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WE print elsewhere what seems to us the best presentation ever made in a court of record in this country, and perhaps the best ever made anywhere, of the duties of an architect. A firm of architects was obliged to sue a client for balance due for professional services. The client set up the usual defences: that the architects had disobeyed his instructions, to his great loss; that they had failed to use due skill and care in supervising the work, and that, in consequence, it was not done as it should be, and that the architects were responsible for his loss on this account; and that they had not delivered up to him the drawings of the building, and that, in consequence, their contract not having been completed, nothing was due them. One of the items on the bill was for plans made in accordance with the original wishes of the owner, which were afterwards thrown aside, and new ones made. In regard to these, the defendant claimed that they were thrown aside because they were made contrary to his wishes and instructions; and another claim of the defendant, in regard to the executed plans, was that he gave instructions to have an oval dining-room, and was promised one, but that the dining-room, when built, had one end truncated to accommodate a fireplace, thereby, in his opinion, injuring its appearance, and the value of the house. Of course, the decision, on most of these matters of fact, was left to the jury, but the judge, in commenting on the position that the architects would hold in case the jury should find the claims of the defendant well founded, expounded the subject of the relations of architects and their clients with remarkable clearness and learning. As the charge will go upon the records, and form an important precedent in this country, architects will do well to familiarize themselves with it, and, in case of need, to call it to the attention of their lawyers.

THE Trustees of the Sanitary District of Chicago have published a volume of five hundred pages, containing a history of the various attempts which have been made to dispose in a satisfactory manner of the Chicago sewage. Most people know that a great deal of work has already been done on the immense navigable canal, which is to connect the Chicago River with the Mississippi, and convey the sewage of Chicago to the Gulf of Mexico, but every one does not know that the idea of such a channel was suggested by Joliet and Father Marquette, the first white men who ever saw the

Chicago River. Joliet, in 1673, on returning to Canada from his explorations in the Mississippi Valley, reported that "We can quite easily go to Florida in boats, and by a very good navigation. There would be but one canal to make, by cutting one-half league of prairie to pass from the Lake of the Illinois" (Lake Michigan) "into St. Louis River." The St. Louis River is now known as the Desplaines, and the new canal follows the route designated by the original explorers. By "boats," however, the moderns mean something very different from the canoes of the good French missionaries, and the Desplaines River will have to be very much widened and deepened before commerce can pass through it between Canada and the Gulf of Mexico. This widening and deepening, however, forms part of the present plan, and, when the Sanitary Canal is finished, Chicago will be the central point of a system of inland navigation extending from Labrador to the Rocky Mountains, and from Canada to Florida. That this will have an extraordinary influence upon the development of Chicago and the surrounding territory cannot be doubted. It is well known that canals are beginning to take a much more important part in commerce than they occupied a few years ago. The water-carried tonnage entering and departing from Paris, which is the centre of a well-studied network of canals, is said to exceed that of any seaport in the world; and a system by which boat-loads of iron-ore from Michigan, and coke from Pittsburgh, can meet at the Chicago rolling-mills, must soon materially affect industrial conditions. As a sanitary scheme, we are not sure that the canal is so commendable. There is no reason why Chicago should not, before very many years, have five million inhabitants, and the sewage from a city of that size would make a canal, even of the largest dimensions, and even with Lake Michigan as a flushing-tank, unwholesome. The Thames River would supply many canals with water, yet it has been found necessary to keep the London sewage out of it, and Chicago sewage is not likely to be any more innocent than that of London.

A VERY large establishment for the cremation of garbage has just been completed in St. Louis. It will be remembered that St. Louis has been almost the pioneer, among our large cities, in disposing of garbage in a decent and sanitary manner, and the new plant appears to embody the results of long observation and experience. The structure and machinery, with the land, are said to have cost two hundred and forty thousand dollars. The delivery of garbage from the carts takes place in the third story of the main building, which is floored with asphalt. Twenty-four huge tanks receive the material, which is then conducted by pipes to the dryers below. The dryers are practically jacket kettles, kept at a temperature of boiling water by steam circulating through the jackets, while revolving stirrers keep the material inside the kettles in motion. The vapors given off in this process are withdrawn by fans, and forced into the boiler furnaces. After drying in this way, the garbage is conveyed to the extractors, where it is saturated with naphtha, which is allowed to run in through pipes from a large tank outside the main building. After the naphtha has had time to dissolve out the grease and oil, it is pumped into stills, and distilled by steam-heat, the condensed naphtha flowing back into the main tank, while the greasy residue is collected in barrels, for sale to the soap-makers. The exhausted garbage left in the extractors is sold, without further treatment, to manufacturers of fertilizers.

A VERY curious device has recently been invented, by Mr. Von Hofe of New York, for assisting the efforts of firemen in forcing an entrance into burning buildings. It is obvious enough that the pressure of water in a fire-hose might be made available for driving a motor, and Mr. Von Hofe proposes to supply the fire-companies with portable motors, which can be immediately attached to a hose-nozzle, and are used to drive a crown saw, five or six inches in diameter. To use this apparatus, the motor is attached to the hose-nozzle, and the saw held against an iron shutter, or whatever else it may be desired to penetrate. The water is then turned on, and the saw begins to revolve, soon cutting a circular hole, large enough to put the nozzle through. The apparatus is then detached, the hose-nozzle inserted through the hole, and

a stream of water directed where necessary. Where shutters, as in New York, open from the outside, this instrument would not be very necessary, but something of the kind might occasionally be of value for other purposes.

THE terrible earthquakes in Greece, besides the sympathy which they awaken for the unhappy people who have had their dwellings destroyed, and their friends crushed in the ruins, recall many historical reminiscences. Fortunately, or unfortunately, as the case may be, the earthquakes of two thousand years have left little Greek architecture standing, and archaeological inquiry that takes the form of excavation has not much to fear from the shaking of the earth; but the attention which has been called to some of the places which have suffered most is likely to revive the legends connected with them in a way which will be valuable. For example, one of the towns which has suffered most is Larissa, in Thessaly, which is now a thriving city of fourteen thousand inhabitants, and has been a place of importance ever since a time so remote that history fails to give us any information in regard to it. All we know is that, many centuries before the Trojan War, a powerful people inhabited the country extending from the Persian Gulf on the east nearly or quite to the Atlantic on the west. Whether they were Accads, or Hittites, or Pelasgi; whether they were white, black or brown; whether their boundaries extended beyond the Himalayas, or into the Nile Valley; who were their neighbors, and how their territory came to be overrun, and divided among the distinct races which have occupied it during the historical and legendary period, we know nothing whatever, but we do know that their name for a city was Larissa, and places which retained that name through the historical period, and some of which, like the Thessalian town, have kept it to this day, are scattered through Mesopotamia, Asia Minor, Greece and Italy. Recent explorations in Greece, as well as in Asia Minor, have made it certain that a brilliant civilization had flourished and passed away there ages before Theseus fought with the Minotaur, or Hercules sat up in his cradle and strangled anacondas. Mr. Stillman observes, of some imposing ruins in the island of Ithaca, that they look to us just as they did to Ulysses and Penelope, and we know just as much as the hero of the Odyssey about who built them. In the average mind, curiosity in regard to a race so strange and long-forgotten is as strong as that in regard to their better-known successors; and it may perhaps be hoped that the commotions in regions less familiar to Classical students may result in discoveries which will throw light on a period long anterior, even to the time of Classical legend.

IN the death of Dr. John H. Rauch, for many years Secretary of the Illinois State Board of Health, sanitary science loses one of its most devoted followers, and the American community a member whose unselfish energy and skill has been of incalculable value. We should not dare to guess how many useful and happy lives have been saved, not only to Illinois, but to the other States whose health authorities have followed Dr. Rauch's teachings and example, but the number must run far up into the thousands. Besides the energy with which Dr. Rauch carried out the measures which it became his duty to execute, he was distinguished for a broad comprehension of sanitary problems, and a convincing earnestness in his writings in regard to them, which gave him great influence throughout the country, and his loss can hardly be made good.

AN architect a hundred years old died not long ago in England. The student of English architectural books will remember the name of J. C. Buckler, as the illustrator of some of the best of them, and, perhaps, as a brilliant watercolorist and draughtsman of architectural subjects. This Mr. Buckler, besides being an artist, was an architect of distinction in his day. His first important work was the splendid Costessey Hall, near Norwich, the seat of Lord Stafford, which was built in 1826, and is still often cited and illustrated as an example of English magnificence; and he was, later, the architect of many noted private mansions, and of a considerable number of churches, while his knowledge of mediæval architecture brought him much employment in the restoration of church and college buildings, particularly in and about Oxford and Cambridge. He even had what he considered a fortunate

escape from building the new Houses of Parliament, his design having been awarded the second prize, in the competition held after the burning of the old House in 1834, and the history of the vexations which Sir Charles Barry and his family suffered in connection with the building shows that Mr. Buckler's opinion, that complete success would have shortened his life, was justified.

IT will be remembered that, some two years ago, Brother Paulin, director of the Agricultural Institute of Beauvais, following out an idea of the Abbé Bertholon, undertook to modify the electrical condition of the soil around growing crops, by laying wires in the ground, and connecting them with a sort of lightning-rod, placed in the centre of the field, and carrying a wire brush, for collecting electricity from the air. After a thorough, and not particularly sympathetic, test by various agricultural societies, this system has proved its value, and various medals have been awarded to its inventor. Where potatoes have been subjected in this way to electric influence, the yield has been nearly doubled, and the growth has been so luxuriant that shoots are said to have measured nearly eight feet in length. In vineyards, the electrified soil is said to have produced sweeter grapes than that not treated, and spinach in such soil grows with great luxuriance. The theoretical explanation of this phenomenon, as given by M. Berthelot, is a curious one. According to his observations, which are confirmed by those of other chemists, the activity of the little nitrifying bacteria which do so much work in the world is stimulated by an electric current; and the appearance of the electrified vegetables suggests that of plants highly nourished with nitrogenous applications. As nitrogenous food is just what the farms in our Eastern States lack, it is not impossible that the simple plan of running a network of wires under the surface, and connecting them with a cheap lightning-rod, might have excellent results in reclaiming the substantial, but impoverished soil of those States.

THE statistics of the production and consumption of natural gas in the Mississippi Valley for 1893 show clearly how limited the supply of gas is. In Pennsylvania, where, in 1888, the value of the gas produced was \$19,282,375, the value in 1893 was only \$6,488,000; and, as the average price paid for gas was much higher in 1893 than 1888, this falling-off in value indicates a much more serious falling-off in the supply. In fact, in Pennsylvania, as has often been noted of late, manufacturers are rapidly discontinuing the use of gas, and converting their furnaces back to proper forms for burning coal; and the gas will soon be used mainly for domestic purposes. In Indiana, which possesses a gas-bearing territory of immense extent, the supply is still said to equal the demand, but, as the demand is, as yet, only about one-fifth what it was in Pennsylvania, in the palmy days of the gas-wells, the probability is that the experience of Pennsylvania will, sooner or later, be repeated there.

THE uncertainty about what will become of the ruins of Philæ, in case a dam is built across the Nile, still continues. The project of carrying off the temples bodily, and putting them up somewhere else, seems to have been abandoned for the present, but the majority of the engineers of the Commission, including Sir Benjamin Baker, still advocate the construction of the dam just below Philæ, Sir Benjamin Baker offering to undertake to raise the temples, so that they will still be above water, although the island itself will be submerged. This proposition, as might be expected, still fails to please the archaeologists. M. Boulé, the French member of the commission of engineers, refused to join with the majority in recommending the choice of the Philæ location for the dam, on account, it is said, of the injury to the island and temples. If this is true, as is quite likely, the circumstance affords a good illustration of the seriousness with which the French, whatever their profession, regard matters of art. To an American, or an Englishman, brought up in what he delights to call practical life, the idea that a person of mature age, and in full possession of his faculties, can take pleasure in memories or ideals is inconceivable. He is willing, out of good nature, to humor, to a certain extent, persons afflicted with this aberration of intellect, but the idea of sacrificing dollars and cents, or engineering economy, to such whims never enters his head.

STYLE.¹—III.

RESIDENCE
for
L. S. Summers
Urbana, Ill.



THE philosophy of Ruskin and that of Semper have their main points in common; both recognize a moral element and a material element. The moral element rests on the superior qualities of the soul, the material on the higher enjoyments capable of gratifying our senses; but not for a single instant can the two elements be dissociated; the one strengthens the other. It is this wholesome doctrine that we have adopted as our guide in the following analysis and synthesis of our subject.

The word *style* is derived from the Greek *στῖλος* and the Latin *stilus*, a small pointed metal instrument used in writing and engraving. So style, in a figurative sense, is an *ensemble* of qualities peculiar to intellectual works brought forth under the influence of a common cause, whose mighty impulsive force leaves its impress on them as though engraven and serves to write the civilization of an epoch. These *general qualities*, requisite to productions of the brain, in order to portray faithfully the intellectual and moral aspirations or the material needs of the epoch at its zenith, are consequently purity, propriety, precision, clearness, naturalness and appropriateness.

Purity is one of the constituent parts of style, since it consists in the use of only those elements whose expression does not belong to various epochs. Details, being merely the consequence of a general conception, clothing a form to respond to a dominant want, following a principal direction and necessarily constituting but one with it, cannot be borrowed from different sources and must remain unmingled.

Propriety (from the Latin *proprius*, proper or peculiar) is the very act of the origin of style. The influence that presides at the advent of a certain style is peculiar to a determined epoch, and, when this influence passes, another succeeding it gives rise to a new style, separated from the first by a transitional phase having some hereditary relation to it. The predominating new character is soon strong enough to dictate a general direction for all the details to follow and indicates unmistakably the idea that instigated the initiatory movement. Some rather shallow thinkers have fancied that they have discovered certain future needs, which, however, time has not confirmed; they have drawn on the imagination for the creation of original types not subjected to the test of the rules laid down by that infallible guide, reason, and therefore the works executed after these types will always be unapprehended; still others have continued to live in the past. These last are dangerous laggards, for their aversion to change makes them the natural enemies of all progress.

Precision in the choice of forms most suitable for the material, in order to fulfil the office assigned to an organ by the quickening thought, is rigorously called for under penalty of engendering confusion. This choice, with certain artists, is the outcome of intellectual aspirations that serve as its factors and imperiously stimulate activity of thought, before it has as yet revealed itself to the masses; this is the thought of genius.

