

THE AMERICAN ARCHITECT AND BUILDING NEWS.

VOL. XXXVII

Copyright, 1892, by TICKNOR & COMPANY, Boston, Mass.

No. 864.

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

JULY 16, 1892.



SUMMARY:—

The Lockout at Homestead.—A Mechanic's Lien Case in Washington, D. C.—American Methods of Handling Ocean-borne Freight.—European Methods of Freight Handling.—International Art Exhibition at Munich.	33
MODERN ARCHITECTURE.—III.	35
BIOGRAPHICAL SKETCH OF MR. S. D. BUTTON, ARCHITECT, PHILADELPHIA.	37
THE INTERNATIONAL CONGRESS OF ENGINEERS AND ARCHITECTS IN ITALY.	38
BLOIS, AMBOISE, CHAMBORE AND CHENONCEAUX.	39
LATEST FINDS IN ROME.	40
SUN-DIALS.	41
ILLUSTRATIONS:—	
Madison Square Garden, New York, N. Y.—Commonwealth Hotel, Harrisburg, Pa.—Home for Aged Couples, Walnut Avenue, Boston, Mass.—The Georgia State Building for the World's Fair, Chicago, Ill.—Vancouver Arcade Block, Vancouver, B. C.—Portrait of Stephen Decatur Button of Philadelphia, Architect.	
Additional: Notre Dame des Victoires [Notre Dame du Sablon] Brussels, Belgium.—Peristyle on the Court of the Hôtel de Vogüé, Dijon, France.—Ancient Church near the Corn Hall, Tours, France.—The Library, Lincoln Cathedral.—Design for Municipal Buildings, Oxford, Eng.	43
COMMUNICATIONS:—	
Dry-pressed Brick.—Signing Buildings.	43
NOTES AND CLIPPINGS.	44

EVERY one has read, with indignation, of the brutalities practised at the great Carnegie steel mills upon helpless prisoners, who, in endeavoring to do their duty, were attacked and defeated by a mob which outnumbered them twenty to one. According to all the accounts, the better class of the workmen, whose differences with their employers led to the trouble, behaved very well, some of them, indeed, nobly, in their efforts to prevent violence, and to defend the prisoners; but the iron region of Pennsylvania, like New York, is infested with a class of foreigners who are scarcely above beasts in intelligence, and are far below them in savage bloodthirstiness; and these people seize upon occasions of temporary anarchy to indulge their brutal instincts. We do not believe that the striking workmen felt less horror and pity than any one else at seeing a woman punch out both eyes of a prisoner with an umbrella; but the people who begin lawless proceedings cannot evade responsibility for the excesses to which they may lead. That the workmen, however, as a rule, sincerely wish to respect other peoples' rights is rather pleasantly indicated by the offer, which they are said to have made, to guard the works themselves against the violence with which they were threatened. It seems as if the acceptance of this well-meant offer would have done much to restore good feeling between the owners and the men, but the sheriff of the county thought best to decline it. Meanwhile, matters at the mills are quiet, and likely to remain so, until some acceptable mediator steps in. According to the newspapers, the real difference between the men and their employers amounts only to a dollar a "billet" for steel making. The recent price was twenty-five dollars. The manager of the company, finding business dull, gave notice that he could only pay twenty-three. The men offered to accept twenty-four, and an equal, or perhaps, even smaller concession on the manager's part would have obviated all trouble, but he preferred a contest, rather than concede anything.

NOW, as every one knows that the profits of steel-making at Homestead have been enormous, and there has hardly been such a decline in the value of the manufactured material as to require a reduction of ten per cent in the cost of the labor needed to produce it, the manager's position will seem to most thinking people to be unreasonable; and even if it were more reasonable than it appears to be, he has no right to forget that he is dealing with men and fellow-citizens, who are entitled to have their necessities considered. Circumstances have permitted Mr. Carnegie to make an enormous

fortune out of his business. Probably his income for a month would pay the difference between what his manager offers, and what his men are willing to accept, for a year, and, if the profits of the business at present are not sufficient to warrant the paying of the difference, he could do nothing with a part of his private income that would give him more pleasure than to make up the deficiency out of his own pocket. There is no question that most of his men are as good citizens, and as good Christians, as himself, and, unless the temper of the manly and self-sacrificing iron-workers has greatly changed of late, there are very few of them who would not cheerfully contribute a twelfth of their own yearly wages to save from distress an employer whom they believed to be sincerely attached to them, and anxious for their welfare. As between the masters and the men, in the great strikes of skilled and intelligent workmen, the fortitude, unselfishness and quiet self-control are found mainly on the side of the men, and it is a pity that some way cannot be found for utilizing these virtues in some better cause than the destruction of the industry by which they live.

SOME novel doctrines were brought forward, both by the Court and the counsel, at the trial of a mechanics' lien case in Washington a few days ago. A Mrs. Young contracted with one Walter, a builder, for the erection of a house, which was to be completely finished by December 1, and to be paid for in eight instalments, as the work progressed; and the contractor agreed to forfeit five dollars a day for delay beyond the stipulated time of completion. Six of the instalments had been paid, when, on December 17, sixteen days after the stipulated time of completion, Walter abandoned the work, leaving it still unfinished, and \$1,163.91 of the contract price still unpaid. Mrs. Young then, without unnecessary delay, went on and completed the building according to the contract, with the help of other mechanics, at a cost of \$544.60, but, by using all reasonable effort, she was unable to get it done before May 23 following. The forfeiture for this delay beyond the stipulated time of completion would, at the agreed rate, be more than the remaining balance, still unpaid, of the contract price, so that Mrs. Young would, under the contract, owe the builder nothing at the termination of the transaction. Meanwhile, however, a number of mechanics' liens had been filed. The first, for \$492, was entered by Whelan, the plumber, December 17, the day that Walter abandoned the work. Others followed, until the aggregate of the claims was \$2,315.53. On the trial of the liens, Whelan's claim was dismissed, as it appeared that he had been working for Walter on several houses, and had mixed the accounts for the different houses together, and, although he had received payments on general account from Walter while he was working on Mrs. Young's house, a part, at least, of which were presumably intended to be for his work on that house, he had given no credit for any part of these in making up his claim against Mrs. Young. Of the other claims, the court in which the cases were first tried allowed \$1,772.53; and both sides appealed.

THE appeal was heard at the General Term, and the decision reversed, as to the claims which had been allowed by the court below, and sustained as to the others, thus dismissing all the claims, on the ground, briefly, that the amount of the claims exceeded the balance of the contract price remaining to be paid at the time of the filing of the liens. It will be remembered that the New York mechanics' lien law expressly provides that owners shall not be liable for the claims of mechanics and material-men beyond the balance of the contract price remaining to be paid at the time the claim is filed. The statute of the District of Columbia provides that "the said lien shall not exceed or be enforced for a greater sum than the amount of the original contract for the erection or repair of said building or buildings"; which may mean that the owner shall not be obliged to pay more than twice over for his building, or more than once, according to the interpretation put upon it. It has, however, been held before by the District courts that the proper meaning was that the owner should not have to pay more than once for the work; and, in the present instance, the Court explained the relative position of the contractor and subcontractor, in regard to liens, by saying that "The builder is 'entitled, upon filing his notice, to a lien on the property for

"the whole contract price. Two persons, however, cannot have distinct liens for the same debt; and as the law also gives the sub-contractor a right of lien, it would seem to follow that upon filing his notice of lien he intercepts so much of the contract price as the builder is to pay him, and to that extent displaces the builder's lien, or right of lien, and becomes lienor in his place. In this way, and to this extent, he acquires a preference over the builder." Moreover, the court went on to say, "As between the owner and the builder, the law gives no backward relation to the lien of sub-contractor or material-man, and there is nothing in the statute to take it out of the general rule, that the lien should operate only from the giving of notice on the record." All this is very neatly and logically put, and if logic were capable of being applied to mechanics' lien laws, the decision of the Washington Court would form a valuable precedent; but in most States the mechanics' lien laws are intentionally and avowedly licenses to rob, under which mechanics, who are assumed, not without reason, to be poor men, unable to collect the wages due them by the ordinary processes, and driven by necessity, are authorized to put their hands into the pockets of the owner, who is assumed to be rich, and help themselves to the money they find there, to the amount of the wages due them from the builder, without inquiring whether the owner may not already have paid the builder, under the contract, for their labor; and such statutes, although pleasing to the eye of philanthropic enthusiasm, present little attraction to the reasoning man. The counsel for one of the claimants in the Washington case, to explain the justice of mechanics' liens in general, denied the theory that, under such contracts as that between Walter and Mrs. Young, the contractor was the agent of the owner to bind his property by sub-contracts, either express or implied. The Court, fortunately for the unhappy owners in the District of Columbia, rejected this notion without hesitation. "There is no privity," it said, "between the owner and the sub-contractor, and the rights of the latter as against the owner are purely statutory, and do not grow out of any privity of contract. Otherwise, the owner would be bound by every admission and declaration of the contractor in his dealings with his employés and sub-contractors, and would be committed to obligations which he could not anticipate, to persons whom he never heard of."

THERE is, perhaps, no point in which this country is so far behind the rest of the world as in that of commercial conveniences for seaport towns. Our inland traffic is well accommodated, and even the coal cargoes, which fill most of the coasting vessels, are transferred with tolerable facility from the hold of the vessels to the cars alongside; but the manner in which foreign ships are loaded and unloaded in our principal ports is ludicrous, or, at least, would be so, were it not for the thought which it suggests, that no great commercial prosperity is likely to return to this country, with or without free ships, until our methods of handling ocean-borne freight are brought, to some degree, into conformity with those of the rest of the civilized world. It is a familiar remark among merchants in New York, that to get goods from the steamer, at the pier, to the railroad cars by which they are to be transported to the consumer, costs more than to bring them from Liverpool, or London, or Bremen, or Havre, or Genoa; and that, after they have been put on the cars, they can be taken a thousand miles, to Chicago or St. Louis, for less than the expense of hauling them across New York City, from the pier to the railway station. The tax on out-going commerce is hardly less heavy. Of course, outward cargoes consist mainly of grain, or agricultural products of some sort; and although there is tolerably efficient elevator-service at Brooklyn and Jersey City, the elevators themselves are supplied by a clumsy system of lighterage, and it is by no means always convenient for a foreign steamer to leave its New York dock, and spend several days at another, for the simple purpose of taking on board its return cargo.

