety-ninth St., 2 five-sty brick tenements and stores, tin roofs; cost, each, \$20,000; owner, architect and builders, same as last.

One Hundred and Twenty-seventh St., n. s. 130' e Second Ave., 2 four-sty brick tenements, tin roofs; cost, each, \$10,000; owner, Chas. H. Barton, 111 West One Hundred and Thirty-third St.; architect, J. H. Valentine; builder, W. O. Barton.

West Sixty-first St., No. 532, five-sty brick tenement, tin roof; cost, \$14,000; owner, Patrick O'Reilly, 534 West Sixty-first St.; architect, J. Kastner.

Third Ave., n. w. cor. One Hundred and Thirty-fifth St., four-sty brick tenement and store, gravel roof; cost, \$9,000; owner, Martin Norz, Third Ave.; cor. One Hundred and Forty-fourth St.; architect, H. S. Baker; builders, Jas. M. Lacost and Ed. Gustavson.

One Hundred and Sixth St., n. s. and One Hundred and Seventh St., s. s. from Ave. A westerly, and across rear of lot, 3 frame stone-cotton sheds, gravel roof; owner, Robinson Gill, Sixty-fifth St., near First Ave.

Seventy-second St., n. s. 100' e Tenth Ave., 10 four-sty brownstone front dwells., tin roofs; cost, each, \$25,000; owners and builders, James R. Smith, 47 West Thirty-ninth St., and C. W. Luyster, 237 West Fifty-third St.; architects, D. & J. Jardine.

Eleventh Ave., No. 452, five-sty brick tenement, tin roof; cost, \$10,000; owner, Edward Joyce, 556 West Thirty-seventh St.; architect, C. F. Ridder, Jr.

Twentieth St., n. s. 270' w Tenth Ave., 5 four-sty brick tenements, tin roofs; cost, each, \$12,000; owner, Clinton Sutphen, 20 Nassau St.; architect, Geo. B. Pelham.

One Hundred and Seventeenth St., n. s. 373' e Ave. A, 3 four-sty brick flats, tin roofs; owner, Geo. W. Moore, London, Eng.; architect, Jas. E. Ware.

One Hundred and Eighteenth St., s. s. 373' e Ave. A, 2 four-sty brick flats, tin roofs; owner and architect, same as last.