Clearness is requisite to meet the demands of a well-defined

programme, whether it be purely material or whether it be moral and intellectual, although none the less real; otherwise it would no longer faithfully image the effects experienced by the majority of beings living and thinking at one epoch and subjected to the influences of the same *milieu*. All efforts tending toward a single end, the latent feeling of the mass, analyzed and comprehended by a certain number, is ere long readily expressed by a few who proclaim a style with its maximum of clearness.

Naturalness (from the Latin *natura*) is the quality of style that pertains to nature, is conformable to the natural order. Material and moral needs are the natural causes that stir the sentiments and rouse the faculties to effort, those sources of the force whence spring light and life. Sentiment is, then, the reaction produced in us under the influence of numerous causes brought to bear upon us. This sentiment sets thought in motion and solicits its action. Then it is that thought conceives the expression most perfectly interpreting its will—the result of a comparison of the needs with the means calculated to satisfy them—and enunciates the underlying principle (Latin *principium*, origin). To be perceptible, this expression clothes a form that must be adapted to productions of the industry best answering to the necessities of this action; it becomes the resultant of all the qualities of science and industry carried to the extreme of intensity and constitutes art (from the Greek, *ἄρτι*, virtue, power) in its various evolutions. For this reason, we define art as the poetry of industry. It is the virtue, the generic power, inherent in a nation.

Genius (from the Latin *ingenium*, natural aptitude) brings together in one family the arts of like origin among all peoples of similar race. Thus it is that it has been said—and rightly too—that French architecture was inspired by the Latin genius. Naturalness is all the more necessary to style because, if it ceases to be in sympathy with the sentiments of the time, it leads the intellectual faculties astray and deprives them of all conviction based on truth to enlighten their faith. Art moves with uncertain step in the darkness, paralyzed in all its efforts, merely following a path that no longer leads it whither it should go and not daring to venture into another, owing to an entire lack of the analytical spirit, up to the moment when, after a more or less prolonged course of decadence, naturalness is once more attained and art is born again.

Appropriateness is one of the marks of style. It is the urgency of combining only such elements as have common ties, the impulsive force of a common thought having presided at their creation. It is the complete consistency of the expression and the thought, of the means and the end, of the organ and its function, the rational fitness of the material for the organ, the natural deduction of the decorative form from the material according to its aptitudes, the subordination of the whole to the original principle: sentiment.

Architectural style in ancient works, as well as in those of more recent times, offers, like all branches of philosophy, not only certain necessary qualities that we have just analyzed, but it likewise obeys the laws of esthetics (from the Greek *αἰσθησις*, perception), giving an individual character for each perception, and the laws of matter, by an application of the mathematical sciences, which, in order to render the expression of the thought visible and tangible, react on the form in view of the function.

The aim of *esthetics* is a study of the objective influences that succeed in charming us by the sight of the beautiful, and also a search into the subjective reasons for these influences, so as to deduce from them fixed laws embracing those principles that we regard as leading to truth; whence it follows that beauty may be considered as the splendor of truth. This beauty will consult the needs of the senses at the same time as the requirements of reason, so as to keep within the bounds of truth. In order to comprehend the sway of beauty over the senses, it must be noted that a body in contact, or at a distance, produces on the organs of sense an action called "impression"; and that these organs, after the direct perception of the impression, transmit it to the brain, where it is analyzed; the result of this analysis is sensation, which is translated by a sentiment. The debate between objective impressions and subjective sentiments ends in the empire of the one or the other and occasions an excitement, which is the mother of passion. Passion, in man, finds powerful auxiliaries in education and in surroundings, so that it is susceptible,

¹ From the French of Léon Labrousse, in Planat's *Encyclopédie de l'Architecture et de la Construction*. Continued from No. 968, page 47.

according to the nobility of one's character or the baseness of one's instincts, of becoming virtue or vice. Virtue may be said to lie in a rational harmony of the parts with the whole, as well as in a perfect balance between the end and the means used to attain it; but beauty, which is the manifestation of the invisible by the visible, of the quality by the expression, can fully satisfy only the senses of sight and hearing—the latter by music. Hence it may be said of man that he is really beautiful only so far as he, a moral and physical being, by a just proportion between all his faculties, expresses intelligence and force; but a monument may be termed beautiful when it, a material body, represents stability and when all its parts are in entire harmony with the reasonable moral and material wants of man, who is to make use of it. In architecture, man is clearly the goal set up by Nature toward which must be directed all those works of which he is the responsible author. Contrasts calculated to strike the senses constitute one of the means at our disposal for stirring the emotions: thus, a thing is great in contrast with a smaller one, it is powerful in comparison with a weaker, it is rich with relation to a simpler, it is luminous when accompanied by shadows to give it vigor; in architecture, its use may be emphasized by a correct balancing of the solid and open portions and of the depressions and projections; in a word, this thing impresses us in a way that was expected, premeditated and consequently reasonable, and also by true means, for without frankness in art all nobility disappears. As for painting and decorative sculpture, they must form a part, as it were, of the construction of the monument and accent its purpose. The ornamentation, whatever it may be, must not disregard the immutable principle of all art: sincerity. In spite of efforts and researches, beauty will never be perfect because its intermediaries are the senses; the end to be attained will forever rouse the emulation of artists. Out of this spirit of emulation have come works that reflect an entire world, an entire period, and whose creation has represented, almost always unconsciously, a collective product; this will continue to be the case.

The principles of style, to be correct, must necessarily harmonize with the dominant qualities that have been enumerated, since they are included in them and since they are deduced from the connection of these qualities with the creating thought. Upon the perfection of this accord depends the wonderful unity of a style at its zenith. Let us turn to painting, sculpture, engraving, music, literature, architecture, to all the arts, in short; if, by analyzing the dominant qualities, we succeed in separating the creating thought from the principles, we find what was the most earnest endeavor, the care that stood out most prominently, that stamped its seal upon all contemporary productions, and such care becomes characteristic. Every people, at some moment of its existence, according to its own ideal, has sought to image a theme that was growing to be its favorite; at the time, this theme engrossed its attention and was manifested in a remarkable way in its productions; so we must seek out their characteristics, and we may conclude that *style is the characteristic expression befitting the dominant need of an epoch.*

The dominant need of a people has varied with its ideas according to the times and has called out works, embracing all the virtues of style and quite unlike each other; the term "styles" has been applied to these different characteristic expressions, by extension, so as to distinguish between them.

The characteristics then enables one to classify styles, by assigning a certain date to them according to their historical connection and their relations to each other; but, for that, it excludes the archaeological eclecticism (from the Greek *ἑκλεκτικός*, choice) of those who, by combining divers elements, pretend to revive styles no longer belonging to their normal epoch. Though a knowledge of their evolutions is requisite, one must draw therefrom only such philosophical inferences as are to be deduced, and he must not enslave himself to their forms. In fact, when certain expressions have lost their significance and yet maintain traditional forms that have ceased to answer to the thought,—a sort of language whose words have no equivalent in our needs, either from an esthetic or scientific and practical standpoint, which perpetuates a symbolism that finds no response in the moral training of the masses—thought becomes hieratic, strays from Nature's teachings and lives in conventionality; it is no longer nourished at its native sources and art falls into decadence. Art ceases to be comprehended by all, and then follows that state of social unrest that marks the troubled times when

artists, charged with the duty of expressing in clear and precise phrase the common will, are at variance with the majority, speak a dead tongue and remain powerlessly isolated.

So requisite to style are the qualities and laws that we have presented that not one can be dispensed with, and they serve as guides in all archaeological classification. According to our interpretation, national genius may be said to have engendered art, of which style, with its fundamental principles, often preserving the same peculiar characteristics for several successive periods, constitutes the first division; consequently, the periods will be divisions of style and sub-divisions of art; then the union of epochs will form the period, and the years will fix the exact limits of the epoch. Thus, the following order will be obtained: *national genius, art, style, epoch, year.* The term *century*, or *age*, is frequently used to designate a period, and *reign* to indicate an epoch.

But style must not be confounded with mode. The latter, as the word shows (from the Latin *modus*, peculiar manner of being or doing), is individual, peculiar to one or another branch of human thought; it is the child of fancy, it does not form a unit with what is about it, it shuns the rules of common-sense and heeds whims alone. Therefore, as soon as a mode has gone by, it appears before us in all its ridiculousness and shocking incongruity; it is the unearthing of a past, with no accompaniment or justification; it is an isolated fact wholly out of harmony with the surroundings. We often invoke progress to keep up fashion, confusing the pleasure of change with progress. Progress is based on truth which leads to beauty, and truth, to manifest itself, requires liberty; license must not, however, be mistaken for liberty—the one recognizing no law, no principle, the other having reason as its express limit. Style and mode are not interchangeable; they are essentially different; the one excludes the other; the one kills the other.

The characteristic of style rises and falls with the intellectual and moral level of a people, and, consequently, with its degree of civilization; this fact enables us to determine by the subordination of the execution to principles, since the execution springs from the thought to which it contributes, whether art is, or is not, at a moment of decadence. In truth, decadence can be readily detected in a work, for art is no longer at its zenith, if there is a want of balance in the conception between the needs and the means; in such cases, processes maintain a skill superior to and independent of the needs to be satisfied, and are a sure indication of a weakening of the original principle; while, on the contrary, if the means and processes do not come up to the needs, it may be assumed that art is in its infancy and is preparing for an upward flight.

[To be continued.]

NEW THEATRES AT BERLIN AND THEIR SAFETY AGAINST FIRE AND PANICS.

BERLIN, Germany's brand new capital city, is gradually getting a fine set of theatres built. The first modern play-house was the Lessing Theatre, put up by Messrs. Hude & V. d. Hennicke of that city and holding an audience of 1,100. Then came Ronacher's Variety Theatre, built by the Messrs. Fellner & Helmer, of Vienna, for an audience of 2,000 and then the "New Theatre" with seating capacity for 800, for which Herr Heinrich Seeling of Berlin acted as architect. The next new play-house will be a so-called "Peoples' Theatre," the funds for which are now being collected by public subscription. These new erections, as also the various alterations which are being made at the Royal Opera House, the Royal Play-house and several private theatres, have to be carried out in accordance with the stringent police regulations which came into force some three years back and which now, having stood a fair trial, are to be considered final, excepting in a few points relating to the remodelling of old structures. These regulations may be termed interesting, especially as we hear that they have been the outcome of some eight years' inter-remittant labor of various Government committees and experts, afterwards practically put into shape by the zealous chief of the Berlin Police Fire-brigade, Herr Stude, who met with an untimely death a few months back.

Looking at these regulations as a whole, one sees that the chief aim is to prevent the danger to life and limb caused by panics founded either on real or false alarms of fire. Very exact rules have been laid down as to the number of exits, and the convenience of getting at them from every seat in the building—the width of the doors, passages, stairs, etc., having to be in a certain ratio to the number of people likely to use them; and a common method of describing the routes to be taken to gain the open has been arranged.

As panics are known to be just as dangerous in absolutely fire-proof buildings as in those of more combustible nature, not half so

¹ See *American Architect* for May 12, 1894.

much stress has been laid on the materials themselves as is generally the case; in fact, that part of the regulations referring to the safety of the building itself has been put quite into the second place. Wooden columns, flooring and corridor-partitions are distinctly permitted, and even wooden staircases can, as a rule, be erected, only a few exceptions being made in favor of iron. Wooden staircases are considered to be safer than either those of stone or iron, especially if the underside of the wood has a good coating of plaster.

The Commission has considered it to be of great importance that smoke or suffocating gases should be stopped from entering the passages and staircases. In order to avoid this, ventilating-flues, easily manageable in case of need, have to be made both over the stage as well as in the ceiling of the auditorium, and the disposition and construction of the flues are subject to very stringent rules. It is chiefly to prevent the smoke from filling the auditorium too rapidly that the so-called fireproof curtain divides the theatre into two parts. Its substance is simply required to be incombustible, but its work is distinctly not to be automatic; in fact, no self-working contrivance is permitted in any position where it would be of importance if it did not work. Such doors as may be required in the wall between stage and auditorium are to be of hard wood, plated on both sides with iron.

The impregnation of stage paraphernalia, so as to render it unflammable, is not required, but the scenery itself is to be of as unflammable a nature as possible. A substitute for canvas is not definitely mentioned in the regulations, but the official "*Centralblatt der Bauverwaltung*" recommends a certain cloth of wire-netting and asbestos, invented by a Berlin firm.

The Commission has set down several paragraphs concerning the lighting, ventilation, etc., but no novelties are to be found in these parts of the rules.

As will be seen, the above regulations taken as a whole do not exactly tend to throw any new light on the question of theatre protection, excepting in the one important case that the authorities apparently wish to express forcibly that their efforts are not intended for the good of the proprietors of theatre property, but solely for the benefit of the public. It is all the same to them if a theatre or a store burn down, and fire in the former would be even less likely to spread and endanger neighboring property on account of its isolation. But, at all cost, the public are to have facilities for saving themselves if they chance to be in the building at the time of a mishap. As soon as there is no public in the place a theatre fire will rank exactly as any other and if the proprietor has used wooden columns or staircases he must risk their destruction. It is, however, unlikely that wood will be used, owing to the extra cost it would throw on the proprietors in the way of insurance rates.

Now, to see that these rules are carried out, the ever-thorough Berlin authorities have an excellent Police Board-of-Works with Crown surveyors attached and there is little chance of avoiding them. The actual management of the house, which is treated of in a separate set of paragraphs, as well as the general state of the building after it has once passed the authorities, are further subject to quite a complicated scheme of regular survey which is carried out with wonderful exactitude. There is the committee of the Police Fire-brigade and building officials that regularly inspect the theatres at odd times. There is the regular inspection of the district fire-marshal once a fortnight by day and once a fortnight after dark, at odd times also. Then there are the regular inspections of the lieutenants of the Fire-brigade practically every evening at odd times, and, further, the authorities have strong fire-watches stationed in the buildings during the performance, under the command of a senior non-commissioned officer, besides a patrol of police in the "front" of the house under a commissioner to see that all the exits are free and regulate the crowd as far as possible, if necessary. The fire-watches are composed of the senior men of the Royal Police Brigade and have the necessary powers to prevent at any moment any dangerous action in the house, and the managers well know that in case of any opposition on their part to act in the interests of public safety, it would only take a few minutes to have the theatre closed by them if need should be. In spite of the tension, things, however, work very smoothly and, though there was some bad blood at first, there has neither been any unnecessary overbearing on the part of the officials nor rowdiness on the part of the theatre employés. The laws are being stringently carried out, it is true, but the public know it and feel such confidence in their officials that a case of panic or disorder is getting more and more unlikely. Berlin's theatre enterprise is hence not dangerous for the public, and the population can be congratulated on the many fine places of entertainment now given them. EDWIN O. SACHS.