IN Boston, the helpless fatuity of the means employed for transferring goods from sea to land conveyance is even more pitiable. Most of the railroads which connect New York with the vast and rich interior of the country at present terminate on the west side of the Hudson River, and, so long as the only great railroad which reaches New York by land cares nothing about what becomes of the goods which it has once

dumped in its freight-yard, the others are, at present, unable to do much to improve matters; but Boston is the common terminus of a vast system of railways, reaching every important point in the whole North American continent, which penetrate to the heart of the city, and, in many cases, have tracks laid on the very edge of tide-water. In any European seaport above the fourth-rate, the water-front, under such circumstances, would be laid with a system of tracks, with cranes erected at short intervals over them, by means of which cases would be transferred immediately from the vessels in the dock to the cars by which they were to be carried to their destination. At Hamburg and Bremen, the cranes run on bridges, a few rods apart, extending from the water's edge to a row of warehouses parallel with the dock front, and leaving space between them and the edge of the water for a double-track railway, which passes under the bridges; so that goods are hoisted from the hatches of the steamers, and swung either into the cars waiting beneath the bridges, or into the warehouses, as may be ordered, and, as the cranes, in the more recent instances, are operated by electricity, a touch of a switch controls every movement of them and their load. Nothing could be more painful, to the merchant's eye, than the contrast between this method of handling goods, as perfected by the most prosperous and determined commercial people on the globe, and that practised in Boston, a city far superior to Bremen, Hamburg, London or Liverpool in natural commercial advantages. At the principal Boston dock, if an old wooden wharf deserves that name, a single line of railway is seen, belonging to a company which, for the sake of securing the monopoly of this traffic, has condescended to extend to the waterside a crooked and ill-conditioned branch. On its arrival at the wharf, however, the track, instead of being laid at the front of the pier, so that goods can be lifted from the vessels to the cars, retreats as far from it as the limits of the pier shed will permit, so as to exclude all chance of a direct transfer. At first sight, the idea of laying the tracks of the railroad intended to receive and deliver goods at a distance of a hundred feet or so from the dock front at which the vessels lie that bring and carry the goods away appears inexplicable; but the explanation will perhaps dawn upon the spectator as he watches the wharf teamsters, who, for a liberal compensation, take the cases which the steamer's hoisting-booms deliver near the water's edge, pull, tug, roll and push them up a plank into the tail of a cart, whip up their horses, transport their load across the shed, a distance equal to about three times the length of one of their own teams, and push, tug, roll and pull the cases out of their carts again, and upon the platform of the car by which they are to be carried to their destination, perhaps Denver or Mexico. If the goods are fragile, the destruction caused by the rough handling of the teamsters is frightful, but neither the remonstrances of the owners of the goods destroyed, the complaints of the people who have to pay the destroyers an unconscionable price for their worse than needless services, nor the humiliation incident to the natural comparison between this childish arrangement and the masterly planning of foreign seaport conveniences, seems to have any influence in promoting a change. Meanwhile, such remnant of foreign commerce as the United States still boasts is fast slipping away. Before long, all the immense mail service between England and Asia and Australia will probably be carried from a Canadian port, through the whole length of British America, and shipped at Vancouver, in English steamers, to its destination, simply as a result of efforts which the American trans-continental lines might have made twenty years ago, if they had seen fit to do so.

WHE International Art Exhibition at Munich, to which we called attention some time ago, seems, from the account of its opening given in the *Deutsche Bauzeitung*, to have been a great disappointment, so far as architecture is concerned. It will be remembered that the management expected to be able to show an extensive collection of drawings, left by Semper, Hansen and Ferstel; and interesting contributions were expected from Italy, France and England, and were hoped for from this country. In point of fact, all these attractions are conspicuous by their absence. No works of either Semper, Ferstel or Hansen are to be seen, nor is there a single contribution from France, England or the United States; while Italy sends a solitary drawing. The whole number of architectural exhibits mentioned in the catalogue is only fifty-three, and Germany furnishes thirty of these.

MODERN ARCHITECTURE.¹—III.

WE might follow up this survey of public edifices with an interesting series of private residences; but we do not care to repeat what has already been published on the subject in the articles on English architecture (see *American Architect* for February 21, 1891, *et seq.*). We must, however, add that nothing is more stereotyped than an English dwelling-house, though clothed with an appearance of capricious variety. The cottage especially, which is universally considered the ideally comfortable rustic home, embodying the owner's individual tastes and conceding nothing to the factitious demands of a false regularity or pedantic symmetry, in a word, this masterpiece of rational freedom and rustic grace is, in our opinion, as far removed from originality, as monotonous and as conventional, as the most classically decorated brick and mortar house that can be found in the most *bourgeois* suburban district of Paris. The impression produced by a first specimen of this sort of construction is very far from being unfavorable; but as we have already had occasion to remark, the sight of a second or

19, laundry; 20, larder; 21, cook; 22, vaulted doorway; 23, 24, bedrooms; 25, kitchen court; 26, avenue; 27, meadow; 28, vault; 29, garden; 30, fountain.

To apply the heavy classic regularity of the palace of Versailles to a country-house that would not admit of more than three windows on each façade was certainly a gross error, of which our French architects were long guilty; and we must congratulate ourselves that they freed themselves some years ago from this bondage, by accepting a certain amount of irregularity when the character of the site quite naturally called for it; by varying their choice of a decorative system according to the importance of the structure; and by drawing on all sorts of materials for means to make the ornamentation supple and varied. But the English early went over to the opposite extreme and there they have remained; avoiding in the general style everything suggestive of composition, adaptation and harmonious disposition, they stranded on the most unlooked-for reef—and yet the surest to be encountered in the circumstances—namely, monotony. These contrasting courses are the result of national differences of temperament; but there is more than

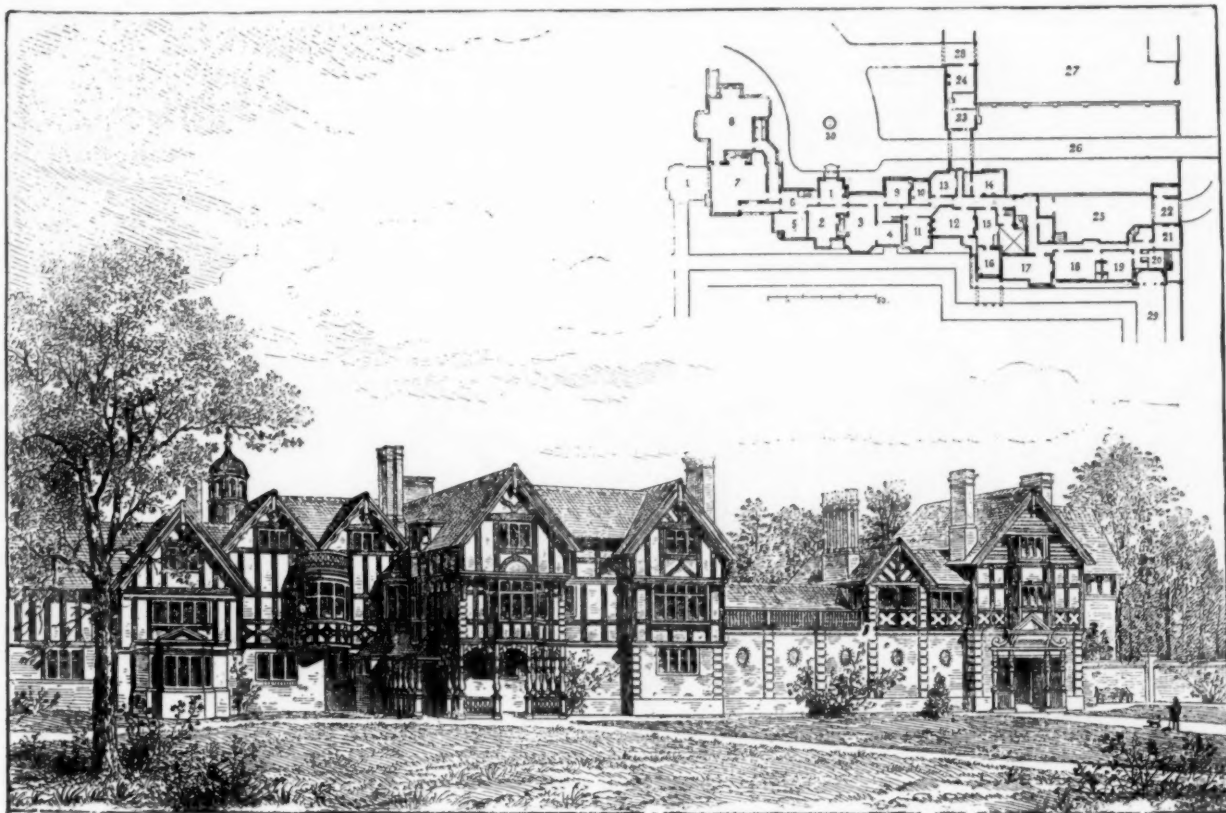


Fig. 14. Ascott House, Leighton, Eng.

a third, with the same wooden exteriors, the same gables, the same bay-windows, the same rambling projections, the same headless and tailless plans, the same intentional irregularity and carefully disposed disorder is irritating to persons most leniently inclined toward artistic caprice.

We will present here but one example of these picturesque dwellings; it is sufficiently characteristic to show their main features, amply so, in fact, for any one who has seen one English cottage has seen them all. Attention is asked particularly to the labyrinthine plan (Fig. 14). We have selected this work of Messrs. Williams, West and Slade for the very reason that it seems to us to embody all the merits and defects of the style, a certain rustic grace and a picturesque *ensemble*, if this term can be employed here, together with the most carefully planned incoherence.

The following legend shows the distribution: 1, hall; 2, parlor; 3, 4, dining-room; 5, boudoir; 6, staircase; 7, drawing-room; 8, billiard-room; 9, sleeping-room; 10, servant's-room; 11, workshop; 12, custodian; 13, butler; 14, pantry; 15, servant's-room; 16, maid; 17, servant's hall; 18, kitchen;

that in it; the rambling cottage reaches the importance of an institution in England, a fact most cleverly stated by our collaborator, Mr. L. Harvey, who is thoroughly conversant with the tastes and natural bent of both nations. We quote his words:

"The young English architect is schooled to incoherency as the young Frenchman is to system and monumentalism, so that their positions are exactly the reverse of each other. It is for this reason that the former will force rambling plans on his worthy client and invent caprices for him, if he has none of his own. For instance, here is a building in process of construction, or barely completed, for a wealthy man. The owner is least of all an eccentric person; on the contrary, he is by nature, by tradition and by education perfectly balanced and opposed to every species of *mise en scene*. His father began life as a modest mechanic; but, owing to the exceptional intelligence and no less exceptional good luck, he succeeded in making twenty millions, which he transmitted intact to his son. The latter received a simple, sound education in the city of Marat and Rousseau, that is in Geneva; he is therefore an Englishman trained in Continental ideas. Would any one suspect it on looking at his house? And should we err in

¹ From the French of P. Planat, in Planat's *Encyclopédie de l'Architecture et de la Construction*. Continued from No. 863, page 22.

surmising that our friend had yielded to the lead of his young architects? I am told that they were young.

"But I am reminded that one factor has been overlooked, and that the most important of all: Madame! Ah yes, madame! My colleagues will all assent to this, will they not? The husband is a negligible quantity in architecture; it is to madame and the architects then that all the merits of this construction must be ascribed. I regret that I have not the honor of her acquaintance, but I do know this: though the man is usually a more or less isolated unit in every country, the woman, on the contrary, is the faithful keeper of the sacred trust of national character. In the present problem it is then a matter of some moment for us to make the acquaintance of madame; we have only to substitute for her any other English lady whom we may know, and we can draw our inferences with due certainty. The resultant is invariably the cottage which I have the honor to submit to the consideration of your readers.