THE ITALIAN RENAISSANCE¹.—III.

HINTS TO TRAVELLING STUDENTS.—THE PALACES OF ROME.

THE pontificate of Nicholas V marks the beginning of the palace-building, as of the ecclesiastical architecture, of the Roman Renaissance. It was he who first conceived the notion of remodelling and symmetrizing the miscellaneous group of more or less dilapidated buildings belonging to the popes in the vicinity of the ruined S. Pietro in Vaticano. But this project, like that for the re-edification of the old basilica, fell through for the time being, and was not finally put into execution until fifty years later, when

Bramante began the great Belvedere Court and the Court of San Damaso, about 1506. Meanwhile, however, the great palace of Venice, with its adjacent court and loggia ("the lesser palace of Venice" according to Letarouilly) had been erected, perhaps from designs by Bernardo di Lorenzo (or Alberti?) and Baccio Pintelli, and Bramante had himself begun and partly or wholly completed the Sora, Cancellaria² and Giraud palaces.

The growth of a powerful ecclesiastical aristocracy of great wealth and splendor, the pontificate of men like Julius II, Leo X, and Paul III, the cessation of such murderous feuds as had earlier disturbed the peace—that between the Orsini and Colonna families, for example—and the advent of Bramante, Peruzzi and Raphael, Sansovino and the San Galli to Rome, all combined to make the first half of the sixteenth century a period of unexampled brilliance and activity in the building of palaces. The new taste in art—for which the way had been prepared by the Humanist movement and by the rich collections of antiques which had accumulated in princely houses and in the Vatican through the Middle Ages and the fifteenth century, and now received constant accessions from all over Italy—had been slow in asserting itself in Roman architecture, but now became supreme. The ancient ruins were being studied and measured by Palladio and others, while they were at the same time being stripped or demolished to provide materials for the palaces rising on every hand. New churches, nearly all with domes, were erected, and a long series of "restorations," embellishments, and alterations of the old basilicas was begun. From this time on, nearly every Italian architect of distinction found in Rome the widest and richest field for his activity.

The Roman palaces and *case*, or larger private residences, are distinguished by the prevalent dignity and simplicity of their façades and the amplitude of their plans. The court-yards are generally spacious, and in most cases their surrounding arcades do not support the main court-walls, which rise in the plane of the rear walls of the arcade-passages. Most of the arcades, or *loggie*, are in two stories, generally of arches of the Roman type, i. e., carried by heavy piers fronted by decorative orders, and not, as in Florence, supported on free-standing columns. The exteriors of the palaces, whether of stone or stuccoed brick, depend for their architectural effect more often on the judicious proportioning of the different stories, the profiling of the string-courses and cornices, and the elegant disposition and spacing of the openings, than on adornment by columns or sculpture. The ground-floor, or *piano terreno*, is devoted to the domestic service, to shops, or to other subordinate uses; the second story (*piano nobile*) to purposes of state and festivity, the upper floors only being designed for actual residence. Communication between the rooms is had mainly by the arcades, the great salons and festal halls of the *piano nobile* being usually arranged *en suite*, without independent communications; so that for modern living-purposes they have had in many cases to be cut up by plaster partitions into smaller apartments and corridors. The staircases are of stone, and seldom treated with any special architectural elegance or prominence, except in the later palaces, like the Barberini and Braschi.

Of the eighty to one hundred palaces and *case* enumerated in the guide-books and descriptions of Rome, a partial list is given below. The dates and names of architects are given under all reservation, as detailed investigations from time to time overthrow long-accepted theories on these points. The chronology of the Vatican is given separately at the end of the list.

A. PALACES OF THE FIFTEENTH CENTURY.

1. PALACE OF VENICE: 1468, Bernardo di Lorenzo. Second court of same, called by Letarouilly the "Lesser Palace," cir. 1475; Bernardo di Lorenzo or Baccio Pintelli. (Letarouilly ascribes the "Greater Palace" to Giuliano da Majano and the lesser to Pintelli; Baedeker attributes the whole to Alberti, and Lübke to di Lorenzo, as above.)
2. COURT OF SAN SPIRITO IN SASSIA: 1471, Baccio Pintelli.
3. PALAZZO DEL GOVERNATORE: 1490. (?)

B. PALACES OF THE SIXTEENTH CENTURY.

4. PALAZZO SORA: 1501, by Bramante.
5. PALAZZO GIRAUD (Torlonia): 1504, Bramante.
6. PALAZZO PALMA: 1506, Antonio da San Gallo, the younger.
7. PALAZZO CANCELLERIA: 1508 (?) Bramante. The main entrance, by Domenico Fontana.
8. PALAZZO DORIA PANFILI: 1508, Bramante.
9. PALAZZO ORSINI: 1510, Baldassare Peruzzi.
10. PALAZZO FARNESINA: 1516, Baldassare Peruzzi. Frescoes in loggia, by Raphael, cir. 1518.
11. PALAZZO STOPPANI (Uggucone or Vidone): 1518, from designs by Raphael; erected by Lorenzetto.
12. PALAZZO LAUTE: 1520, Baldassare Peruzzi.
13. PALAZZO NICCOLINI: 1520, Giacomo Tatti Sansovino.
14. PALAZZO OSSOLI: 1525, Baldassare Peruzzi.
15. PALAZZO FARNESE: 1530, begun by Antonio da San Gallo, the younger; court-arcade by Vignola, cir. 1540; upper stage of arcade and cornice by Michael Angelo; completed, and central loggia added, by Giacomo della Porta.
16. PALAZZO BUFALO (della Valle): 1530, by Lorenzo Lotti. Ceilings by Giulio Romano.
17. PALAZZO ALTEMPA: 1530, Baldassare Peruzzi; completed by Martino Longhi, the elder, in 1570.
18. BANCO DI SAN SPIRITO: 1532, Antonio da San Gallo, the younger.
19. PALAZZO ANGELO MASSIMI: } 1532, Baldassare Peruzzi.
20. PALAZZO PIETRO MASSIMI: }
21. PALAZZO LINOTTA: 1534 (Baedeker says 1515), Baldassare Peruzzi.
22. PALAZZO SACCHETTI: 1540, Antonio da San Gallo, the younger.

² There is not space here to discuss the question of the significance of the date 1495 on this palace, whether Bramante actually visited Rome previous to 1501 or merely completed and altered a palace begun before his arrival, is not here material. The palace, as it stands, is certainly his design in all essentials, and as certainly belongs mainly to the first years of the sixteenth century.

¹ Continued from No. 958, page 49.

23. PALAZZO DEI CONSERVATORI: the first of the group on the Capitol (Campidoglio), designed and begun, 1540, by *Michael Angelo*.
24. PALAZZO DI FIRENZE: built on site of earlier palace, 1540, by *Giacomo Barozzi di Vignola*; (Farnese, upper stories, façades and court, by *Michael Angelo* and *Giacomo Barozzi di Vignola*, 1547, see 15.)
25. PALAZZO LANCIOTTI: 1560, by *Pirro Ligorio*.
26. PALAZZO DEL SENATORE: second of the group of three on the Campidoglio, (sometimes called "Palazzo del Campidoglio"), 1563, after designs by *Michael Angelo*; executed with slight modifications by *Giacomo della Porta* and in 1610, by *Girolamo Rainaldi*; the square tower in 1580, by *Martino Lunghi*, the elder; see 23.
27. PALAZZO NEGRONI (di Smeronetta): 1564, *Bartolomeo Ammanati*.
28. PALAZZO SPADA: 1564, by *Giulio Mazzoni*; (exterior decoration in stucco-relief, by *Borromini*.)
29. PONTIFICAL PALACE on the Quirinal (commonly known as the Palazzo Quirinale; recently seriously injured by fire): 1574, by *Domenico Fontana*; enlarged 1606, by *Flaminio Poncio* and *Carlo Maderno*; in 1655, by *Lorenzo Bernini*; and in 1737, by *Ferdinando Fuga*.
30. UNIVERSITA DELLA SAPIENZA: façade and court, 1575, by *Giacomo della Porta*. (PALAZZO FARNESE: internal façade on Via Giulia, 1575, by *Giacomo della Porta*; see 15.) (TOWER OF THE CAPITOL: 1580, by *Martino Lunghi*, the elder; see 26.)
31. COLLEGIO ROMANO (Museo Kircheriano): 1582, by *Bartolomeo Ammanati*.
32. PONTIFICAL PALACE of the Lateran (Museo Laterano): 1586, *Domenico Fontana*.
33. PALAZZO BORGHESE: 1590, *Martino Lunghi*, the elder.

C. PALACES OF THE SEVENTEENTH CENTURY.

34. PALAZZO SCIALOJA COLONNA: 1600, *Flaminio Poncio*.
35. PALAZZO ROSPIGLIOSI: 1600, *Flaminio Poncio*.
36. PALAZZO MATTEI DI GIORE: 1602, *Carlo Maderno*. (ENLARGEMENT OF QUIRINAL PALACE: by *Flaminio Poncio* and *Carlo Maderno*, 1606; see 29.)
37. PALAZZO BARBERINI: 1627, *Francesco Borromini*; staircase by *Lorenzo Bernini*; other additions by *Carlo Maderno*.
38. MUSEUM OF THE CAPITOL: the last-built of the three palaces on the Campidoglio, 1644-50, from the designs of *Michael Angelo*; superintended by unknown (?) architect; see 23 and 26.
39. PALAZZO PAMFILI on Piazza Navona: 1650, *Girolamo Rainaldi*. (Further continuation of QUIRINAL PALACE: 1655, by *Lorenzo Bernini*; see 29.)
40. PALAZZO ODISCALCHI: 1660, *Lorenzo Bernini*.
41. PALAZZO ALTIERI: 1674, *Giovanni Antonio di Rossi*.

D. PALACES OF THE EIGHTEENTH CENTURY.

42. PALAZZO TORLONIA (Bolognetti): 1700, *Carlo Fontana*.
43. PALAZZO COLONNA: 1730, *Niccolo Michetti* and *Paolo Posi*.
44. PALAZZO CORSINI: 1736, *Ferdinando Fuga*. (COMPLETION OF QUIRINAL PALACE: 1737, by *Ferdinando Fuga*; see 29.)
45. PALAZZO BRASCHI: 1790, *Morelli*.

E. PALACE OF THE VATICAN.

- a. THE SALA REGIA and alterations in 1473 (?), by *Baccio Pintelli*.
- b. COURT OF SAN DAMASO, with the loggia: 1506-1520, by *Bramante*; frescoes by *Raphael*, *Giovanni da Udine*, and
- c. COURT OF THE BELVEDERE: 1500-1520, by *Bramante*.
- d. Remodelling the BELVEDERE proper: octagonal court of same; 1510, by *Bramante*. "Restored" by *Simonetti* in 1750.
- e. CAPELLA PAOLINA: 1540, by *Antonio da San Gallo*, the younger.
- f. LIBRARY OF THE VATICAN (dividing *Bramante's* great Belvedere Court in two): 1588, by *Domenico Fontana*.
- g. THE SCALA REGIA (?), by *Lorenzo Bernini*.
- h. PONTIFICAL RESIDENCE: 1580, by *Domenico Fontana*.
- i. GALLERY OF THE CANDELABRA: 1780, *Michael Angelo Simonetti*.
- l. MUSEO PIO CLEMENTINO: 1780, *Michael Angelo Simonetti*.
- l. BRACCIO NUOVO: 1817, *Raphael Stern*.

VILLAS OF THE RENAISSANCE.

The Roman villas were the suburban residences and pleasure-houses of the wealthy nobles and princes of the sixteenth and seventeenth centuries. They comprised vast gardens with terraces, labyrinths, cascades and summer-houses, besides the villa proper and its casino. The villa proper was not always adapted for prolonged residence, but seems to have been planned with special reference to receptions, festivities and other entertainments rather than to comfortable lodging or quiet domestic life. The casino was a species of play-house, often converted into a museum of antique and modern sculpture, though sometimes such collections were provided with a separate building, and sometimes were accommodated wholly in the villa proper. In these villas the traditions of the Roman villas of antiquity and of antique Roman landscape-gardening were revived and carried out with great splendor; and their gardens are perhaps now, certainly were once, the most beautiful in Europe. Many of them have been in recent years sacrificed to the greedy real-estate speculations of their hereditary and princely owners, who have cut them up into building-lots. A few of the most important only are here enumerated.

1. VILLA MADAMA: 1520, by *Giulio Romano*. (Celebrated for its stucco enrichments.)
 2. VIGNA PAPA GIULIO: 1534, *Baldassare Peruzzi*.
 3. VILLA MEDICI (Academy of France): 1540, by *Annibale Lippi*.
 4. VILLA OF POPE JULIUS: 1553, *Giacomo Barozzi di Vignola*.
 5. VILLA PIA (Vatican Gardens): 1561, *Pirro Ligorio*.
 6. VILLA FARNESIANA: 1570, *Giacomo Barozzi di Vignola* and *Gir. R. naldi*.
 7. VILLA MATTEI: 1582, *Giacomo del Duca*.
 8. VILLA BORGHESE, on the Pinclan: 1616, *Giovanni Vasanzio*.
 9. VILLA LUDORISI: 1623, *Domenico Zampieri*.
 10. VILLA PAMFILI: 1644, *Alessandro Algardi*.
 11. VILLA ALBANI: 1760, *Carlo Marchionne* from designs by the Cardinal Albani.
- GATES, FOUNTAINS, ETC., IN ROME.
1. PORTA PIA: 1561, by *Michael Angelo*.
 2. PORTA DEL POPOLO: 1562, *Michael Angelo* and *Giacomo Barozzi di Vignola*.
 3. FOUNTAIN FELICE AI TERMINI: 1588, *Domenico Fontana*.
 4. FOUNTAIN OF THE TRITON, Piazza Navona: 1580, *Giacomo della Porta* (?).
 5. AQUA PAOLA: 1612, *Giovanni Fontana* and *Carlo Maderno*.
 6. FOUNTAIN OF THE TRITON, Piazza Barberini: 1640, by *Lorenzo Bernini*.
 7. FOUNTAINS, Piazza Navona: 1650, *Lorenzo Bernini*.
 8. FOUNTAIN OF TREVI: 1735, *Niccolo Salvi*.

It is impracticable here to give any list of the monuments, tombs, tabernacles and altar-pieces of the Renaissance in Rome: such a list

would be too long for insertion, and hardly necessary to the student, since there is scarcely a church in the city but possesses some more or less interesting example of this department of architectural art.

A. D. F. HAMLIN.

[To be continued.]

THE SUPREME COURT OF MAINE ON THE DUTIES OF ARCHITECTS.

THIS was the charge to the jury in a case recently tried before the Supreme Court of Maine. The case brought up the rights and duties of architects with unusual distinctness, and it was necessary for the judge to instruct the jury in regard to the law on the subject. The instruction was given in the following words, which contain so clear and admirable an exposition of the question that we reproduce it, from the official stenographic record, in advance of the regular publication in the Maine Reports.—Eds. AMERICAN ARCHITECT.

STATE OF MAINE, HANCOCK COUNTY.
SUPREME JUDICIAL COURT, January Term, 1894.

ARTHUR ROTCH *et al.*

vs.

MARIA D. B. FRY *et al.*

CHARGE.

GENTLEMEN OF THE JURY:—

The plaintiffs are a firm of architects, in the City of Boston, of long experience and skilled in the art of building. The defendants, the owners of a site for a house or a residence which they contemplated building, at Bar Harbor, applied to them and sought their services. They inquired of them their terms, and there was handed to them a schedule of prices. With that they appear to have been satisfied, and thereupon engaged them to perform the work, and, in the absence of any further stipulation or agreement between them, the law would imply a promise on their part to pay the prices there stipulated. So that, in this case, the prices which they would be required to pay, and which the plaintiffs are entitled to receive, are the prices given according to the schedule which was furnished to the defendants at the outset. So far they cover the services that were called for or were required. I do not understand that the learned counsellor for the defendants denies this. On the other hand, I understand him to admit that, if his clients are liable at all in this case, they are liable to pay for the services charged according to that schedule, less so much as shall be deducted therefrom on account of conditions that I may call your attention to hereafter.

It appears that the defendants carried to the plaintiffs' office some sort of a topographical sketch or plan of their house site. The plaintiffs did not visit the locality and did not have an opportunity to examine the ground. I do not know that it appears in the case that they were requested so to do, or required so to do at any rate. I think there was some testimony on the part of some of the witnesses as to whether it would or would not be necessary. At any rate, the services were undertaken to be performed without visiting the locality, the plaintiffs being guided by such information as the defendants could give them and such information as the topographical sketches or plans would indicate. Some consideration arose as to whether or not the house should be built with a projection, or L, at right angles with the main structure, or whether it should be built with a diagonal projection. You have heard the evidence in regard to that. The defendants contend that they allowed the plans to go on by reason of an assurance on the part of the plaintiffs as to the feasibility of the square or the projection at right angles, that they allowed them to go on by reason of the advice and assurance of the plaintiffs as to the cost and feasibility of it and were guided wholly by their judgment.

The plaintiffs continued in the execution of the plans; they procured the details and perfected the entire set of plans. For some reason those plans were rejected by the defendants. The plaintiffs say that it was because they did not give the house sufficient size and capacity and arrangement to suit them, and that they preferred an entirely different house, a house of different dimensions and different architectural proportions. The defendants say it was because they found the plans impracticable, and that the arrangement of the plans called for so great an outlay that it rendered it too expensive for them to be carried out and adopted, and they say that that was on account of the mistake of the plaintiffs in not properly advising them and in deceiving them as to the practicability of the plans.

Now, gentlemen, in determining the rights of the parties, it is well to consider what the legal duty of the plaintiffs was to the defendants. The architect is skilled in the art of building houses. Those who employ him have a right to his best judgment, to his skill, to his advice, to consultations with him and to his absolute fidelity and good faith, and when the architect has contributed these things to the person who employs him his duty has been fulfilled.

Now, in this case, if these plaintiffs, taking the description of the lot from the defendants, and believing it to be feasible and best to advise a house with a square L, and in good faith they did so, and the defendants accepted the advice and relying upon it, allowed the plans to go on and be finished to the minutest detail, then, gentlemen, the defendants have had a service for which they must pay. But, on the other hand, if the plaintiffs deceived the defendants, and did not give them good and faithful service and advice, but knowing and having knowledge sufficient to warn them that a house of that sort would be impracticable and too expensive to be built and withheld that information from the defendants and concealed it from them, and of their own desire and motive went on and built this house leaving the defendants to find it out when completed, then, gentlemen, they cannot recover.

So, then, the question comes as to the first charge, in this writ, of \$150 for the plans and specifications for the first house. As the house

was not built, it does not come within the schedule of prices contained in the slip that was handed to the defendants, and, therefore, it is left to the law to determine what the compensation shall be. And in such cases the law says that the compensation shall be a reasonable compensation. I do not know that the defendants deny that \$150 would be a reasonable compensation for the services, if they are compelled to pay it. If the learned counsellor denies that fact he can say so now: but I do not understand that he denies the reasonableness of the charge, but rather that the charge is illegal and that they are not required to pay it at all. So, gentlemen, take that consideration, under the instruction which I have given you and say whether or not these plaintiffs, taking into account the information which was given them by the defendants, taking into account their instructions, taking into account the defendants' views about it, and say whether or not they served them faithfully, honestly, in the exercise of good judgment, without fraud or concealment, without any attempt to compel the defendants to pay for a set of plans and specifications for a house that they knew were impracticable, and could not be carried out without unreasonable expense, and if you find that the plaintiffs were faultless in that regard, if you find that they acted in good faith and gave the defendants their best advice as to construction, skill and service, the defendants having taken it and accepted it, why, then gentlemen, the defendants must pay them a reasonable compensation for their service, which is admitted to be \$150, otherwise the defendants are required to pay them nothing. That is wholly a question for you to determine. The first plans and specifications were rejected some time in the month of April. I think that one of the defendants says that then he had a conversation with the plaintiffs about building him another house, and that they expressed a desire to do so, and I think he stated that he should be very glad to have them do so, and thereupon the plans and specifications for a second house were undertaken by the plaintiffs and carried forward to completion. After the plans were made, they were accepted by the defendants and appear to have been satisfactory to all parties, and the building was placed under contract with a builder whose duty it was to build and construct the house according to the plans and specifications. To this contract these plaintiffs are not parties. They are simply the servants of the defendants. They are required to give them their service, to follow their directions and do whatever they should direct to have done. The defendants might discharge them at any moment, or they might allow them to continue. The plaintiffs, not being parties to the contract between the builder and the defendants, are not held bound by that contract, except in a general way, except in particulars that may perhaps be material and which I will mention hereafter.

You will notice by the terms of the contract that, as fast as the work progressed, the bills were to be submitted to these plaintiffs, the architects, who were to approve them, and when they were approved they were payable, and I understand that they were promptly paid. I understand that the house was built and that the defendants paid for it—for every nail, scantling, board, brick and shingle; that they have paid for the painting and the decoration, and that it is their house. The plaintiff in this case have contributed nothing except their personal services. The house was to be built upon the land of the defendants, and when the house was completed and they had paid for it—paid for the material and labor—it necessarily became their house and they could not reject it if there were faults on the part of the architects. They would not be required to do so, because it would be unreasonable to hold that, if the architects had failed to perform their contract faithfully, the defendants would be obliged to allow their house, costing upward of thirty thousand dollars, to remain idle and vacant until a law-suit could be determined. They were not required to do that, so they moved into the house, and the plaintiffs are entitled to recover the schedule price for their services in preparing the plans and specifications and in supervising or superintending the building of the house. The amounts charged are not denied to be the schedule prices for that work, including the bill for travelling expenses, so that you need have no trouble concerning the items of the plaintiffs' account. They are indivisible, and no special assessment is required by you touching them, except so far as deductions may, or may not, be made from them as required by the instructions which I am about to give you. In the main the house seems to have been completed as the defendants had wished and intended; but the defendants say that the plaintiffs wilfully departed from their instructions, and wilfully built and finished it contrary to their explicit directions. In the first place, the defendants say that they directed the trimmings of the house to be of a particular color. The plaintiffs deny this. They say that it was indefinitely left to them to choose the color that would match certain other parts of the house, and give to it a proper artistic appearance.

Now, gentlemen, that is a question of fact. If the defendants specifically and explicitly directed the plaintiffs to paint the trimmings of the house a particular color, and the plaintiffs understood those directions, it was their duty to follow them. It is the owner and builder of a house who has the right to say what sort of a house will please him, and what sort of a house shall be built, so long as he is able and willing to pay the expense of building it. But the plaintiffs say that this was left indefinite and that they had no express instructions to put on the color which the defendants contend they had, and this the defendants deny. That, gentlemen, is a question of fact. Are you satisfied from the evidence that the defendants expressly ordered the plaintiffs to put a particular color upon the trimmings of that house, as they say they did, or, does the evidence fail to satisfy you of that fact? If you find that the plaintiffs had specific directions as to the color which should be put upon the house and, notwithstanding that, wilfully violated those directions to please themselves, because they thought a different color would be better, then gentlemen, the plaintiffs are in fault, and the defendants, having changed the color to suit themselves, and paid therefor the sum of seventy-five dollars, have a right to charge that against the plaintiffs' bill. So that, in regard to that matter, if you find that the paint was put on there in disobedience of the defendants' orders by the plaintiffs, then you may deduct from the amount the plaintiffs are entitled to receive, the cost of changing it. But, on the other hand, the plaintiffs may have had talk in regard to these colors,

may have advised about it, may have held out various considerations and the defendants may have thought about it, and if the plaintiffs did not understand that they had specific and explicit directions, but that they had only received advice and suggestions, and they, in good faith, followed out their own best judgment about it, without wilfully violating the orders of the defendants, why then, gentlemen, even though the color did not please the defendants, it is no defence to this action, and they must fail so far as that part of the case is concerned.

In the next place, the defendants say that the plaintiffs constructed the sashes of the French windows in express violation of their orders and directions. Now, gentlemen, how was that? The plans definitely and distinctly show the kind of French windows that were to be built and furnished. You will have with you the plan. That shows that the windows originally put into the plan and into the blue-prints were exactly the same kind of French windows that were put into the house by the plaintiffs. I do not think that either party questions that fact. But the defendants say that after the plans were made, and while one of the plaintiffs was at Bar Harbor, they called his attention to certain sashes in another house and directed him to have their sashes made like those shown. The plaintiffs say they do not remember any conversation of that sort; but they may have been asked as to whether the windows would be like those or not, but they do not remember definitely about it.

Now, gentlemen, the same considerations come in here that came into the other case. It is always well for the owner of a house, in matters of this sort, where the contract and specifications are in writing, to bear in mind that the architect, likely enough, has many jobs on his hands and many buildings under his control and is very likely to forget and omit specific directions, and if he wishes his architect to make changes, it is always well, if he wishes to give specific directions and to hold the architect to them, to give them in writing. The owner is not required to do so, but it is well that he should. This was not done in this case, and you will determine whether or not the plaintiffs, in following out the plans that had been given them and putting in the windows exactly as the plans and drawings required, violated the express orders and directions of the defendants, or whether, in good faith, they followed out what they supposed were his wishes and directions as expressed in the plans, and had not in mind any specific directions more than mere conversation or inquiry about it. It is just the same in this as in regard to the paint. Now, the testimony is (and I think it is undisputed), that for the changes made in those window-sashes the defendants paid \$65. Well, gentlemen, if that was paid on account of the plaintiffs' wilful disregard of the defendants' orders, it may be deducted from the account. But if it was only required to be paid because the plaintiffs made a mistake about it and they built the windows in good faith, that was all that they were required to do, and if the defendants saw fit to change them afterwards, they must pay the expense of doing it.

Now, there are two other considerations which are of the same character, the dormer-windows and the dining-room. The blue-prints, or the original plans of the house, call for dormer-windows, apparently to be 2 feet 11½ inches from the floor. That plan the defendants had had and accepted, and they had reason to expect that the windows would be built at that height. The contract contains, in substance, a permission on the part of the defendants that the architects may make some changes, as they may think desirable, in the construction of the house, and, therefore, even though the blue-prints called for these windows to be built 2 feet 11½ inches apparently, yet in the absence of more specific instructions from the defendants, if they, in good faith, thought it advisable and best, in the exercise of their best judgment and discretion, to raise the window-sills seven inches and a half, and they did so, then, gentlemen, that would not prevent their recovery in this case. But if, on the other hand, they had received instructions to make the windows low, and, knowing of these instructions to make them low, they deliberately and purposely went to work and made them high for some particular reason of their own, then gentlemen, they violated their duty. You will take into consideration the probabilities of the case; you will take into consideration the motives which the plaintiffs would, or would not have, in doing a thing of that sort. In answer to an inquiry of mine, it was stated by one of the witnesses that there were no architectural reasons why the windows should be raised; that it was not necessary that they should be raised on account of any architectural defects. Consequently, if that was so, the plaintiffs would have no reason to raise them simply to give a better appearance to their own work.

Now, the plaintiffs say that, although the blue-prints call for the windows to be 2 feet 11½ inches, they received specific directions from the defendants to make the windows high, and that they thereupon, in making their frame plans, marked them up 7½ inches, and that the house was built with these windows 7½ inches higher than the original plans called for. Now, the defendants say that was done in direct and distinct violation of their orders. The plaintiffs say that it was not; that their instructions were to make the windows high. It is argued to you that they would have no motive in departing from the instructions, and it is argued to you that they exercised their own good judgment and good sense in determining where it was best to place those windows. On the other hand, the defendants say that they were told explicitly to make them low. Now, gentlemen, that is wholly a question of fact for you, and you will determine whether or not the plaintiffs deliberately and wilfully increased the height of those windows in violation of the defendants' instructions.