"What course would a Continental take in our friend's situation? Proud, and justly so, of the great wealth acquired

English woman and her architects; it is not stone, nor marble, nor rich sculptures that they long for; what they do want is a document in masonry which will tell the passer-by in unmistakable language that, centuries before, the family had begun with a cottage, and that little by little additions had been made to the original structure until, after the lapse of centuries, the dwelling had become a gigantic aggregation of small buildings. Their aim is not a castle but a village occupied by a single proprietor.

"This idea once comprehended everything is accounted for, not excepting the chimney passing straight in front of a tower window; it is even a delicately poetical detail, which I commend especially to the admiration of my colleagues. This chimney, these little houses, built sometimes of brick, sometimes of stone and sometimes of wood, make our friend fancy himself on his ancestral estates—a sweet illusion which it will henceforth be almost impossible for him to throw off, thanks to his architects. They, seconded by his wife, have produced a work of genius, for everything, even to the mural paintings of

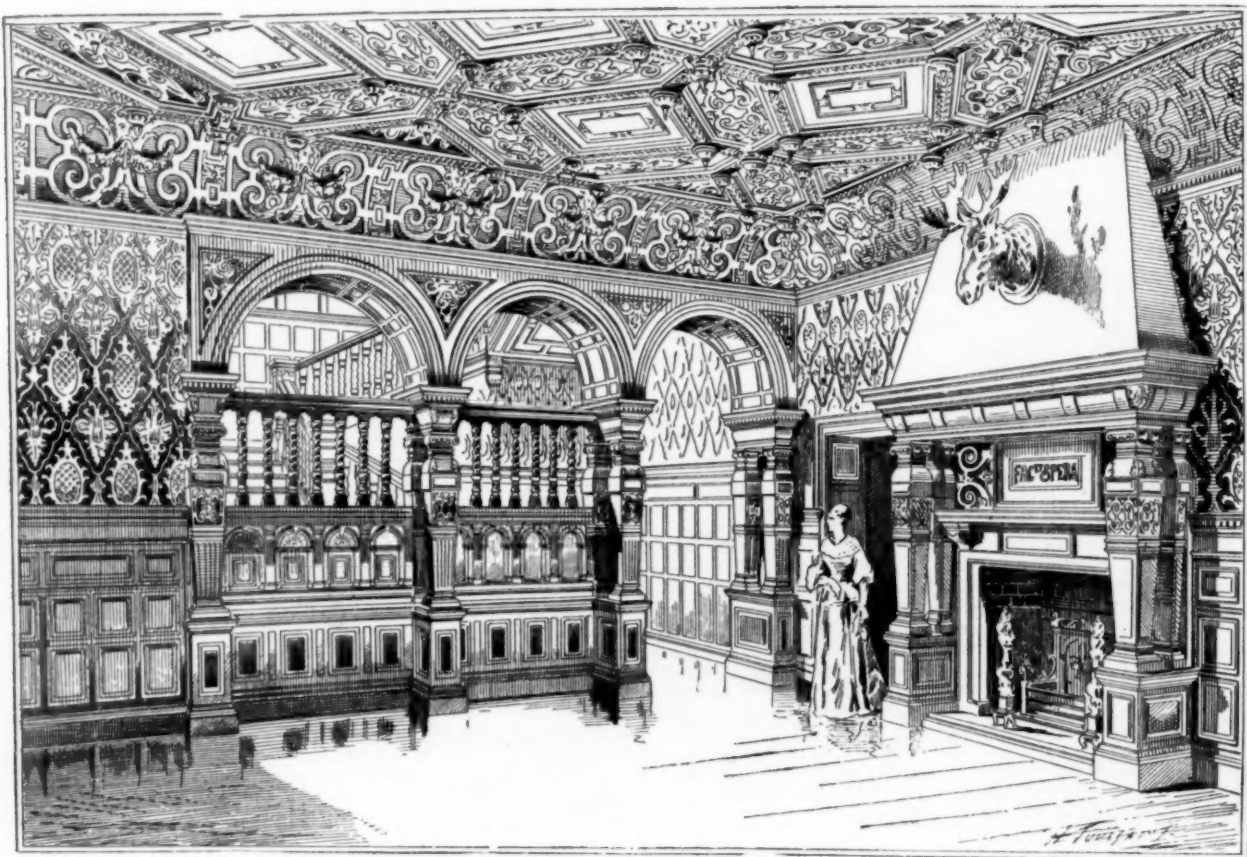


Fig. 15. Entrance of the Hall of Palace Court, Kensington, Eng.

through his father's genius, he would insist upon its being represented in a château, consistent throughout, and his own creation, as Versailles was the creation of Louis XIV. It would probably comprise a central pavilion surmounted by an immense roof, with symmetrical wings running off at the sides; the pavilion, wings, windows, doors and even chimney-stacks would all be drawn up in order like a regiment ready for review. He would build his castle of the most beautiful freestone obtainable, and it would be preceded by terraces and gardens adorned with fountains and statues. His money would be fully represented. Moreover, as an amiable man, he would take good care not to hide all these treasures, but would so arrange things that the humblest passerby could gaze on them through the grated gateway from the departmental highway.

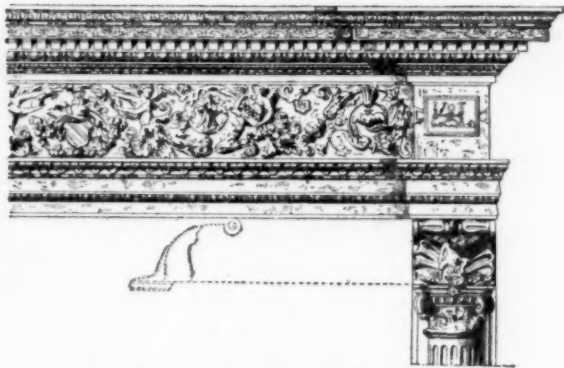
"Such are not the ideas of grandeur that an English lady cherishes for her husband. In my day at Paris, M. Boucicault had not yet erected the magnificent Bon Marché stores; he still pointed with legitimate pride to the very small house in which he had opened business as a hosier; later he added first this shanty, then that until gradually he came to own an entire street. This sort of agglomeration constitutes grandeur for the

the staircase, where one of his ancestors is depicted commanding in the army of the Crusaders, under the very walls of Jerusalem—carries the family into a purely ideal life; but is not the ideal the very essence of art?

"Nothing remains but to christen this complex, though harmonious, whole a *hall*, to inform any one ignorant of the fact that the family must have originated on these very domains, at a time in the remote past when beasts and retainers, lords and domestics, all slept under the same roof, in a single apartment termed the hall; and the hand is played."

We produce one more example, the entrance to the hall of Palace Court, at Kensington. Messrs. W. Harvey and Bernard Smith, as English architects are fond of doing, modelled this structure after the manor-houses dating from the Renaissance period, a large number of which are still in existence. We should note, however, that the caisson ceiling shown here is a departure from the decorative system then in use and frequently copied now, a specimen of which is presented in Figure 37, English Architecture (see *American Architect* for February 28, 1891).

[To be continued.]

BIOGRAPHICAL SKETCH OF MR. S. D. BUTTON,
ARCHITECT, PHILADELPHIA.

Mantel, Now in the Musee de la Porte de Hal, Brussels.

AN event of interest possibly to the architectural profession generally, is the attainment of his eightieth year by one who is probably the oldest practising architect in this country, Mr. S. D. Button, of Philadelphia, who fortunately retains his faculties unimpaired and a carriage and bearing that many men twenty years younger might envy, and still draws his plans and details with clearness and decision, remembers facts and figures distinctly, and can see to read and write without artificial aids.

It was thought a fitting occasion by some Philadelphia architects in combination with old time pupils, now widely distributed over the States, to present a congratulatory address, illuminated on vellum, expressing their feelings in the following terms:

"Presented to Stephen Decatur Button, June 8, 1892, by brother architects, desiring to congratulate him on entering the eightieth year of his age, as an expression of their respect for an honorable career extending over half a century, and remarkable for many important public works, executed with integrity before clients and fellow-citizens; an unassuming and courteous bearing, a self-abnegation, combined with generous helpfulness and an ever-ready counsel for his younger associates, to whom he has endeared himself as a model of right-minded and faithful dealing."

The architects of Philadelphia have reason to be grateful to Mr. Button for the loan of his valuable architectural library for their general use during the last fifteen years and for the recent free gift of these books to the Philadelphia Chapter.

We must carry our minds back to the time when under the presidency of James Madison, the United States in 1812 had declared war against Great Britain and though our army had been generally unsuccessful, the brilliant exploits of a daring little navy, pitted against "the mistress of the seas" had saved the country from complete discouragement and had proved at last that the English were not invincible afloat. The American people were wild with excitement over the victories of one of its naval commanders, Stephen Decatur, when Captain Roswell Button, then in command of a company of militia defending the harbor of New London, received news of the birth of a son on June 8, 1813. Hurrying home to Preston, New London Co., Connecticut, for a brief period, he in the enthusiasm of the moment declared that his child should be named Stephen Decatur Button.

Upon his father's farm young Button remained until the age of sixteen, when his uncle, Samuel Button, a prominent builder in the adjoining town of Griswold, Conn., apprenticed him to the carpenter's trade; he there became thoroughly grounded in building construction, learned geometry, and gradually imbibed a love for the most ancient and the most necessary of all arts by industriously drawing and studying the five orders of Roman architecture.

At the age of twenty-one, after completing his apprenticeship, he removed to New York and became an assistant to Mr. George Purvis, architect, a Scotchman by birth who had graduated at the High School, Edinburgh, and subsequently had been a pupil with the celebrated firm of Cubitt Bros., of London.

About the beginning of this century there were perhaps not more than five qualified architects in the whole country, but they maintained much of the purity of style upheld in England, more especially by Sir William Chambers and his pupils, so that some of the public buildings of that period are very worthy of our attention and study at the present day. By way of comparison it may be interesting to note that for the New York City-hall, begun about 1803, a premium of \$350 was offered for a plan and four elevations and the pay of the selected architect, Mr. McComb, was fixed at \$6 a day for each and every day he should be engaged upon the building, which took about ten years to complete.

The stone-cutters' wages appear to have ranged from \$1 to \$1.25 per day, the day being fourteen hours in winter and fifteen or sixteen in summer. Some of the trades worked up to 9 P. M., six days of the week between September 20 and March 20.

An eye-witness of so many events that pass for ancient history with the present generation, the vivid recollection of the great

changes and of the enormous progress made during the lifetime of our old friend compels an interest in his conversation.

Within Mr. Button's recollection have occurred some of the most remarkable events influencing commercial intercourse, the prosperity of the community and the conditions of life generally, and a conversation with him reveals a mind well stored with facts and their connection with general progress. The building of Fulton's first steamboat in 1807, the great improvements introduced in American clipper-built ships, the swiftest sailing vessels in the world, the commencement of railroads in this country about 1830, and five years later the electric telegraph set up by Morse, all are told of by a man who has lived to see the immense changes wrought on society by these and similar inventions.