The dining-room was to be oval in shape. A controversy has arisen as to whether it was so built. The plans and specifications do not show what kind of a ceiling the dining room was to have. It is conceded by all parties that the room was to be broken upon the floor by a fireplace and chimney; they were to break the exact oval of the room. The plans show that. So far the intent of the parties is plain and easily to be understood. Now, the defendants say that they expressly told the plaintiffs that the chimney-breasts should disappear at the lower point of the cornice in the room, so as to give them an oval ceiling, and that they required it made so. They say that that was their

express and explicit direction to the plaintiffs. On the other hand, the plaintiffs say that it was suggested to them, or that they suggested it to him. I do not think it is of any consequence from what source the suggestion came. The plaintiffs say that, having that in mind, and either from the defendants' suggestion that they would like to have an oval ceiling, or from their suggestion to him that it would make a very handsome room if it could feasibly be done, they made studies and sketches; that they went so far even as to make sketches that were finally submitted or shown to the builder, to the contractor, but the plaintiffs say that those plans were never adopted by the defendants; that they were only shown to them to see how far the idea could be worked out, hoping to do it if possible; that finding it impracticable and feeling that the defendants would hold them responsible for having a chimney of a proper draught, and to avoid its smoking, they were unwilling to recommend it and to adopt it, and, therefore, they made the room as it is now made, by carrying the chimney straight upward. Now, gentlemen, if the contention of the plaintiffs is the true one, and they and the defendants considered the feasibility of making this room in that way; if they talked about it and had conferences about it and made sketches of it, and finally it was left to the discretion of the architects to determine and they did determine to build it as they did, they were justified in doing so. If, on the other hand, as the defendants contend, they had specific instructions to build it the other way, and to have the chimney disappear below the lower edge of the cornice, it was the duty of the plaintiffs to build it so. It was the defendants' house. They were willing to pay the bills, and they had the right to have the dining-room, or any other room, built in any way they were willing to pay for, and it was the duty of the plaintiffs to so build it. But if, on the other hand, from the conferences and the talk between them, the plaintiffs were led to believe that they had no express or positive orders to so build it, but were only required to build it if it met with their approval, if it became feasible and would, in their opinion, give good results, why then, gentlemen, if they saw fit to exercise their own judgment, and did so, in good faith, even though the defendants are displeased with it, it is no bar to the recovery of this case.

Now, gentlemen, the dormer-windows and the dining-room come under the same consideration, in one aspect, that the paint and the French windows do, except that in the first two instances, the defendants made the changes themselves and paid the bills. Now, in regard to these other two items, the dormer-windows and the dining-room, I instruct you, as matter of law, that if the plaintiffs, wilfully, disregarding the positive orders of the defendants, built the dormer-windows high when they were directed to build them low, and built the dining-room with a broken oval in the ceiling when they were directed to give it a perfect oval, and if the violation of those orders has substantially injured the elegance, comfort, utility and value of the house, then the plaintiff cannot recover at all, because a man cannot be allowed to wilfully disregard the orders and directions of his employer, and then compel his employer to pay for the service. But, on the other hand, if any of these deviations were honestly and fairly made and were not wilfully done in violation of the orders of the defendants, even though it did not come up to the contract, or to the directions of the defendants, then, gentlemen, all that the plaintiffs would be required to do in such case would be to make the defendants whole; and the defendants, for any shortcoming of that sort on the part of the plaintiffs, would be entitled to have deducted from the bill the difference in value between the house they have got and the house they would have had if the architects had performed their duty according to their directions and requests. So you see that that question turns explicitly and directly upon whether there was any failure on the part of the plaintiff to follow directions, and, if there was, whether it was wilfully and purposely done in direct violation and disregard of the defendants' orders. In the one case, as touching these two last items, it bars their recovery altogether, and in the case of the first two items, the paint and the French windows, it allows them to be deducted from the bill, because the changes have been made and it is ascertained exactly what the damages would be. But if there was no wilful violation on the part of the plaintiffs, and they carried out the defendants' directions to the best of their knowledge, with discretion and skill, in the construction of this house, even though they may not have conformed to all the directions and requirements of the defendants, yet they would not be barred from recovery of their bill, but could only have deducted from their bill the amount which the defendants had peculiarly suffered, and which would be the difference between the house as now built and the value of the house as it would have been had it been otherwise built, or built according to the requirements.

Now, gentlemen, there is one other consideration. It appears that in the contract there was included a stable, and the plans and specifications were to cover the stable, and that some plans and specifications were furnished. It appears that a stable was built by the defendants, and the defendants contend that, inasmuch as certain framing plans or specifications concerning the stable were not furnished to them, which came within the duty of the plaintiffs to furnish and for which they had paid, and which were refused to the defendants, that the plaintiffs cannot maintain this action. Gentlemen, that is not the law. They can maintain their action; but it was their duty to furnish the framing plans and specifications touching the stable; it was their duty to do it; they were paid for doing it. Now it does not appear that any of the work was delayed, or that a stable was not allowed to be built on account of the non-receipt of any of those things. It appears that the plaintiffs' bill concerning the stable was paid by the defendants. So, gentlemen, in that regard, I instruct that the plaintiffs were bound, before they received their whole pay, to furnish all the necessary details and plans for the stable, and if they refused to furnish them, then, gentlemen, you must deduct from their bill such sum as you think, from the evidence, the plans so refused were reasonably worth. If, on the other hand, the defendants accepted the plans and did not call for the specifications, or waived them, and settled the bill, and made no claim on that account, and the settlement included all the controversy in regard to the stable, that is an end of the claim and you will not concern yourselves about making any deduction for their failure to furnish specifications in regard to the stable. Otherwise, you have the

right to consider it, and to make such allowance as you think the plans that were so refused by the plaintiffs to have been reasonably worth.

Now, gentlemen, if you find a verdict for the plaintiffs, you will add interest from the date of the writ. In regard to the rough-cast, that was left to the architects to decide, and their decision must be binding upon the defendants. It is not contended here that there was any such failure on the part of the plaintiffs in regard to the rough-cast as would change the result of this case.

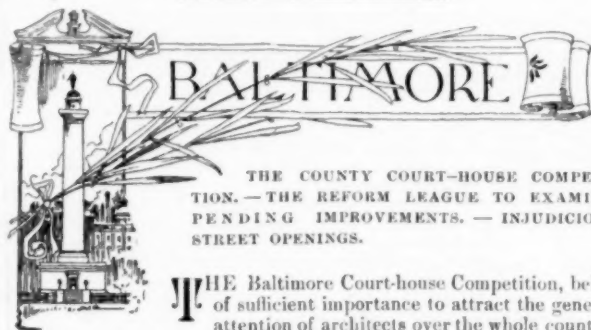
There are one or two things that have been suggested to me that I may have omitted, and that is in regard to the dormer-windows and the dining-room. I supposed I had stated to you (I will do so now at any rate) that if they were built by the architects, in the exercise of their own good judgment and discretion, and not in the wilful violation of orders, why, then the defendants have no claim on that account, if they were built as ordered.

Then, it is suggested to me that I told you that a plan was submitted to Mr. Hodgkins for consideration by him. I do not know that I said so, but if I did so state, you have heard the evidence as to what the plan was submitted to him for. I did not mean to preclude you in any way about that, and I do not know as it is material. I did not intend to say to you that the plan was submitted to him to determine anything, because I do not know that it was.

I am requested by the learned counsel for the defendant to instruct you that,

"If you find that the house was not built in accordance with the defendants' instructions to the plaintiff, and such departure was the result either of the negligence or wilfulness of the plaintiffs, then there shall be deducted from the amount that would otherwise be due the plaintiff whatever damage the defendants have suffered on account of the departure."

Yes, gentlemen, I give you that instruction.



THE COUNTY COURT-HOUSE COMPETITION.—THE REFORM LEAGUE TO EXAMINE PENDING IMPROVEMENTS.—INJUDICIOUS STREET OPENINGS.

THE Baltimore Court-house Competition, being of sufficient importance to attract the general attention of architects over the whole country, is naturally the chief subject of architectural interest at this time in the city itself, as it is by far the most extensive, elaborate and thoroughly considered scheme ever yet instituted in Baltimore, and, indeed, may rank as one among the most important undertaken in any of our larger cities during the last decade. The pamphlet of instructions to architects, issued about three months ago, is carefully, systematically and, on the whole, successfully compiled by an unpaid commission of eight prominent citizens, with the mayor as chairman, and Prof. W. R. Ware as expert advisor, and it is evidently the intention of this commission to act to the best of their ability in order to accomplish the best results for the city under the fairest terms to the competitors. They err, perhaps, in being too explicit and binding in what they ask for, as to the exact dimensions and other points, even of the subordinate features, of what they have preconceived as a proper arrangement for such a design. In addition to the quite minute and exhaustive details of site and of the various requirements throughout the entire building, representing in itself no small amount of labor and expenditure of thought and time, the remainder of the pamphlet is chiefly occupied by the few simple conditions of the competition, very fairly conceived and clearly stated.

No limit of cost is named; it is, however, generally known that \$1,400,000 have already been appropriated for the purpose, and that an effort is being made, apparently meeting with public approval, to obtain \$1,000,000 additional. Not more than ten sheets of drawings are required, to a sixteenth-inch scale, finished only in line and black-and-white, with a perspective of the same character to an eighth-inch scale, and all designs were to be submitted, under number only, not later than April ninth. Five from among the most prominent architects in the country outside of Baltimore—Messrs. McKim, Mead & White, Peabody & Stearns, Burnham & Atwood, Carrère & Hastings and Bruce Price—were especially invited to submit designs, for which they will each be paid \$400. The same amount is also to be paid to each of the best five designs received from Baltimore offices. All other architects are invited to compete under the same instructions and regulations, but without remuneration, and the expert advisor will select, at least, five from all designs received and hand them over to the Commission, with comments and recommendations, and the Commission will then appoint the author of one of these designs to be the architect of the building, if in their judgment and that of their advisor they are justified in so doing (a very elastic condition), with a compensation of five per centum on the total cost.

This is undoubtedly an admirably-arranged competition and one with which, in all its general conditions, the profession should feel thoroughly satisfied. Some comment and discussion arose among some of the local men in regard to the position of the Baltimore

architects in the competition, it being claimed that a certain number of them should have been selected by invitation and their designs paid for, as was done in the case of the five invited outside men, but the Commission, for various reasons, preferred not to make any standard for selection among the Baltimore men, but to leave the question of the premiation of these to the best five designs submitted, chosen on their merits alone, without regard to authorship. It was even suggested that a money-value basis be taken and only those men invited to compete who had done work costing over a certain amount. For obvious reasons this suggestion did not commend itself to the Commission and they determined to abide by the original form of their "Instructions," addressing, however, a letter to each of the Baltimore architects, specially inviting them to submit drawings under the regulations therein contained. It is needless to say that no designs are to be shown outside the Commission, unless by permission of the respective authors, to whom all the drawings are to be returned when the competition shall be decided.

The excellent form this competition has so far taken, where the execution of the work and the full amount of five per centum on the total cost is to be given to the successful competitor, the conspicuous position of the site in the centre of the city and a certain amount of general public interest and discussion that the matter has excited, has proved, we feel, a decided step in architectural progress, not only in this particular community, but will have influence, perhaps, extending beyond.

Another step has been made in the last few days in the right direction toward obtaining the recognition and influence of intelligent public opinion in regard to matters that bear directly on municipal reform of various kinds, all of which are at present of the greatest importance to the city, and which, more or less directly, must have an effect on architectural questions. The Reform League of Baltimore, consisting largely of men of integrity and influence outside the political ring, at its last meeting, among other measures, appointed several committees from among its members to definitely overlook and report upon certain specific items of city work, already in hand or to be undertaken, such as sanitation, paving, sewerage and street-opening. To architecture, none is of more importance than the last, namely the opening and widening of streets, of which of late much has been done recklessly with very disastrous results. In some few cases what has been done was doubtless desirable, or even necessary, if properly carried out with the careful forethought and consideration which such changes usually require, but in the majority of instances, from the demands of rapid-transit companies, or of interested property-owners with an influence in city politics, and such like moving forces, a number of the most uncalled-for and positively injurious "openings" and "widening" have been made, at large expense to the city's treasury, relieving no really "congested" sections, extending no really important thoroughfares, tearing out fairly good existing buildings, to be replaced by few better, many worse, or else leaving ghastly propped-up ruins, hasty and cheap repairs, and vacant lots covered with debris, the portions of the city where the changes have been made apparently not demanding any improved building over what previously existed there. Still more unfortunate is the totally haphazard way in which the lines of these newly opened streets have been allowed to run into each other, it being scarcely conceivable that those responsible could be either so ignorant as not to see the defects, or so indifferent as to willingly permit them, or, indeed, so presumptuous as to undertake such public work without carefully considered professional advice from the best authority. It is conspicuously evident in many cases to the most casual observer how absolutely wrongly the thing has been done, and how much better, and simpler, and more natural and more effective several other arrangements would have been that suggest themselves to any one with an eye for form and symmetry, and general order and propriety. This is painfully apparent at the Piazza of Mt. Royal Avenue in front of the new Music Hall.

The possibilities here were exceptional for a fine, monumental effect of open "place," avenues and good city architecture, with only a careful, judicious study of the natural situation and requirements, and such small extra expenditure as would have been duly repaid by the enhanced value of all surrounding property. The short-sightedness that did not avail of this opportunity to give to Baltimore one of its few possible good architectural points in its new streets is criminal, whether resulting from ignorance or indifference, and no amount of erroneously colored description and praise can cover the fact that what might have been really a fine result is nothing but an irregular, contorted open space, of no form whatever, surrounded by railroad-stations, badly paved streets of poor buildings, both old and new, and an unfinished Music Hall without a façade, which, even in its embryonic condition, looks out of place—evidently dropped into its position and still seeking a "local habitation" and an axis, with some sort of an excuse for being there at all.

As unfortunate as these late "improvements" are, there are others, not yet undertaken, but which would evidently be so desirable at different parts of the city in the very same line of street opening and widening, yet we tremble to suggest them and would "rather bear the ills we have." It is earnestly to be hoped that the committees from the Reform League will become a power and exert an influence, both restrictive and creative.

PUZZLE BUILDINGS.

INNUMERABLE are the structures to which this title applies, if it be understood to mean buildings of which the record is lost. Stone circles, cyclopean walls, the *cloaca* of Rome, the "mounds" of western America, and countless others are as puzzling as could be. We would limit the term, therefore, to elaborate edifices, the mere use or design of which is unintelligible. Even then, very few examples out of a multitude can be dealt with in our space.

The Noraghe of Sardinia, perhaps, have exercised human ingenuity upon a greater scale, for a longer time, than any other structures on earth, says the *London Standard*. Greeks and Romans speculated over them, and learned men of all countries are speculating still. Aristotle mentions them with admiration; so does Pausanias. They are, in brief, towers standing on an artificial mound, 30 to 60 feet high, and 100 to 300 feet in circumference at the base; some which have a lower platform are more than double this latter dimension. The material is stone, regularly worked with the hammer; they show neither sculpture nor inscriptions nor cement. Some of the blocks are immense. A very low entrance, but broad, leads by a gentle incline into a passage of good height, communicating—by another very low doorway—with a domed chamber, 15 to 20 feet in diameter, and 20 to 25 feet high. Small holes on either hand betray the existence of two or four cells, cut in the thickness of the wall, several feet in width and depth and height. From this dome a spiral passage, rising steeply, takes one to another just above, somewhat smaller, and on again to the broken top of the Noraghe—for none is entire.

What can we make of buildings like these? More than three thousand have been counted. Some authorities argue that they were tombs, some trophies of victory, some fire-temples, some observatories, some even houses. It is easy to show that several of these explanations will not serve, but one cannot possibly tell what forms of building religion may command. On that account only, it may be supposed that the Noraghe were temples or giant altars for sacrifice. Nothing has been found in them. But other remains, not less puzzling, are generally found close by, and—be it remarked—nowhere else. These are "Sepulchre de Gigantis" (giants' graves). Low walls of rough stones enclose a parallelogram, sometimes forty feet long and six feet broad, paved with enormous slabs. They always lie northwest to southeast, and at the latter angle stands a "headstone," a single block not less than ten feet high, often fifteen. Behind this, away from the "grave," the walls are prolonged to make the segment of a circle. At the foot of the headstone is a square aperture finely cut. Of these extraordinary objects many hundreds remain. They represent prodigious labor and no little skill in mechanics; but all that research or ingenuity has discovered is, as yet, that nobody was buried in them.

We have a variety of puzzle buildings in this country [England]. The term may be applied to the "denes" of Essex and Middlesex—perpendicular shafts sunk in the earth, with lateral chambers at the bottom. The most ingenious antiquaries have not yet shown who dug these extraordinary caves, nor what was their purpose. But it is evident that they might serve either as granaries, or dwellings, or places of refuge in time of trouble; all these theories have been argued. Therefore, the denes and other such unexplained but not inexplicable mysteries may be put aside—the Martello Towers, for example. Things downright unaccountable remain. The most speculative only venture to suggest that such or such may have been the object in building the "raths" of Kerry. Hundreds of these raths are still untouched, hundreds have been explored, and hundreds, at least, destroyed. They are apparently mounds of earth overgrown with grass, perhaps twenty feet high and sixty feet in diameter. When the turf is removed, we see an outer wall of stone encircling the space, supporting generally a roof of large slabs; but sometimes the substructure is sunk in the ground, when the slabs do not appear to form a roof, but a pavement.

Somewhere in this wall is the entrance, a narrow hole upon the level of the earth. Crawling through it—but mindful of the poisonous gases which accumulate under such conditions—we find that the enclosed space is intersected by walls which split it up into chambers—not less than six—ten to twelve feet long, and four and a half to five feet high. They all communicate with one another by holes just large enough for a man to crawl through; but the archway is hewn stone excellently fashioned. Each chamber has an outlet for ventilation in the surrounding wall. Sometimes there is a rude fireplace in that most distant from the entrance, though it remains to be discovered—a minor puzzle—how the occupants escaped suffocation when the fire was lit. The floor of a rath is always dry—for a spot with natural drainage was chosen. There is nothing more to be said about them. No tool nor bone has ever been found, excepting objects evidently introduced at a modern date. What can be the purpose of these buildings? They were not meant as hiding-places, for the rath always stands conspicuous. They were not in the way of forts, since an enemy had but to close the ventilators and all within must stifle. If they were dwellings, the people who used them must surely have been dwarfs, for the shortest men of European race could not stand upright therein. It has been suggested that they were the cellars of a small village or communal house, built upon the roof, of perishable materials; but in that stage of civilization, cellars are quite unnecessary. We must give it up—for the present, at any rate.

Let us turn to Japan. Cave dwellings of elaborate construction have been familiarly known and used in many districts from time immemorial. Of late much attention has been paid to them. Mr. Shogoro Tsuboi published a striking account of his discoveries in the *Asiatic Quarterly Review* some years ago. He removed the earth from a hillside, near Tokyo, where a few caverns were visible, and found it actually honeycombed with them. No less than 237 were explored. They are hollowed in tufaceous sandstone after a style of architecture always the same. Mr. Tsuboi does not give the height or width of the entrance, but since he mentions that it was necessary to walk "with our bodies bent," the aperture must be low. It is carefully shaped. A few feet within, the passage widens, forming a chamber one metre square; grooves in the walls, the roof, and sometimes the pavement suggest that a slab of stone here or some sort of door shut off communication. But how could this be? The living-room beyond had neither light nor air, for it is cut in the solid rock.

This living-room, so to call it, is always square and domed. It has an area generally of six to nine feet, and the top of the dome "is little less than six feet from the floor." Here again a race of dwarfs is suggested. We do not learn at what height the domed roof springs from the walls, but it would be very awkward if the males of the family could stand upright only in the middle of their parlor. Moreover, there are holes, sometimes four to four and a half feet above the pavement, which look as if they were designed to receive joists for a ceiling. Shelves and cavities are hollowed in the walls. Every chamber has a bed place—the larger, two or three; that is, a divan, six inches high or so, and six feet long, which is so described. Channels in the pavement served for drainage. Many of these caves are so close together that the partition-walls are barely a foot thick, but in only three instances has any communication been observed; and one of them was clearly accidental, though the smoothness of the sides displays that advantage was taken of the accident. We have here the dim suggestion of a romance, for the builders evidently did not desire that their families should hold intercourse with one another inside the cave. As for the contents, very many objects were discovered, some of vast antiquity; but all of the historic time, left doubtless by people who used these dwellings before they were buried. Mr. Tsuboi found even a series of marks, which we must believe are inscriptions; but they have no resemblance to the Japanese or the Chinese alphabet. All is mystery.

EXPLORATIONS IN CRETE.



a meeting of the New York Society of the Archaeological Institute, held at Columbia College on Thursday, April 19, President Merriam made a report upon recent explorations in Crete, and showed some photographs just received. The report was, in substance, as follows:

The island of Crete has long been a coveted field to archaeologists. Situated between Greece and the Orient, it lies in the natural track of commerce and civilization in their eastward and westward flow, and it is believed that its soil hides the answer to many of the problems of early culture and art. Tradition points to it as the seat of the earliest maritime power known in Greek waters, and the laws of Minos and Rhadamanthus were proverbial as the fountain-head of Greek legal lore. Even the Spartans believed that Lycurgus drew inspiration from this source in moulding his institutions, and they certainly owed much to the Cretan poet and musician, Thales, in the seventh century, B. C. The ancients began their history of Greek sculpture with the advent of the Cretan artists, Dipenus and Scyllis, in the Peloponnesus, for they were the founders of a new school and the beginners of a new era in historic art. Other sculptors from the same island appear about the same time in Greece and Asia Minor, stirring a new impulse wherever they went, and exhibiting the vigor with which the arts must have been practised then in the island. Nor was the art of the earlier period wanting there. Objects of the pre-historic, Mycenaean time have been found, and others of the later transition era, with their strong tinge of Oriental influences, have been discovered in the famous grotto of Idaean Zeus. Some of the most ancient forms of the alphabetic signs, too, very closely connected with the Phœnician, exhibit the affiliations which were expected. Indeed, everything known of the island indicates its importance to the archaeologist, and leads him to hope for its early exploration. Schliemann tried it and failed, and other European archaeologists and archaeological schools have been repulsed. One of the first projects of our Institute after its foundation was exploration there, but the plan was not realized. The only person who has really achieved success within its bounds is Prof. Federico Halbherr of the University of Rome, who spent some three or four years there about a decade since. He it was who discovered the great Gortyna inscription, which within the past few months has become the subject of newspaper exaggeration abroad, till it has reached the dignity of myth, in which it is designated as containing the laws of Minos and Rhadamanthus. It is indeed a singularly antique and important code of laws, and has been the favorite browsing ground of the philologist, the antiquarian and the student of comparative law for some years. Numerous additional archaic inscriptions, together with the important objects from the Idaean

grotto, rewarded the zealous and well-directed search of Dr. Halbherr. With such experience, with such a knowledge of the territory and the people, intimately affiliated with the Syllagos or Archaeological Society of the island, he is naturally most competent to pursue investigations in a district whose political relations have for a long time been most unsatisfactory and often most dangerous.

With a Greek population ardently desirous of annexation to Greece and embittered by numerous uprisings, repressed with a merciless hand by the Turks, and with a large Turkish element, domineering and cruel, the state of the island is far from tranquil, and the path of the foreigner is strewn with thorns. But Dr. Halbherr was not daunted. His archaeological zeal has made him always ready to return to the scene of his former labors, and last summer he accepted an offer from our Institute to spend the winter in Crete and explore the country again. He arrived at Candia about the first of November, and began his efforts to carry out his plans already formed. He found the political condition of the island completely changed since he was there before. The last revolution in 1889, which was favorable to the Turks, resulted in banishing the Greek element from power and influence. The national assembly exists no longer, and the island is assimilated to a Turkish province of Asia Minor administered directly by the Porte, the governor being sent from Constantinople. Under these circumstances it has been much more difficult than formerly to carry out his plans, but he has already succeeded in accomplishing much. He has explored a large part of the eastern half of the island, and the yield of inscriptions has been considerable. The most important is an imperial rescript, one of the longest Latin inscriptions of the Levant. Another is in archaic Greek and belongs to an unknown city. It records a hitherto unknown Cretan magistracy, that of the *Ephoroi*, so familiar in Spartan regions. Among sculptured objects are to be mentioned four heads of members of the family of Augustus, a head of Commodus, a Hellenistic head of Hera, and a colossal statue of a *Cosmos* or other personage of Macedonian or Roman epoch. Another important work has engaged the attention of Dr. Halbherr. Acting in conjunction with the Cretan Syllagos, he has attempted to secure the preservation of the wall upon which the great inscription of Gortyna is engraved, by its purchase and removal to the museum at Candia. The agreement had been made with the owners of the property and the compensation had been arranged, but the removal involved the divergence of a stream from its present channel. To this the adjacent proprietors objected so strenuously and vigorously that the project was suspended for a time, and political and other complications have added to the difficulties. The hope of ultimate success, however, was not abandoned at last accounts.

This report was followed by an animated discussion upon the question of types in art, participated in by Mr. Sturgis, Miss Margaret Uhl, Professor Tisdall, Dr. J. P. Peters and President Merriam. Dr. Peters also gave an account of an interesting discovery in Babylonia, which confirmed Herodotus.

BOOKS PAPERS

IF there is any portion of France that English-speaking people know better than other parts, it is Normandy; possibly because English-speaking people have a certain blood-relationship with Normans and so feel more or less as if visiting the homes of their forefathers when they take a trip into Normandy, partly, of course, because of mere propinquity, because it is so near to England itself, usually the first stepping-stone as Normandy is the second for American travellers. But the chief reason lies in the abstract merits of the district itself, in its picturesque landscape features, and still more in the wealth, dignity and beauty of its architecture.

The outward aspect of this delightful country is just now being worthily presented to the cultivated book-buyer in a most sumptuous publication which makes the pangs of poverty all the harder to bear, and the temptation is so great that there will be many found who will not stop to consider that the plebian "one dollar per Part" will develop into the aristocratic two-hundred-dollar publication before the subscriber is released from his obligation. But, all the same, he will by that time have acquired a book well worth the money and one which he will always cherish. Moreover, he can divide his responsibility by limiting his subscription to the Parts, which will treat of one or more of the five Departments into which the old Province is divided, each of such Parts being a complete publication in itself.

The work is of quarto size, handsomely printed and illustrated, each complete volume, by from eighty to one hundred large heliogravures and a multitude of half-tone cuts and sketches in the text: thus the volume illustrating Seine-Inferieure is illustrated by ninety-one full-page plates and 476 pages of text, the price of which unbound, exclusive of carriage, is 200 francs. We should be glad to procure the work for any subscriber.

"La Normandie Monumentale et Pittoresque." Edifices publics, Eglises, Châteaux, Manoirs, etc. Texte par une Société d'Archéologues et de Littérateurs. Semale & Cie, Imprimeurs-Editeurs, Havre.

Mrs. ROBERTS has translated—in the main very well translated—and published, apparently at her own cost, a curious little work which, some thirty years ago, Victor Cherbuliez sent out into the world of letters under the title "*Un Cheval de Phidias*."¹ The book is sufficiently interesting to read as a story merely, while it has enough of erudition and logical art criticism in it to satisfy those who seek for the deeper meanings that lie behind accomplished physical facts. The story concerns a certain charming countess who in spite of her fascinations is a devout blue-stocking, who in her wanderings has settled for a while at Athens with her uncle, her doctor, her confessor and a few acknowledged or unacknowledged aspirants for her hand. At Athens she divides her time between exercise in the saddle and the admiring study of one of the horsemen in the Panathenaic Procession, and at length takes advantage of a morning's picnic on the Acropolis to demand of her friends and attendants their explanation of the genesis of the fragment she admires. One responds with a great amount of information enforced by copious quotations from Greek and Arabic authorities. Another, an aspirant, whose fad it is to ride an unsaddled horse in absolute imitation of the method followed by the ancients, naturally has encomiums to bestow on the grace of seat assured by such method, and derision to shower on the mediæval and modern method where a rider depends so much on his stirrups, incidentally throwing much ridicule on the statue of Colleon at Venice and the impossible gait the sculptor has given to the horse. And in this way with a little learning, a little philosophy, a little mysticism, a little common-sense and some good and pertinent suggestive criticism, the writer and translator have produced a book with which one can pass a pleasant and not unprofitable evening.