It was formerly a customary thing for the architect to combine the businesses of designing and building, so that on leaving Mr. Purvis Mr. Button was occupied for about ten years chiefly with planning houses and putting up many buildings by contract in the neighborhood of Hoboken, N. J.; then he removed in 1843 to Florida spending the winter at Appalachicola, and the following spring went to Columbus, Georgia, to furnish drawings and assist in the erection of a church there.

Few perhaps will be able to realize now-a-days the nature of the multifarious services required from the architect in the early part of Mr. Button's life. He would at times have to begin his building operations by marking the tree in the forest, getting it felled, squared and cut into scantlings and boards, all to be dressed by handwork, as not a machine existed in the whole country; again it was a considerable disadvantage to a man with a genuine enthusiastic love for his profession, above all sordid considerations, to labor under the very low condition of architecture and the small amount of public appreciation of the art at this period, the builder being often of more importance and more likely to be mentioned in connection with any public work than the architect who designed it.

One who knew Mr. Button intimately testifies that he was "a genuine enthusiast in the study and love of his profession and always endeavored to promote the highest art in design and the most thorough work in construction."

While in Georgia in 1843 the citizens of Montgomery, Alabama, advertised for plans for a new State-house, and designs were submitted by architects in New York, Baltimore and New Orleans, as also by Mr. Button, and his were selected as the best; this was his first competition. He was engaged for two years in superintending the construction of this building and at its completion resolved to return northwards and to practice in Philadelphia, where he opened an office in 1848 in partnership with his brother-in-law, Mr. J. C. Hoxie; in this year the discovery of gold in California was the cause ultimately of a great stimulus to commercial enterprises both in the East and the West. The partnership lasted until 1856 when it was dissolved by mutual consent.

The following list represents some of the principal works designed by Mr. Button during the last fifty years:

State-house at Montgomery, Ala.; church at Columbus, Ga.; State Bank at Montgomery, Ala.; Government Agricultural College at Auburn, Ala.; a theatre and many fine residences at Montgomery, Ala.; court-house, insane asylum and cemetery-entrance at Gettysburg; church and bank at Harrisburg; collegiate school at Greensburg; church and female seminary at Chambersburg; collegiate school, public school, school for soldiers' orphans, fine church and many elegant residences at York; collegiate school at Huntingdon; Eagle Hotel and three churches at Bethlehem; theatre at Johnstown, and many stations and railroad structures on the Cumberland Valley Railroad.

In Philadelphia Mr. Button erected the first fireproof structure, the Pennsylvania Railroad office at the corner of Fourth and Willing's Alley; Delaware Insurance Building, Third and Walnut Streets; Spring Garden Institute, Spring Garden Bank, Spring Garden Lutheran Church, German Reformed Church, Seventh and Spring Garden Streets; Lutheran Church, Fifteenth and Green Streets; First Baptist Church, Broad and Arch Streets; Kensington Mariner's Bethel, Fifth Street Market House, Eleventh Street Market House, Chestnut Street Theatre, Reading Railroad Station and Depot at Ninth and Green Streets, and many of the handsomest iron and stone business houses on Chestnut and Walnut Streets, as well as many of the handsomest private residences around Rittenhouse Square.

In Delaware Mr. Button has left the impress of his art, and beside city-halls, bank buildings, schools and residences, he constructed the State Insane Asylum.

In New Jersey he constructed the city-hall, seven churches and thirteen school-houses, two ferry-houses, a bank and many fine residences in Camden, the new jail at Woodbury, insane asylum, hospital and almshouse at Blackwood, and almshouses for Gloucester and Cape May Counties, Stockton Hotel at Cape May, Howland House at Long Branch and a large number of country residences, hotels and public buildings throughout the State.

He married a Massachusetts lady, and has two children: W. G. Button, an engineer with the Thomson-Houston Electrical Company, and a daughter, Miss Maria Button, who lives at home, and is an artist of ability.

Mr. Button's design in his best public buildings was always more largely influenced by the architecture of the Italian Renaissance than by the Gothic style. Not that he was a servile imitator or

copyist in any sense; he made architecture grow from a conveniently arranged plan to an appropriate, simple and stately structure without overloaded ornament. Fresh in the memory of his pupils is his emphatic denunciation of the attempted revival now known as "Victorian Gothic," with its knife-whittled chamfers, and his comparison and loving exposition of the greater purity of Classic proportions.

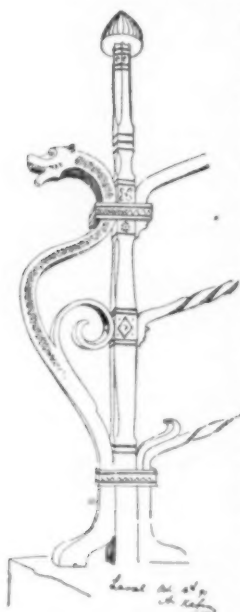
There are, however, several large churches designed by Mr. Button which show his full appreciation of simple effect and good proportion in Gothic work, without over-elaboration of detail.

Mr. Button has always been keen to observe and encourage as far he could any indication of talent which fell in his way, and not a few mechanics and handicraftsmen owe their success to the help and guidance, and even substantial assistance, which has been bestowed to influence their efforts, and among the numerous pupils and draughtsmen who in the course of half a century have done service with him are many men now widely scattered in prominent cities of the States, who remember their old friend with the greatest esteem. As an instance, one old pupil writes: "To us 'boys' (our hairs are turning frosty) it seems a rare distinction to have reached your eightieth year and yet be in the forefront with the architectural harness buckled on, and we feel that you have achieved what we never can, not only in the number of years of active practice and important commissions executed, but in your influence exerted in so many ways for the advancement of our art."

"We gratefully bear witness to the kindly and helpful spirit you always manifested towards us students, the forbearing manner when criticising our early efforts, and we acknowledge the heritage we received from you of whatever we possess of true enthusiasm for architectural art, an enthusiasm far removed from the sordid spirit of mere money-getting."

When all who have come into closest contact with Mr. Button are unanimously agreed upon the points of his character, it may be said without fulsomeness that the life of this generous and withal modestly retiring man, with his genial sympathies and youthfulness of spirit preserved up to date, is one affording a rare example. "A blameless and beautiful life to look back upon, in which nothing can be remembered that will not bear the scrutiny of the sunbeam, showing always a true independence of spirit and a willingness to stand alone and to make personal sacrifices, if need be, in maintenance of principle, never suffering principle to be moulded or manipulated for the sake of expediency or policy. He has sought nothing and gained nothing from it save the testimony of his conscience and the respect of good men."

THE INTERNATIONAL CONGRESS OF ENGINEERS AND ARCHITECTS IN ITALY.



FOR the first time, Italy recently invited the engineers and architects of the world to a congress. Until now only national congresses have been held, but Palermo took the occasion of her Exhibition to initiate international congresses of the professors of our art, and it is desirable that the example should be followed. Italy is, in truth, the country of congresses. We have them of all kinds, and so frequently as to make one wonder whether our own scientific men, artists and manufacturers wish at every moment to discuss the problems which most agitate the modern intellectual life. Among the many congresses which are thus held in Italy, few are more opportune than those of the engineers and architects, because, as you know, among us, on account of the imperfect instruction offered to architects, particularly in regard to the most practical questions of professional life, nearly everything has to be gone over again. In the work of reorganizing and arranging, the votes of the congresses ought to have a real importance, which should not escape the notice of legislators.

The First International Congress of Engineers and Architects, therefore, could not but be received with special sympathy by our colleagues, whom the Executive Committee at Palermo invited to treat of very practical subjects, as I shall show you. The Congress divided itself into eight distinct sections, thus: I. Sanitary engineering, including the laying-out of towns. II. Architecture in relation to civil constructions, including considerations of hygiene, social science and legislation. III. Bridges, streets and tramways, with related questions of security, economy and legislation. IV. Construction and operation of railways, with their relation to public security, economy, military service and legislation. V. Hydraulics, maritime, fluvial and industrial. VI. Physical, technological and industrial apparatus, with questions of safety, economy and legislation. VII. Engineering in its various applications to military purposes.

VIII. Geodesy, topography, plotting, estimating and agricultural Engineering, with economical and administrative questions.

Evidently, all questions pertaining to our profession are included in this extensive programme, whose vastness itself ought to give you an idea of the importance of the first International Congress ever held in Italy among engineers and architects.

To show you how the affair was organized, I should say at once that every adherent to the Congress was requested to propose one or more questions for public discussion before the assemblage of members. The question proposed for discussion had to be first accepted by the Executive Committee, and then by two-thirds of the members present. Certainly, the preliminary announcement of the subject is preferable, since every one can prepare himself for the discussion, which, moreover, proceeds more smoothly. This was the opinion of the Executive Committee, which had also another excellent idea, which was to add to the formal event of the Congress a programme of artistic and scientific excursions through the island. These excursions, directed by the chief of the provincial bureau for conservation of historical monuments in Sicily, revealed to many of our colleagues a treasure of beautiful things: Girgenti, Siracusa, Catania, Taormina, Messina are districts which the great majority of artists, even Italian artists, know only from photographs and descriptions in books, so that you may judge of the value of these Sicilian excursions, each of which was made still more useful by the comments of a learned local antiquary, a devoted lover of the monuments of which he was the official guardian.

Excuse, if you please, this digression, which is not quite superfluous, and listen further. I will mention, as I promised, the principal questions considered, but I confine myself particularly to those of general importance.

"What economical and technical consequences would come from the limitation of the working-day to eight hours in public works and contracts for ordinary constructions?"

To-day, when the question of working-hours and wages is continually raised in industrial agitations, the study of the economical and technical consequences flowing from the limitation of labor to eight hours is a problem of the greatest importance. The person who proposed it was unable to demand from the Congress a definite resolution, but only the technical reasons for the consequences incident to such limitation. He presented the question in its true shape, making comparisons, offering facts and reasons, substantiated by figures, drawing conclusions unfavorable, from an economical and technical point, to the limitation of the hours of labor. His views, on the other hand, favored the determination of a minimum rate of wages—a determination which has already an example in the municipal regulations of Milan—in order that labor may have a reasonable recompense, not subject to the influences of dishonest competition. This conclusion, which was accepted, has a certain importance, as you see.

Another important question was the following. I do not know whether, in architectural competitions in America, a thing happens which frequently occurs with us—the promulgation of a programme which lays down many requirements, and fixes a limit of cost for the execution of the work which is quite insufficient, so that the architects often find themselves obliged to fail in some way to conform to the programme, either providing less accommodation than is required, or suiting their design to the programme in this respect, and so deceiving the public authorities or the juries. From this comes the importance of the present question: "By what criterion ought to be determined the sum necessary to carry into execution works made the subject of architectural competition; and by what rules should be fixed the premiums offered to the authors of the competitive designs?"