It may be, perhaps, taken as rather a significant indication of the interest taken in steel-skeleton construction by all classes connected with building-operations, that Mr. W. H. Birkmire's book "*Skeleton Construction in Building*" has already entered on its second edition.

ALTHOUGH there is very little in the book of real practical value to architects, it is, nevertheless, a pleasure to find a manual of instruction in any industry prepared, arranged, illustrated and printed in as workmanlike a manner as the "*Art of Copper-smithing*,"² which presents in book-form a series of papers on the subject written by John Fuller, Sr., of Seneca, Kansas, and lately published in the *Metal Worker*.



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

ENTRANCE TO THE CHURCH MISSIONS HOUSE, FOURTH AVE., NEW YORK, N. Y. MR. R. W. GIBSON AND E. J. N. STENT, ASSOCIATED ARCHITECTS, NEW YORK, N. Y.

[Gelatin Print issued with the International and Imperial Editions only.]

THE sculptured groups in the pediment panels are the work of the sculptor J. Massey Rhind.

MAUSOLEUM AT ROCK CREEK CEMETERY, WASHINGTON, D. C. MR. W. J. MARSH, ARCHITECT, WASHINGTON, D. C.

[Issued with the International and Imperial Editions only.]

THIS hillside mausoleum, recently completed for Mr. Crosby S. Noyes, is built of Quincy granite. The cost was \$5,000.

DINING-ROOM FURNITURE FOR MONROE SMITH, ESQ., PHILADELPHIA, PA. MR. W. L. PRICE, ARCHITECT, PHILADELPHIA, PA.

[Issued with the International and Imperial Editions only.]

THIS furniture is now being made of dark English oak, and the upholstery will be in illuminated leather.

HOUSE OF CHARLES E. HIRSH, ESQ., DEVON, PA. MR. W. L. PRICE, ARCHITECT, PHILADELPHIA, PA.

THE lower story of this building is to be of light gray stone while the upper story is of half-timber work, the brick panels being plastered and the woodwork stained a dark color.

HOUSE FOR E. H. CURTIS, ESQ., KENNEBUNKPORT, ME. MR. WM. L. WELTON, ARCHITECT, LYNN, MASS.

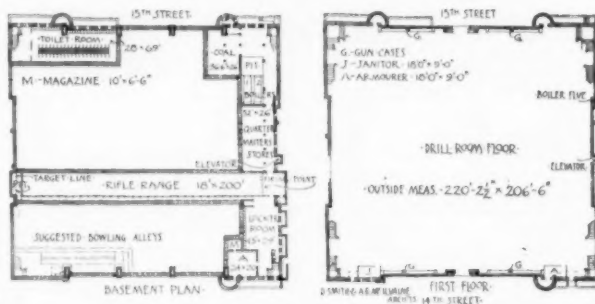
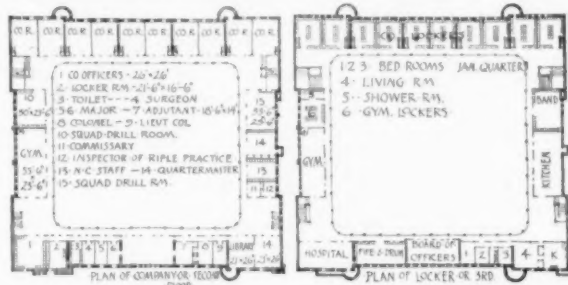
THIS house to be of regular smooth face ashlar for first story and shingles and half-timbered work on the second story; shingles and half-timbered work to be stained a silver-gray. Roof painted a brownish-red. Interior finish for first floor, live-oak; second floor, except bath-room, maple finished natural.

¹"The Phidian Horse." Art and Archaeology on the Acropolis, with seven illustrations. From the French of Victor Cherbuliez, translated by Elizabeth Hill Bissell Roberts; 1893. The Rittenhouse, Philadelphia.

²"Art of Copper-smithing." A practical treatise on working sheet-copper into all forms. By John Fuller, Sr. Published by David Williams, New York, N. Y., 1894. Price, \$3.

APARTMENT-HOUSE, MINNEAPOLIS, MINN. MR. H. W. JONES, ARCHITECT, MINNEAPOLIS, MINN.

COMPETITIVE DESIGN FOR THE 9TH REGIMENT, N. Y. S. G., NEW YORK, N. Y. MESSRS. DOUGLAS SMYTH & A. R. MCILVAINE, ARCHITECTS, NEW YORK, N. Y.



ST. PETER'S, ROME, ITALY: FROM THE REAR.

[Additional Illustrations in the International Edition.]

CHAMBER IN HOUSE OF E. F. SEARLES, ESQ., GREAT BARRINGTON, MASS.

[Copper-plate Etching.]

INTERIOR OF FRENCH PROTESTANT CHURCH, SOHO SQUARE, LONDON, ENG. MR. ASTON WEBB, ARCHITECT.

SOUTH END OF THE SAME.



BOSTON, MASS.—Several hundred Specimens of Textile Designs of all countries, from the second century to the present time, from the collection given by Denman W. Ross; also a collection of Japanese Color-prints: at the Museum of Fine Arts.

Architectural Drawings by Albert Randolph Ross: at the St. Botolph Club, May 7 to May 19.

CHICAGO, ILL.—Annual Exhibition of Water-colors: at the Art Institute, May 6 to May 27.

Seventh Annual Exhibition of the Chicago Architectural Sketch Club: at the Art Institute, May 10 to May 24.

NEW YORK, N. Y.—Twenty-sixth Annual Spring Exhibition: at the Metropolitan Museum of Art, opened May 8.

Exhibition of the Competitive Designs for the Decoration of the Oyer and Terminer Court-room: at the Century Club.



TAKEN AT HIS WORD.—To show how few and simple words may constitute a binding legal contract, the *Australasian Builder* tells the following amusing story: An architect under cross-examination in the witness-box averred most positively that he could build a house according to the designs exhibited in court for what appeared to be a very inadequate sum—let us say £2,000. "You are quite sure," said the presiding Judge, "that you can build the house properly for that sum, within a reasonable time—in fact, you are ready to do so?" "Perfectly, your Lordship." "And you would undertake that there should be no extras?" "Certainly, my Lord." "Very well," said the Judge, "that is precisely the kind of house I want myself; on the rising of the Court, I will give you a cheque for the amount; build the house, and let me know when it is ready!"

THE LIABILITY OF GERMAN EMPLOYERS.—In Germany the liability of employers for accidents to workmen rests chiefly on the law of insurance which dates from 1884. All employers are obliged to insure their work-people and clerical staff, even when the employment is temporary and unpaid. There are special associations for different industries, and the statutes must be approved by the Imperial Insurance Office. Injuries include those which are internal as well as external, loss of intellect, memory, or nerve. When compensation is claimed, it is necessary to trace the injury to some specific cause, and not to the mere normal exercise of the occupation. Generally, the person who is to gain or lose most by the undertaking is held to be the employer. Thus, in building contracts, it is not the capitalist who advances the funds, but the master-builders, carpenters, etc., who are responsible. Employers' contributions to the associations are proportionate to their annual expenditure in wages. The amount of compensation is based on the wages received by the workmen during a year. So long as he is completely incapacitated, he is to be allowed two-thirds of his wages. For partial disablement he obtains a fraction of that maximum proportionate to the extent of the injury. In case of death, twenty days' payment (in no case a sum less than 30 marks) are to be granted toward funeral expenses. The widow, until her re-marriage, is allowed about twenty per cent of her husband's wages, whilst fifteen per cent is allowed for every child under fifteen who has lost one parent, and twenty per cent if it has lost both. The total compensation to widow and children must not exceed sixty per cent of the deceased's wages. In case of re-marriage, she receives as composition three times the amount of her annual allowance. If the deceased was the sole support of parents or grand-parents, they may receive twenty per cent of his wages during their lifetime.—*The Architect*.

ALMA-TADEMA'S HOUSE.—In an article on Alma-Tadema, in the February *Century*, Mrs. Edmund Gosse thus describes the destruction of the artist's house and its rebuilding: By the year 1874, the decorations of Mr. Alma-Tadema's house, at the North Gate, Regent's Park, were completed, and the whole effect was of a palace of exotic beauty. In a moment all this beauty was well nigh destroyed by the explosion of a barge laden with gunpowder and benzoline, which was passing along the canal in front of his house. The walls were cracked, the windows broken, the front door, even, was torn off its hinges, so that the open portal showed on its threshold the almost too hospitable greeting of "Salve" to the outside world. M. Tissot, the French artist, who was at the time living in London, said that the terrace of houses nearest to the scene of the accident had all the appearances of the streets of Paris after the bombardment during the Commune. There is a pretty story of the behavior on this occasion of the two young daughters of the house. They had always been told that if they felt frightened at night they were to ring their bedroom bell; so, when they awoke suddenly in the utter darkness, to find the window-frame lying on their bed, the ceiling falling in fragments, and hundreds of hazelnuts—part of the boat's cargo—showing down upon them, the elder child remarked to her sister, in the high calm voice of authority, "Anna, ring the bell!" The news of the explosion was a terrible blow to Mr. and Mrs. Alma-Tadema, who were travelling in Scotland at the time. But Mr. Alma-Tadema's splendid energy was equal to the occasion, and he at once saw means for improving his house. The outer walls were, first of all, firmly clamped together with huge iron girders; next, the inner house was considered. New doorways were cut through the side walls, arches were constructed, and here and there a slim, supporting column was added. The whole aspect of the place became, if possible, more charming and fairy-like than before. The artist decorated the ceiling of his studio in the Pompeian style, with figures of his own hand in a design of light floral festoons, dividing the space into panels of different sizes and shapes. For these Mr. Alma-Tadema made some charming sketches of dancing nymphs and tooting satyrs.

THE CARRARA QUARRIES.—The marble quarries, which are 400 or 500 in number, are situated far above the town, in the midst of the grandest and most savage scenery. The soft aerial hues which distance lends to the mountains disappear on nearer approach. The great peaks stand up against the sky in fantastic forms. No trees or verdure clothe their naked sides, no flowers grow, no water flows to fertilize that soil. The 6,000 quarrymen who are busy here appear as ants crawling on the vast hillsides. The marble is quarried by dynamite. Every moment explosions rend the air, and huge fragments fly up as if expelled from a volcano. Often the mine has to be placed in the perpendicular face of a precipice. Then the workman is lowered by a rope and hangs suspended, "like the samphire-gatherer, 'twixt earth and heaven. A dreadful trade." About 160,000 tons of marble are annually exported, of which much goes to America. The quantity is inexhaustible. The entire mass of the Monte Sagro, 5,000 feet high, which dominates Carrara, is solid marble. One of the most famous quarries is in the valley of the Polraccio. From this were extracted in Roman times the 1,700 tons of marble that served for the construction of Trojan's column at Rome. Here Donatello got the block which he carved into his "St. George," and Michael Angelo the one for his "Moses." From here also came the huge block mentioned in the memoirs of Benvenuto Cellini, which served for the colossal Neptune of Ammanati in the middle of the fountain of the Piazza della Signoria at Florence. Unlike the miner, who burrows underground, he works in a blinding glare of light. The fierce heat of the Italian sun beats upon him in summer. The cold blast of the tramontana, rushing from the gorges of the Apennines, chills him in winter. Constantly exposed to danger, seeing his companions killed and wounded by his side, trained to rapid action, and with every faculty of mind and body on the alert, accustomed to dominate the rude forces of nature—he has developed into an independent and powerful type of man.—*English Illustrated Magazine*.

THE BESSEMER-STEEL RACE BETWEEN ENGLAND AND THIS COUNTRY.—For a number of years Great Britain and the United States were running a race in the manufacture of Bessemer steel, which eventuated, in 1879, in the supremacy of the United States, says the *London Engineering Review*. At that time, however, neither country produced a million tons of ingots in a year. Until 1885 there was not much difference in the annual make of the two countries. The United States kept the lead which it won in 1879, although never by as much as half a million tons a year. But in 1886 the American Bessemer-steel industry took one of those remarkable spurts which have every now and again occurred in all the industrial enterprises of that country, and shot ahead of the British industry by about a million tons. In the following year it further improved this lead by about a quarter of a million tons more, and in 1890 it had the satisfaction of producing more than twice the Bessemer-steel tonnage of the old country. In 1892, however, the United States did relatively still better, and produced the extraordinary quantity of 4,168,000 tons of ingots, against a production of only 1,500,000 tons for the United Kingdom. From this giddy height the Bessemer-steel industry fell in 1893 to an output of only three and one-ninth million tons, while the British make of the same description of steel was practically the same as it had been in the previous year, notwithstanding that several of the leading works, notably in South Wales, were practically closed over the whole period. The moral of this short, eventful history is that great spurts, like those to which American industry appears to be especially subject, are liable to bring in their train equally great depressions, and that the best and safest thing for manufacturers is to aim at a regular and steady trade. Of course, the most serious cause of the over-production that is mainly responsible for the recent trouble in the United States is the enormous development of the means of production, not so much by the increase of new works as by driving to their utmost endurance the means employed in handling the materials.

A BIRMINGHAM EXPERIMENT IN STREET-WATERING.—"The very methodical manner in which you sprinkle your streets in St. Louis," said Wallace Orthwein, of Birmingham, Eng., who is on his way across the continent and was at the Southern yesterday, "reminds me of a very amusing incident in our city which resulted in something like a riot or rebellion ten or twelve years ago. A genius devised a plan of street-sprinkling by means of pipes laid in a recess cut between the stone sidewalk and the curb. This pipe was pierced with holes pointing in the direction of the street, and was then carefully cemented over, the holes, of course, being left clear. Then, when pressure from the main was turned on, water would shoot out of these little jets half way across the street, meeting the flow from the other side and sprinkling the street very thoroughly. The only drawback was, there were no means of notifying the public when the water was going to be turned on, and while the experiments were being tried, a man who was walking along the gutter was suddenly deluged with water, and drenched through and through. He was arrested for assaulting one of the workmen who was watching the performance, but was discharged on the ground that there was at least some justification for this erratic vengeance. When the sprinkling device was in regular use it would frequently happen that whole beves of ladies would be caught in the centre of the street and be held prisoners between two quite violent streams of water. Horses would stand on their hind legs and everything was turned upside down. I think the experiment was tried for about a month, but perhaps it was a little less. Finally, in response to a wail of indignation, which extended from suburb to suburb, the plan was abandoned, though it was not till some years later, when a new sidewalk was laid, that the previously-offending pipes were taken out and sold for old iron.—*St. Louis Globe-Democrat*.

PROPOSED MIDWAY PLAISANCE CANAL, CHICAGO.—A petition has been submitted to the South Park Commissioners of Chicago, asking that the famous Midway Plaisance be turned into a canal, drawing its stream from Lake Michigan and supplying the lakes of the park with "live" water. The scheme looks very attractive on paper, for it is proposed that the Plaisance Canal, which would be a mile long and as wide as most tidal rivers, be used for aquatic sports, and for day and night pageants, such as were witnessed at the World's Fair. From bridges picturesquely thrown across the water, as well as from the banks laid out in walks and adorned with shrubs, immense multitudes could view the sights and sports prepared for them on great holidays by the municipality. At present, South Park has meadows, glades, and the lake-front as attractions for the people, but much remains to be done to make it a pleasure resort. In great part the Midway Plaisance Canal would supply the need. The Chicago City Railway stands in the way of the realization of the plan, however, for if the canal were constructed, the company would be compelled to elevate its tracks, an undertaking that would involve a heavy outlay.—*N. Y. Evening Post*.

LONG-LIVED TREES.—The Soma cypress of Lombardy is, I believe, the oldest tree of which there is any authentic record. It is known to have been in existence in 42 B. C. There are, however, many trees for which a vastly greater antiquity is claimed. The Senegal baobabs—some of them—are said to be five thousand years old. The baobab tree of Anuradhapura, in Ceylon, is perhaps the oldest specimen of another very long-lived species; it is held sacred upon the ground that it sprang from a branch of the identical tree under which Buddha reclined for seven years while undergoing his apotheosis. The oak is well known to be a long liver, and there are specimens still standing in Palestine of which the tradition goes that they grew out of Cain's staff. The hawthorn, again, sometimes lives to be very old; there is said to be one inside Cawdor Castle of an "immemorial age." The cedars of Lebanon, may also be mentioned, and there are, according to Dean Stanley, still eight of the olives of Gethsemane standing, "whose gnarled trunks and scanty foliage will always be regarded as the most affecting of the sacred memorials in or about Jerusalem."—*Notes and Queries*.



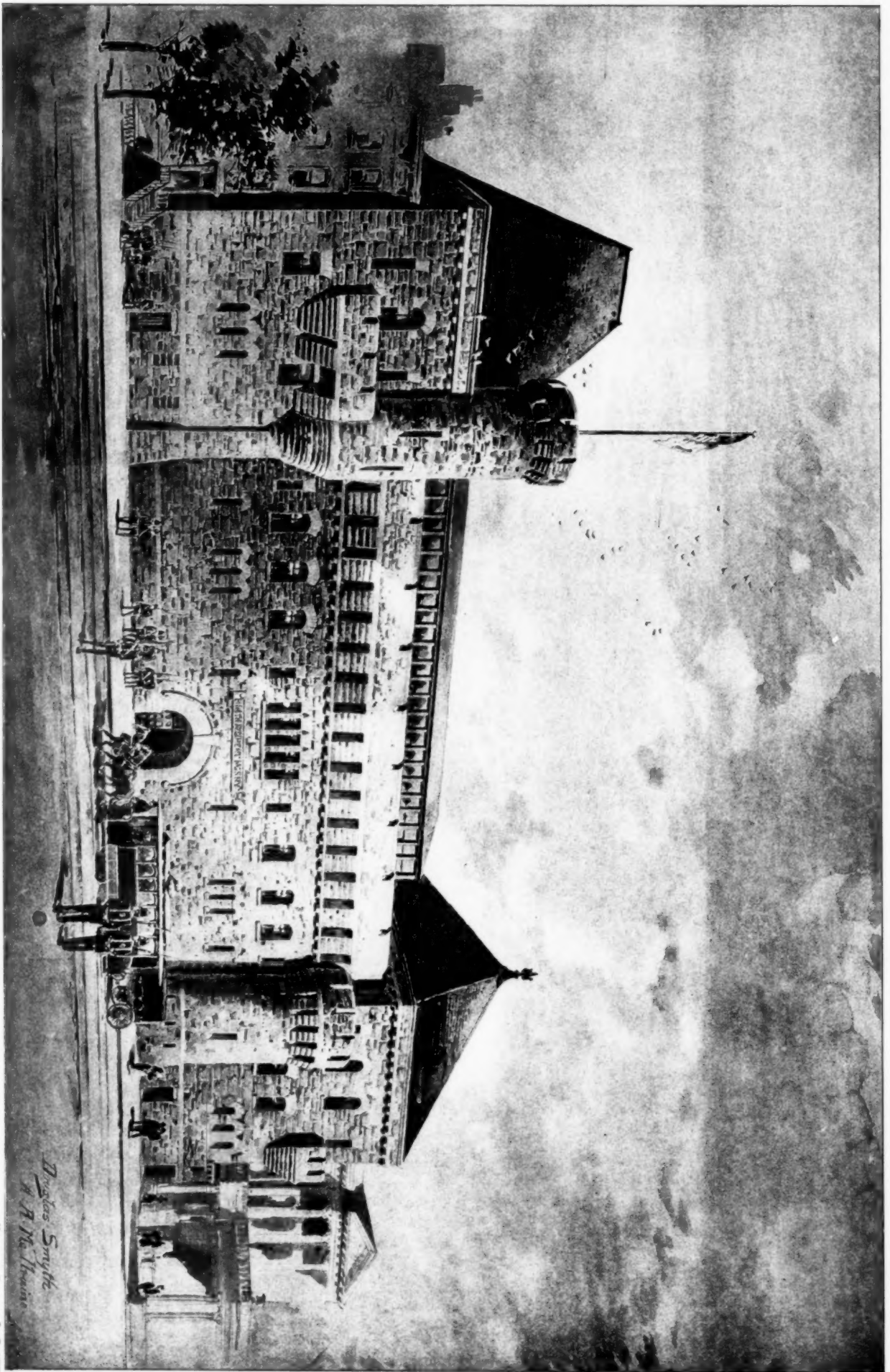
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W. G. Simkhovitch S. P.
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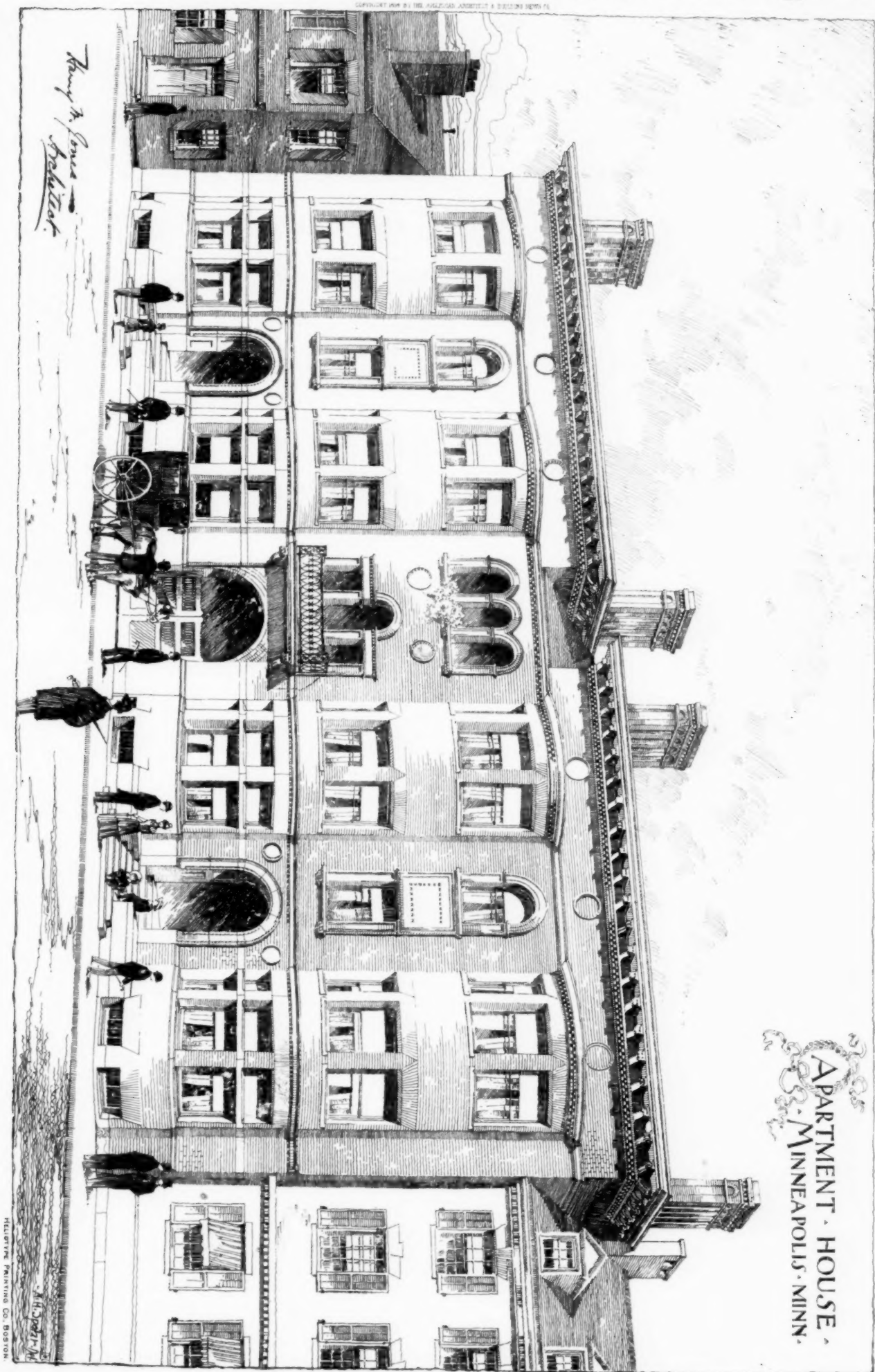
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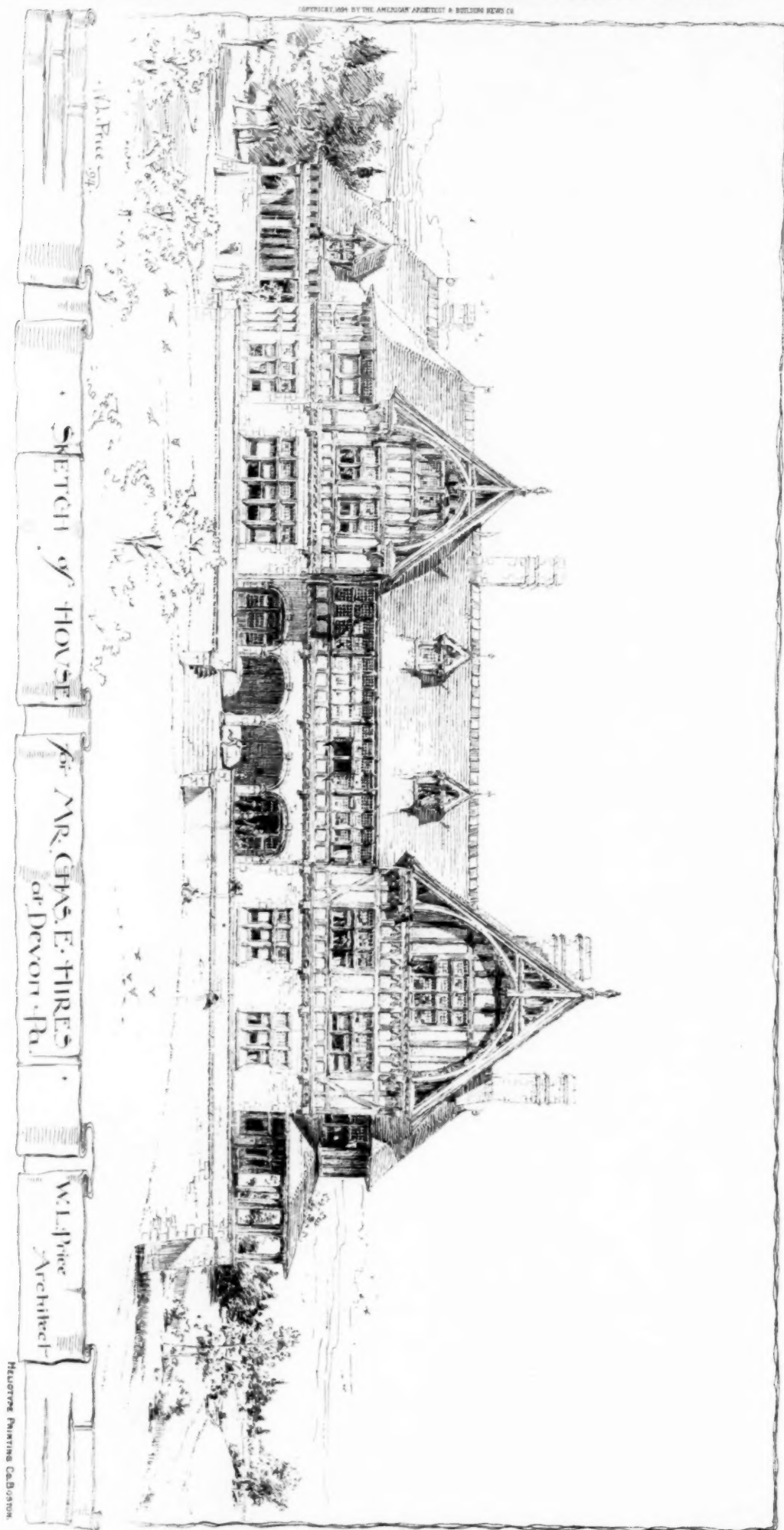
COMPETITIVE DESIGN FOR NINTH REGIMENT ARMORY, NEW YORK, N. Y.

DOUGLAS SMYTH and A. R. McILVAINE, Architects

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