"Considering that science and art are cosmopolitan, what method should be taken to unite the various societies of engineers and architects with similar international bodies?" This theme, therefore, was proposed for discussion. The member proposing it maintained that it was now desirable to found a single association, with a central seat at the capital, and autonomous provincial sections. He argued that it was also desirable to have, every three years, an assembly of delegates, representing the various international associations, and instructed to deliberate upon acts and the needs of the association during the three years' interval; and finally he advocated the holding, every ten years, of an International Congress, for the discussion of the most important questions of international interest. This idea is certainly a grand one, but it was observed that it would be difficult to carry out the scheme, and that the wishes of the essayist would be sufficiently met by the intellectual relations already existing among those who cultivate the sciences of architecture and construction, through the medium of books, reviews and technical journals. As if by way of comment on the preceding inquiry, was presented a proposition for encouraging the publication and circulation of works on engineering and architecture. Each society of engineers and architects, it was argued, ought to reserve a certain sum for the encouragement of technical publications. The authors who wished to avail themselves of the encouragement offered, ought to be obliged to publish their works in the language spoken in the city which should be the seat of the Society or Congress offering the prize, or in a common language, to be adopted by the various societies of engineers and architects who should have approved the present convention. Each society should get such help as it could for the publication of such works, whatever they might be, provided

only that they were technical in character, from its own members, and should also endeavor to interest its own Government to lend assistance in the dissemination of works of real excellence, published upon the history or practice of engineering or architecture. "If moreover, the government could be interested in the matter, it would be very desirable to form, in the museums of the various universities and technical schools, collections of the natural and artificial materials employed in building and other industries, indicating their physical, chemical and mechanical qualities, in the interest of science, industry and hygiene." One of the most important requisites for industry, construction and hygiene, is that the engineer and architect who direct works of construction should have full knowledge of the materials which are to be adopted, inasmuch as upon the goodness of the materials used depends the success of a work of construction or of a manufacture. It is here that in the great centres, and for important works, tests may be made of the different materials, before adopting them, or permitting their employment; but, if this is easy for those who stand at the head of public works, it is not so easy for private practitioners, particularly if they live remote from the great centres. It would, therefore, be useful, as any one can see, to initiate a series of publications, explaining the qualities of the materials of different districts. In these should be indicated the resistance of each material, under different circumstances, its geological and chemical constitution, its lithological, mineralogical, stratigraphic and petrographic character, the most common use to which it was adapted, the normal cost, with relation to the dimensions and mode of working of the pieces, the locality where it was obtained, the annual production and the ordinary dimensions. There are, it is true, at least among us, works by distinguished authors on the different sorts of materials, on their resistance, porosity and permeability, but these are scattered and incomplete, and employ varying standards of comparison. The coordination of all these researches and studies would result, evidently, in an economical advantage, if not in any other.

Among the many inquiries proposed to the International Congress was also one curious one, as follows: "To seek for means of forming in Italy an architectural style which shall be modern and national." Do you not agree with me in thinking this a singular proposition? Every one knows that an architectural style is a complex and living organism, which cannot be formed by a vote of even an International Congress; but the proposer of the inquiry, basing his argument on tradition, and thence on our past history, which inspires and directs the imagination of architects, presented conclusions which were summed up in the following formulas, which I offer you as a curiosity.

1. That the general rule should be to make the construction and decoration depend upon the use and destination of the edifice. (Valuable but not wholly new.)

2. That the Italian architecture of the past, from which those who wish to practise a national architecture should inspire themselves, and to which the instruction in the schools of art should particularly devote itself, is that produced from the XI to the XVI centuries, in response to the different conditions of Italian life, and under original types. (This gives an extensive range, but so much the better.)

3. That, as the traditional elements can refer only to mural construction, the adoption of new material should be to practise independently of tradition, under original inspiration.

It would have been better if the proposer, instead of giving the impression that he was preparing a book of receipts, for modern Italian architecture, had said to the architects, "Seek in the nature of modern requirements, and of the materials most in use, the forms of contemporaneous architecture, and bend courageously your steps toward a reaction, which will release you from the artistic past, which now saturates and atrophies the nervous centres of your personality. Do you not think that this would have been preferable? But in Italy, traditionalism rules always, and its worship so blinds the eyes of the mind as to render the presentation of such questions possible in an International Congress.

Another question was: "What are the conditions of modern architecture? and if it has declined, what are the means for checking such decadence, and for restoring the value and prestige of this art?"

The proposer believed that the decadence of architecture in Italy might be checked by the regulating of architectural instruction, that is, by the establishment of true and complete schools of architecture. Truly a modest wish; but we have had enough. Let us pass on.

More practical and sensible was the following question: "What is the best arrangement for workmen's dwellings, keeping in view climate, hygiene, economy, and the habits of the population?" This was presented with a very considerable accompaniment of results of study and research, and with a series of comparison of extreme utility, which I would describe to you if I had space to do so. But, who knows? perhaps I will return later to the subject, and write specially about it, as the construction of workmen's houses interests deeply the new as well as the old world.

Another practical question was the following: "What would be the most rational and economical system for paving great dormitories, hospitals, barracks, refectories, etc.?" To this I should add, as a natural complement, this other: "What would be the most rational and economical system for paving the streets of great cities, particularly for the most frequented ones?" I do not here mention

certain inquiries of local importance, which, however, have their interest, as, for example, the following: "Whether, for uniting Sicily to the Continent, a subterranean tunnel, or a bridge across the Strait of Messina, would be preferable?" Or this other: "Upon the utility of promoting in Italy, as is done in other countries, the study of hydrology, both superficial and subterranean, and of establishing for the purpose a suitable corps of observers, working in harmony with the meteorological observers, in the interest of agriculture and hygiene." I must omit other questions, so as to conclude this long letter on the first International Congress of Engineers and Architects which has ever taken place in Italy. Its success has been complete from every point-of-view. One part of its practical utility consists in its having given occasion for many Italians and foreigners who were unacquainted with Sicily to visit this island with the greatest ease and the most extensive facilities, and hence with the greatest profit.

ALFREDO MELANI.

BLOIS, AMBOISE, CHAMBORD AND CHENONCEAUX.



Basilica dell' "Estrella," Lisbon.

AFTER all, it is not the shop nor the theatre, the musée nor the literary associations, neither the memory of St. Martin nor the presence of the splendid cathedral that brings us to Tours, though we feel the varied attractions of each and all, but that four-fold constellation of bright stars that lie around it—the great royal châteaux, Blois and Amboise, Chambord and Chenonceaux. If one had a mind to do anything so improving one might make an interesting architectural study of these châteaux. Amboise, Blois and Chenonceaux mark three historical stages as prettily as though

they were built on purpose to be labelled "Figures 1, 2 and 3."

Amboise is the mediæval stronghold, the *château-fort*, grim and severe, built on a bluff, with frowning battlements, massive masonry, and cruel machicolations through which melted lead was poured on the heads of assailants; Blois is the royal residence, prepared for defence, yet only incidentally; Chenonceaux is the luxurious villa, for pleasure and not for war. It is built on stone piers in the River Cher (a tributary of the Loire) and connected with the bank by a drawbridge—all of which is a mere caprice and shows a craving, not for safety, but for novelty. These stone piers are hollow and large enough to contain the kitchens and offices, so that the cooking is done, as in a ship's galley, below the water-line. Henry II gave the place to his beloved Diana of Poitiers, and there is a balcony hanging over the river that is called by her name and speaks well for her taste. She had it built outside the window of her boudoir and was fond of sitting there by twilight, we are told. Catherine de' Medici, with the perversity of wives and queens, took a fancy to Chenonceaux herself and made the fair Diana give it up in exchange for Chaumont.

The chief mark Catherine left on the establishment appears to be an oozy stone staircase by which she descended every morning to take a swim in the river. It seems strange but refreshing to associate the *rusée* Florentine with anything so harmless and praiseworthy as a cold plunge. Tasso used to visit her at Chenonceaux, by the way, and I suppose he was harmless and praiseworthy, too—to a certain extent, at least. Mary of Scotland and young Francis II spent their honeymoon here. I should think it might be a very good place to spend a honeymoon. The gardens are beautiful, the river romantic, the village out of sight, and the situation eminently secluded. The château passed out of royal hands some centuries ago, and has subsequently had a variety of private owners. Since 1889 it has been on the market, and was sold just the other day to Emilio Terry, a Deputy to the Cuban Cortes, who has also a handsome establishment in Paris.

Amboise is only about eight miles from Chenonceaux, and the conventional thing is to drive over through the forest. The condition of the mercury reduced the charms of the prospect so much that we prosaically went by rail. Amboise is an uninteresting little town, with four or five thousand inhabitants. The castle is very high up in the air. As a partial compensation for preliminary climbing, the view over the Loire valley is wide and beautiful.

The present owner is the Comte de Paris, who amiably throws open to the public the property he can never visit himself. Perhaps

exile from Amboise is not an unmixed misfortune. I am sure it would give the Count or any one else the nightmare to live there. If ghosts walk anywhere, they must certainly promenade in the gloomy donjons and dark corridors of Amboise, and above all in the courtyard. There it was that the soldiers fell on the Huguenot conspirators and massacred 1,200 of them, while Catherine de' Medici stood at the window encouraging them, and at her side Francis II and his young bride Mary Stuart, fresh from the honeymoon at Chenonceaux. Meanwhile La Renaudie and forty others of the leaders were hanged from the iron balconies outside the banquet-hall on the precipice side of the castle, where the Loire flows a hundred or so feet below. A plot had been formed to kidnap the young King and get him away from the Catholic influence of the Guises, but it leaked out, and the Queen-mother's vengeance was swift and sure.

All one's associations with Amboise are not so bloody, though none of them is especially cheerful. It was here that the Scottish Mary wrote her melancholy farewell to France just before returning to her own bleak country after her brief taste of being wife and Queen.

"Adieu, plaisant pays de France!
O ma patrie
La plus chérie,
Qui a nourri ma jeune enfance."

It was here that Leonardo da Vinci came to paint at the invitation of that patron of the arts, merry King Francis, and here the great Florentine died in the midst of his work and was laid to rest in the château-chapel of St. Hubert, on the other side of the courtyard. This little sanctuary, dedicated to the genial patron of the chase, is a gem of delicate Gothic chiselling — a fit resting-place for a great artist.

It was here that poor young Charles VIII, still in his twenties, full of hopes and ambitions, ended his short career by striking his head against the top of a low stone arch under which he had to pass in going to the tennis-court. To take a slight temporal jump, it was here that the Algerian Ameer, Abd-el-Kader, was imprisoned for five years till Napoleon III released him. During that time twenty-seven of his suite succumbed to the rigor of the climate and were buried in the courtyard.

I suppose there has been fêting and dancing and lovemaking at Amboise one time and another, but the tragedies that have blackened its history have somehow wiped out the memory of it.

It was with a feeling akin to relief that we turned our backs on the grim old fortress and boarded the train for Blois. Blois is flung on the hillside in a higgledy-piggledy fashion that turns several streets into staircases, and must be more picturesque than comfortable for a steady thing. There is a queer old twelfth-century church of St. Nicholas at the foot of the hill that contains a most delectable work of art in the shape of a high-relief altar-piece representing the life of St. Mary of Egypt in several scenes. St. Mary of Egypt was a fair sinner who suddenly repented of her evil ways and retired to a desert to live in a cave around the corner from St. Jerome's. Considering that no chaperon was handy, the fact that this circumstance led to her canonization instead of to a big scandal speaks well for the charity of the period. It is all quaint, but the last scene is a masterpiece of naïveté. St. Mary has died and St. Jerome and his lion are performing the last rites. The grave has been dug and they are lifting her into it, St. Jerome holding her head and the lion, on his hind legs, supporting her feet with all the sympathetic gravity and decorous depression of an undertaker's assistant.

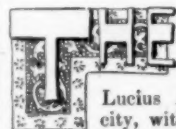
The castle is tremendous. Chenonceaux is a villa, Amboise is a fortress, but Blois is a palace. It is built about a hollow square. On one side are the chapel and the ruins of Catherine de' Medici's observatory. They say she had a passion for astrology, and even dabbled in the black art. The pavilions that make up the other three sides were built at different periods and in very different styles of architecture. The entrance is through the Louis XII wing, a substantial brick structure, chiefly remarkable for the portal—a fine bit of Renaissance work, surmounted by a gilded equestrian statue of the "father of the people." Opposite is the Gaston wing, a frigid and conventional creation of Mansart's in the pseudo-classical style of the seventeenth century. The pavilion that joins these two, at right angles to both of them, the Francis I wing, is a masterpiece of Renaissance architecture and elaborate decoration. The pentagonal staircase in the court is a marvel. Nowhere else can be found such a lacework and broidery of stone, such infinite variety of ornament, such indescribable delicacy of treatment.

The peerless Jean Goujon carved the statues, but a whole army of nameless artists must have worn their lives away in the endless detail of balustrade and cornice. All over the palace are repeated on chimney-piece and pillar, on key-stone and rafter, the royal devices—the salamander of Francis I, the hedgehog of Louis XII, and the ermine of his spouse, Anne of Brittany, *la bonne duchesse Anne*, who united the impracticable Celtic province with the Crown of France after long centuries of warfare. On the first floor are the Queen's apartments—a great many Queens'—but notably Catherine de' Medici's, who died in one of the rooms, and high time it was. On the second floor is the King's suite—a great many Kings'—but the name of Henry III is uppermost in my mind, perhaps because it was here that he had the Duc de Guise stabbed to death, while two monks prayed in an ante-room "for the success of the great enterprise." The next day the Cardinal de Guise was assassi-

nated in the donjon. The weak and vicious King had wearied of the energetic tutelage of his cousins of Guise.

Every nook and corner of the castle is alive with some memory of plot or counter-plot, of heroism or crime, of intrigue or statemanship. Troups of noble dames in stiff brocades, with Medici collars and tapering waists, processions of cavaliers with flowing locks and clanking swords, gorgeous-robed Cardinals, and soft-voiced Jesuits, artists and poets, and famous Generals seem to people the palace of Blois. Living in the Old World sometimes seems like living in a graveyard. The land belongs more to the dead than to the living. It is we who are the unsubstantial shadows, the intruders, and they the reality. — *New York Times*.

LATEST FINDS IN ROME.



THE bridge of Valentinian I, represented by the modern Ponte Sisto, was one of the noblest structures spanning the bed of the Tiber. It was rebuilt between 366 and 367 A. D. by Lucius Aurelius Avianus Symmachus, Prefect of the city, with the spoils of an older one of the time of Caracalla, and dedicated to Valentinian and Valens, then ruling over the eastern and western divisions of the empire. According to a current tradition it was overthrown by the great flood of 799, under Pope Hadrian I.

In 1878 the branch of the river which flows under the first arch on the left having been diverted for the construction of the new embankment, we found Valentinian's Bridge lying bodily on the bottom of the stream in such good order that fragments of an inscription, which ran from one end to the other of the south parapet, were discovered one after the other in their proper position. A triumphal arch, which decorated the approach to the bridge from the Campus Martius side, had also been thrown bodily into the river, together with the bronze statues and groups by which it was crowned. As regards the parapets, they seem to have been divided into panels by projecting pilasters. Each panel contained six or eight letters of an inscription, which as I have just said, ran from one end to the other, and each pilaster an inscription of its own, allusive to the statue placed upon it.

The dredging operations having been resumed in these last months, some more pilasters have been found, one with the dedication: "To the august Victory, faithful companion of our lords and masters, the S. P. Q. R. under the care of Avianus Symmachus, ex-Prefect of the city." Near it was lying the right wing of the statue of the Victory, of bronze gilt. It is of but little value as a work of art. Still it proves once more that if a proper search was made in that section of the Tiber nearly all the statues once lining the bridge could be recovered.

Far more important than these Roman finds are the discoveries announced from Selinunte. In clearing from the accumulation of soil the line of walls between the Acropolis and the semicircular tower, which the best guide-books still persist in describing as a theatre, the wall has been found built with blocks collected at random from the ruins of the city, and among them three metopes carved in white tufa from the quarries in Menfi. Considering the prominent place which the Selinuntine metopes exhibited in the Museo Nazionale at Palermo occupy in the history of archaic art, the new find cannot fail to attract the attention of the archaeological world. The first one, .84 metre high, .69 metre wide, represents the rape of Europa. The young woman is clad in a long chiton, and wears a fringed cape on her shoulders, and the bull upon which she sits is moving from left to right. The sea is represented not by waving lines, but by a couple of fish (dolphins?) swimming between the legs of the bull. Europa's attitude is not without grace; her face is in profile, while that of the disguised god is full.

The second, .83 metre high, .64 metre wide, represents a winged sphinx, with long hair falling on the right shoulder. Both are in excellent preservation. The reliefs of the third have been injured in consequence of their location on the outside face of the wall, and all the projecting portions erased to make the block even with the rest. It represented one of the labors of Hercules—the taming of the bull. The chisel used by the mason in effacing this noble work was 85 millimetres wide as shown by the grooves which corrugate the surface of the metope.

The traces of polychromy noticeable in these metopes add very much to their archaeological value. They are very faint, and cannot be properly analyzed unless the earth incrustated on the surface gets perfectly dry and can be removed with impunity. However, it is beyond doubt that the background of the relief representing the rape of Europa was red, and red also the inside of the ears of the bull; the eyeballs are black, and marks of blue have been noticed in the mass of hair by which the tail of the animal is terminated. It seems almost certain that the portions representing human flesh were not painted.

The dimensions of the three pieces show that they belong to one and the same edifice, their height being the same (.83 metre), while their width varies according to their location more or less near to one of the corners of the frieze. The edifice is unknown. The metopes, although of better design and finer cut than those preserved at Palermo, are considered not to differ very much in age from them. They belong either to the end of the seventh or to the beginning of the sixth century B. C.

Roman correspondents of English and French papers have announced startling discoveries in connection with the Pantheon of Agrippa. These announcements rest on a foundation of truth. There is no doubt that the round body of the structure has been rebuilt by Hadrian from the very foundation, and it seems equally sure that the level of the cella was at a certain time seven feet lower than the actual one. But as the investigations are not complete yet, it seems a better plan to collect first the evidence and then try deductions. In cases like this the spade and hammer tell sometimes a better tale than all the discussions of the archaeologists. — *The London Athenæum*.

SUN-DIALS.



by the famous Grinling especially beautiful one — bears the King's monogram and crown. The dial-plate is graven with the Star of the Garter, with its motto, "Honi soit qui mal y pense," and with the maker's name "Henricus Wynne, Londinii, fecit."

At Tunbridge Wells, on the Church of King Charles the Martyr, painted on a board, and in excellent preservation, within shadow of "Ye Pantiles," where walked and talked good old Doctor Johnson, Beau Nash, Cumberland the dramatist, and their following, will be found a dial bearing the motto "You may waste, but cannot stop me"; below it is the maker's name, Alex. Rae, but it is not dated. At Ferox Hall, Tonbridge, beneath the shadow of a magnificent cedar of Lebanon, more than four hundred years old, and almost smothered with ivy (which rendered it a somewhat difficult matter to make a sketch at all) is a very old dial placed upon two stones; it is excellent in design, and the great tree's shelter has preserved it almost intact from the ravages of time. "Remove not the ancient landmark which thy fathers have set" is carved in Gothic lettering around the stone shaft of a sun-dial in the churchyard of St. Mary and St. Eanswythe, Folkestone. The shaft surmounts four very ancient steps, which originally belonged to the Town Cross, beneath which in ages past, according to the old charter of the Corporation, the Mayor was annually elected. The old horn which was blown on these occasions to summon the people together still exists, and is to be found hung above the mayoral chair in the town-hall; it was one of the treasures lent to the Royal Naval Exhibition just closed.

Fifteen miles over the hills brings us to Canterbury, which possesses several dials, chief amongst which, perhaps, is the one in

in the private office of E. S. Johnson, Esq., at Derby, is a modern but very fine one; it is an exact copy, painted in 1888, by Frederick Drake, of the Close, Exeter, the glazier to the Cathedral, who painted it from one taken out of an old manor house in Devonshire,



dated 1670. The motto is "Dum spectas fugio" (While thou lookest I fly). Below is depicted a bird and a fly (which is marvellously realistic in treatment); the motto is supposed to infer a punning suggestion that they (the hours) fly. There is one very similar in the High-street at Marlborough. The one in Winchester College, to which reference has previously been made, is very like it in design. The same inscription, with date 1739, is to be seen on the dial which surmounts a pillar in a garden at Rotherham; it is also to be seen on an old entrance to one of the canons' houses at Exeter, again at King's Lynn, at Ripley, and on Ingelton Church, Yorkshire.

In the picturesque old town of Rye, on a vertical dial (now upon the town-hall) which was taken from the old grammar school, when the windows were altered in the Jubilee year, are the mottoes:

"The solar shadow as it measures life,
Its life resembles too."

and

"Tempus edax rerum"
(Time, the devourer of all things).

Bishop Edmund Redyngton wrote the following quaint distiches, A. D. 1665, for a dial at Addington, Kent:

Amyddat y^e flowres
I tell y^e houres.

Tyme wanes awaye
As flowres decaye.

Beyond y^e tombe
Ffreshe flowrets bloome.

Soe man shall ryse
Above y^e skyes.

In the church-yard of the fine old Perpendicular church at Headcorn, Kent, built in the time of Edward IV, which still possesses some of its original stained-glass, will be found the wreck of a dial (for it is little else) a sketch of which is given. The twisted



the public garden called "The Dane John." It stands some seven or eight feet high, and round its shaft are four figures typical of the seasons.

The dial (a drawing of which is given) in the stained-glass window



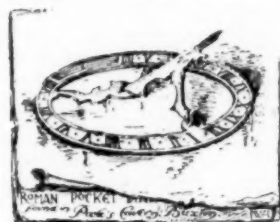
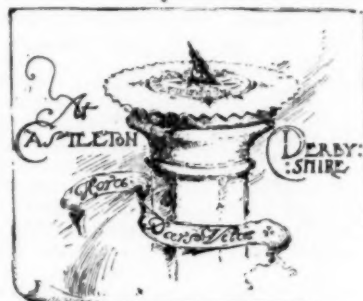
wrought-iron addition to the gnomon, which is nailed at its other end to the oak shaft, is apparently the work of a by no means over-skillful village Vulcan. The date on the dial is 1763, and it stands by a great oak said to be at least one thousand years old.

Winchester, too, is rich in dials; on the south wall of John Frommond's Chantry Chapel, Winchester College, on one of the buttresses, painted in black, and which weather will soon have completely effaced, is a quaint dial bearing date 1712.

In a window in the old election-chamber, now one of the master's rooms, is a glass dial, oval in form, beautiful in color, and bearing on

old library and its finely carved pews, well worth a visit. In the church-yard is a dial, the plate of which projects far beyond its upholding column, and at its edge is serrated, Norman fashion; "Hora Pars Vitæ" (The hour is a portion of life) is the motto engraved upon the plate. The same inscription is to be found fixed to what appears to have been a cross in a church-yard in the Isle of Wight, dated 1815; also in Thursley Church, Surrey; on a church in Northumberland at Kirkwelpington, 1764; and on a church at Tavistock, dated 1814.

The singularly beautiful church at Tideswell, generally known as



a painted scroll the motto "Ut umbra sic vita transit" (As a shadow so doth life pass).

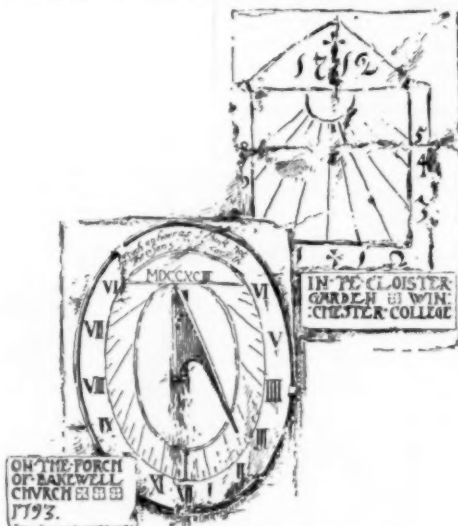
On the south wall of the church of St. Maurice, with its grand old Norman doorway, is an ancient stone vertical sun-dial, which, curiously enough, has the hour-lines marked from 8 A. M. to 4 P. M. only. Farther on is the church of St. Michael, famous for its thirteenth century sun-dial, which marks the hour divisions with crosses for 12, 9 and 5. A mile or two out beyond Winchester on the Southampton Road, is the Hospice of St. Cross.

There is good authority for stating that there is no institution now existing in Great Britain which has been allowed to remain more than 700 years, that is so little changed in its original constitution

the Cathedral of the Peak, built in the latter half of the fourteenth century, and boasting one of the earliest Perpendicular towers in England, possesses, too, a dial, surmounted on a stately stone shaft and circular steps, the total height being about nine feet. It is in somewhat neglected condition, and the name of the man who presumably restored it (J. Tattersath, 1812) is graven on the base.

Hearing that in Canon Bowles's garden in the Close, Salisbury, was to be found a fine cruciform dial, bearing the motto "Quam cito jucundi prateriere dies" (How quickly the pleasant days have passed away) erected by that gentleman in 1829, I eagerly went, hoping to get a drawing of it. Sad to say, the motto seemed to have been prophetic. I stood in the cathedral by the tombstone which marked his last resting place, and hunted long, but in vain, in the dear old-world garden which had once been his, but saw no sign of any dial.

Within a hundred yards, at the other end of the Close, painted high up on a wall (dated 1749) about four feet



as is the Hospice of St. Cross. It comprises two distinct foundations — that of Bishop Henry of Blois, grandson of William the Conqueror (1136) and of Cardinal Beaufort (1444) and both are now under the one Master of St. Cross. On the greensward facing these "castles of peace and rest" stands the dial on fluted shaft, a sketch of the upper part of which is given.

Above the porch of the fine old Norman church at Bakewell, in the Peak district, a church which is full of interest as being the burying-place of the Vernons, and the Manners of Haddon Hall, is to be seen an oval stone dial dated 1793, on the upper part of which is the motto "In such an hour as ye think not the Son of Man cometh." The soft stone is fast crumbling away, and it will soon be a thing of the past. Further north lies Castleton Church, with its

square, is a dial with the tradition — "Life's but a walking shadow" (Macbeth, Act V, Scene V). James Harris, the author of "Hermes," was a Salisbury man; he died in 1780, and there are many reasons for believing that he erected this dial. On the tower of St. Martin's Church, Salisbury, almost completely effaced, and with the gnomon gone, may be traced the wreck of what was once a fine dial.

There is a story told that one of the Deans of Bangor had a faithful but certainly somewhat irascible old gardener, who used to keep away numbers of his master's troublesome visitors by saying to those he saw about "Go about your business." After the gardener's death the Dean had engraved upon the dial in the garden the curt injunction of his faithful servant, but in this wise:

"GOA BOW TYO URB US IN ESS 1838."

The amusing part being that it was usually mistaken to be a Welsh motto.

At Poole's Cavern—an enormous natural excavation in the carboniferous limestone of Derbyshire, running for several hundred yards under a hill about half a mile beyond Buxton—was found in 1865, buried some seven or eight feet in stalagmite, a mass of wonderfully interesting remains—Samian ware, Roman glass; coins of the time of Trajan, Faustina, Nerva; flint implements, weapons, rings; and a Roman bronze pocket sun-dial, in perfect preservation, but little larger than depicted in the sketch given. These fascinating "finds" are still to be seen in the quaint little private museum adjoining the cavern entrance. The cavern traditionally derives its name from an outlaw named Poole, who, in the reign of Henry VI, made it his place of abode and plunder depository.

Doctor Doran tells us in his life of the author of "*Night Thoughts*," that Doctor Young erected a dial in his garden, with the motto "Eheu fugaces!" (Alas, how fleeting!); very shortly afterwards thieves entered his garden, and certainly proved the wisdom of his words by carrying the dial bodily away.

Perhaps I cannot close these brief notes better than by quoting the beautiful lines John Greenleaf Whittier wrote for inscription on the sun-dial of a friend:

"With warning hand I mark Time's rapid flight
From life's glad morning to its solemn night;
Yet, through the dear God's love, I also show
There's light above me by the shade below."

—Warrington Hogg in the Strand Magazine.



ILLUSTRATIONS

[Contributors are requested to send with their drawings full and adequate descriptions of the buildings, including a statement of cost.]

MADISON SQUARE GARDEN, NEW YORK, N. Y. MESSRS. MCKIM, MEAD & WHITE, ARCHITECTS, NEW YORK, N. Y.

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

THIS plate shows the building from the rear as seen from Fourth Avenue.

COMMONWEALTH HOTEL, HARRISBURG, PA. MR. A. W. DILKS, ARCHITECT, PHILADELPHIA, PA.

THE building is nearly finished and I want to send some prints to the owners. It is built of buff bricks and Indiana limestone, five stories in height all around. The kitchen building is detached 45' x 50'. There are 190 chambers, many with private baths. Boiler-room, dynamos, ice-machines, laundry, refrigerators, storerooms, etc., are all in the kitchen building with pantries, serving-rooms, etc. The stores in the new part extend in clear width the entire depth of the hotel. The old part extends from the corner to the central pavilion, which is the ladies' entrance. The central pavilion and the remainder of the building are entirely new. The entrance porches are new and the dining-rooms have been increased considerably in size and a new elevator put in.

HOME FOR AGED COUPLES, WALNUT AVENUE. OPPOSITE THE MAIN ENTRANCE TO FRANKLIN PARK, BOSTON. MR. J. A. FOX, ARCHITECT, BOSTON, MASS.

THIS is the second building provided for this unique benevolent enterprise, which aims simply to furnish a comfortable home for the aged, without the severance of ties of life long companionship. The work originated with and has been maintained and enlarged by Mrs. E. A. Carleton, the president of the corporation, aided by the many friends attracted by her enthusiasm for this phase of helpfulness; and still more by the business-like system that has been coupled with the tenderest consideration for all who have become inmates of the Home.

The building is substantially built of selected Eastern brick and buff terra-cotta and freestone; and has been planned with a view to extension, either by connected or detached buildings, on the already extensive grounds, as fast as funds are forthcoming.

THE GEORGIA STATE BUILDING FOR THE WORLD'S FAIR, CHICAGO, ILL. MR. G. L. NORRMAN, ARCHITECT, ATLANTA, GA.

THE building is to be constructed of wood and plaster, interior finished with Georgia pine, and to contain Exhibition Hall with

gallery, parlors, ladies' and gentlemen's retiring-rooms, committee-rooms, superintendence room, and a room for information.

Proposed cost about \$35,000.

VANCOUVER ARCADE BLOCK, VANCOUVER, B. C. MESSRS. FRIPP, & MILLS, ARCHITECTS, VANCOUVER, B. C.

PORTRAIT OF STEPHEN DECATUR BUTTON OF PHILADELPHIA, ARCHITECT.

SEE article elsewhere in this issue.

[Additional Illustrations in the International Edition.]

NOTRE DAME DES VICTOIRES [NOTRE DAME DU SABLON] BRUSSELS, BELGIUM.

[Gelatine Print.]

A VIEW of the south doorway of this church, which is mainly fifteenth and sixteenth century work, was published in the *American Architect* for May 7, last.

PERISTYLE ON THE COURT OF THE HOTEL DE VOGUE, DIJON, FRANCE.

[Copper-plate Engraving.]

ANCIENT CHURCH NEAR THE CORN HALL, TOURS, FRANCE.

THE LIBRARY, LINCOLN CATHEDRAL. SIR CHRISTOPHER WREN ARCHITECT.

DESIGN FOR MUNICIPAL BUILDINGS, OXFORD, ENG. MESSRS. MORLEY & WOODHOUSE, ARCHITECTS, BRADFORD, ENG.

It was proposed in this design to face the exterior with Bath stone of best quality (or other stone decided upon) and to use brick for internal walls, white glazed bricks being used in the areas. Most of the floors would be fireproof. In the minor rooms pitch-pine would be used for woodwork and oak or American walnut in principal rooms. The corridors would be generally of mosaic, with dados of mosaic or American walnut. Ornamental ceilings would be of American walnut and fibrous plaster.

COMMUNICATIONS

[The editors cannot pay attention to demands of correspondents who forget to give their names and addresses as guaranty of good faith; nor do they hold themselves responsible for opinions expressed by their correspondents.]

DRY-PRESSED BRICK.

NEW YORK, N. Y.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Would you be kind enough to inform me, what is the opinion of architects and builders, as far as you have heard, concerning bricks manufactured by the dry process.

Are they durable and satisfactory?

What make of machine has been found to be the best?

How does the price compare with other bricks?

By so doing, you will oblige,

Yours sincerely,

C. BRUN.

[Dry process bricks differ greatly, and in fact, the process itself is carried on in many different ways. Some manufacturers steam the dry powdered clay slightly, and the amount of pressure used to consolidate it varies with different makers. We think that the best writers on the subject look rather unfavorably on dry-process bricks, as compared with those made by the "half-dry," or "mud" processes, and architects and builders sometimes find dry-process bricks, though well-shaped and smooth, inclined to be light and porous, and sometimes to show minute cracks over the surface, which affect their resistance to frost. Nevertheless, some dry-process bricks are excellent, and we have been told that, by using sufficient pressure, they may be, and are, by the best manufacturers, made as solid and durable as those turned out by any other process. As to the best machine for making them, we cannot undertake to give any opinion. The price, to builders, of the dry-process bricks does not differ much from that of face bricks made by the other processes.—EDS. AMERICAN ARCHITECT.]

SIGNING BUILDINGS.

NEW YORK, N. Y., July 5, 1892.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—I have had no opportunity lately to keep *au courant* with such serial literature as comes to me; and it is only to-day that I see (although I had heard of it) what you say in your issue of the 18th ult. about the arrested inscriptions for the tablets on the new Public Library building in your city.

That draughtsman evidently desired to do honor to his *alma mater*, (you give us no information as to which college he graduated from, but we may doubtless rest serenely in the conviction that it was not

Harvard), by showing the extent of its biographical library, if not the thoroughness of its tuitional methods as regards the formation of clarifying and proportion-heeding powers; or else he is a born Joe Miller, with the super-imposition of enough American independence not to draw the line even at one's professional principals, when an opportunity offers for the display of one's facetiousness.

But I really think the trustees in question (though I know nothing whatever about them—they are simply an abstraction to me), might do much worse than to take the hint furnished by our doubtless well-meaning if somewhat sophomorical draughtsman (who however deserves no slight sympathy under the avalanche of the six hundred names you say they furnished for selective processes), and set the example to other trustees, and to building-committees generally, of giving the architect the same privilege accorded to the painter, the sculptor or whatever other artist, as well as the literary man, of affixing his name to his work and earning thereby such honor or dishonor, such praise or blame, as it may command. The privilege has been and still is not infrequently accorded to the architect in the Old World, and indeed is not wholly without precedent—if my memory serves me—in this hemisphere; and the granting of it would come with special grace from those whose trusteeship more or less includes the interests and honor of art and education, as well as of literature.

A. J. BLOOR.



VENTILATION OF PUBLIC BUILDINGS.—At a recent meeting of the Royal Society of Edinburgh, Dr. C. Hunter Stewart gave a paper in continuation of his researches on the subject of the Ventilation of Public Buildings. It was not the carbonic acid, but the organic matter in the air, he said, which had the baneful effect on public health, and if the organic matter could be got rid of the question of ventilation would be simpler and cheaper. The origin of that organic matter had been very generally attributed to respiration, but that view had now been definitely set on one side, and experiment had shown that the breath was not to be blamed as the source of the organic matter in badly ventilated buildings. He mentioned the case of a German army doctor who had all the soldiers of a particular barrack compulsorily bathed, with the result of a very marked improvement in the state of the ventilation, and he added that if persons could be by law compelled to bathe regularly, and to have their clothes periodically cleaned, the cubic space necessary for the healthy existence of persons would be very much smaller than it is. Taking, however, the quantity of carbonic acid present in the air as a test of the state of the ventilation, Dr. Hunter Stewart gave the results of analysis of the air in different public buildings in Edinburgh. The best results had been got at the infirmaries, where the carbonic acid was less than 6 cubic centimetres per 10,000—showing excellent ventilation—and the quantity varied through different classes of buildings, the worst record being that of St. Cuthbert's Church during service, where 63 cubic centimetres per 10,000 were found in the lower gallery. In other churches it varied from 20 to about 50. Investigations were made in a number of public schools, and results were got in some measure corresponding to the accommodation per child. In one school, where a fan was used to ventilate the rooms artificially, it was found that when the fan was idle there were 12.1 cubic centimetres of carbonic acid per 10,000, and when the fan was working 15.56. In the public library, when the fan was at work, the carbonic acid was 8.9 per 10,000, and when it was idle about 10. Lord Kingsburgh commended the law courts to Dr. Stewart as a field for research. He would find them a much richer field in the way of organic matter and everything else that was bad than any other place he had yet tested. Their ventilation there consisted in this—that when they had been tortured for a few hours, those of them who could leave did so for a few minutes, and ordered every window to be thrown open, so that everybody who remained behind had a bath of cold air. There could be no doubt that the "great unwashed" frequented the law courts more than any other class in the community. It was the only theatre they had for which they had to pay nothing; and it was at the time when judges and counsel were under the greatest mental strain that the courts were crowded with human beings, most of whom would be the better of having the German doctor's discipline enforced. Lord McLaren said he thought that, since the courts must be open to the public and only a limited number could be admitted, they should insist on no one coming in without being decently attired. That was the true solution of the matter.—*Invention.*

TALE OF BIBLIOMANIA.—There used to be a book-collector in this city who was the terror of all who knew him. He was well-to-do, and a very learned man. He was a great buyer of books and owned a fine library, but nobody else's library was safe if it contained a book he coveted. For a long time his victims did not suspect him. He would call, spend an hour or two among their books and go away. Finally one bibliomaniac, who had suffered most severely, had his suspicions aroused. Even then he dared not utter them, so he went to his lawyer about it. The lawyer had him make out a list of the volumes he had lost. They were all of extreme rarity and great value. Armed with this list, the lawyer called on the suspected man and introduced himself as a collector of books from the West. He had heard of the gentleman as a bibliophile of authority, and wished to consult him about some books which had been offered him before he concluded upon their purchase or rejection.

"What were the books?" his host asked.

He ran off the titles of several of the stolen volumes.

"Nonsense!" said his host. "Nobody can sell you them. I own the only copies in the country."

Next day the lawyer wrote a letter which resulted in the restoration of the spoil to its rightful owner. How many rare books belonging to other collectors remain in the collection—for it has never been sold, for obvious reasons—no one can say. At any rate, when this learned bibliophile visited other bibliophiles thereafter they kept their bookcases locked, and showed him what he wanted to see volume by volume, making sure to get one back before they passed another to him. They recognized his perilous mania as an incurable weakness; and while they tolerated him on account of his erudition, they did so as one accepts a necessary evil.—*The Collector.*

ELECTRIC APPLIANCES AT OXFORD.—Oxford having taken unto herself a tramway, and survived what many of her inhabitants regarded as an act of the direst profanation, is about to give further proofs of her readiness to move with the times by the adoption of the electric light in her thoroughfares and public buildings. The compactness of Oxford lends itself admirably to the purpose, for although the compulsory area laid down in the provisional order granted by the Board of Trade is only a quarter of a mile square, it comprises twelve colleges, thirty-nine public buildings and churches, nine hotels and 340 shops, offices and private houses. The promoters of the scheme, who are chiefly local people—both town and gown being represented on the directorate of the company—are to be congratulated on the opportuneness of the date chosen for the inauguration of the new system. By the eve of "Commem." Oxford will have exchanged her old lamps for new, and the gay undergraduate and his lovely womenfolk will foot it in the Corn Exchange beneath the radiant beams of the new illuminant. Nor is the use of electricity likely to be confined to the purpose of lighting the streets and buildings of the town. The question of furnishing motive force for the propulsion of tramways and launches is also being carefully considered, the situation of the generating station at Osney being especially convenient for the latter object. It will be interesting to observe whether the introduction of electricity into the most famous of our university towns will have any effect on the tone and temper of Oxford thought. The groves of Academe can certainly no longer be styled a *lucus a non lucendo* under the new regime. Electricity, of all things, is calculated to "make culture hum."—*London Globe.*

ELECTRIC-POWER CABLES AND GAS-PIPES.—A German contemporary contains a full account, with plans and drawings, of two cases of injury to gas-pipes recently caused in Berlin by electric cables. In one of these cases, a cable-box, into which 12 cables passed, exploded with a flame, and it was observed immediately after that all the gas flames down one side of the street had gone out, and these could not be lighted again. There was no escape of gas after the explosion. The wires were in close proximity to a gas-pipe of 4.2 inches diameter. The leather washer of the nearest street-lamp connection was burned; the next two were loosened; the next was completely destroyed. Then a bit of the gas-pipe was destroyed, along with the lead of the coupling at a joint, and the melted mixture of iron and lead had been driven up a 2.2-inch pipe, which was itself destroyed and perforated in a most extraordinary way. The electricians were three days repairing the damage to their various cables in the neighborhood. The telephone wires in the vicinity were also interfered with, and a new telegraph wire had to be laid, 50 yards of it having been burned. There appears to be no doubt that the insulation of the electric cable had given way, and that the current had forced itself from the outer coating across to the near gas-pipe. In the second case, a fortnight later, a Siemens street lamp burst into a huge flame, showing that a pipe had suddenly burst inside the pillar. The pneumatic-post system was also deranged, the tube being blocked, and gas streamed through the tube into the Post-office. A cable crossing the pneumatic postal-tube was destroyed for about 2 feet of its length; the pneumatic tube had its joints melted up and became blocked; and the current had run off to the street lamp and melted two holes in its iron-supply and nearly melted a third, and had damaged the service-pipe and the main; and had, besides, run off to other electric cables and burned them up. After it was thought that all damages were repaired, the smell of escaping gas remained exceedingly strong; and then it was found that the current had also burned a hole in the 10.4-inch pipes of the English Gas Company, this hole being 4 inches in diameter, and the pipe being separated from the cable by a space of 0.8 inches, packed with earth. One curious feature was the burning of a hole in an iron pipe on the side remote from the electric cable.—*Invention.*

THE LIFE OF INCANDESCENT LAMPS.—A great deal of interest attaches to the longevity of incandescent lamps. There is a popular idea that what is needed is a lamp that will last forever, but as a matter-of-fact the real desideratum is a lamp that, while it lasts, will give the utmost light in proportion to the current energy applied to it. A dim lamp burning eternally is no good to anybody. Some data bearing on these conditions were lately made public by Prof. B. F. Thomas of the Ohio State University, and, though confessedly incomplete, they are interesting. He showed that the lamps tested grew dim at a steady rate, falling off 90 per cent in 200 hours, to 68 per cent in 600 hours, ending at less than 55 per cent at 1,200 hours. As to the time when lamps became "dead," if the figure of decrease were set at 50 per cent of the initial candle-power the lamps tested went above 1,000 hours on the average, and some ran up to 1,200. With the limit at 75 per cent, all died at 450 hours, yet one often reads of lamps lasting 5,000 or 6,000 hours. Professor Thomas expressed the opinion that from the standpoint of the consumer the average lamp of to-day lasted at its fair value about 230 hours, and was then past its prime. He pointed out that, so far as his tests went, lamps made with a mechanically exhausted globe were much freer from blacking of the glass than those in which the vacuum is obtained with the ordinary mercury pumps.—*New York Evening Post.*

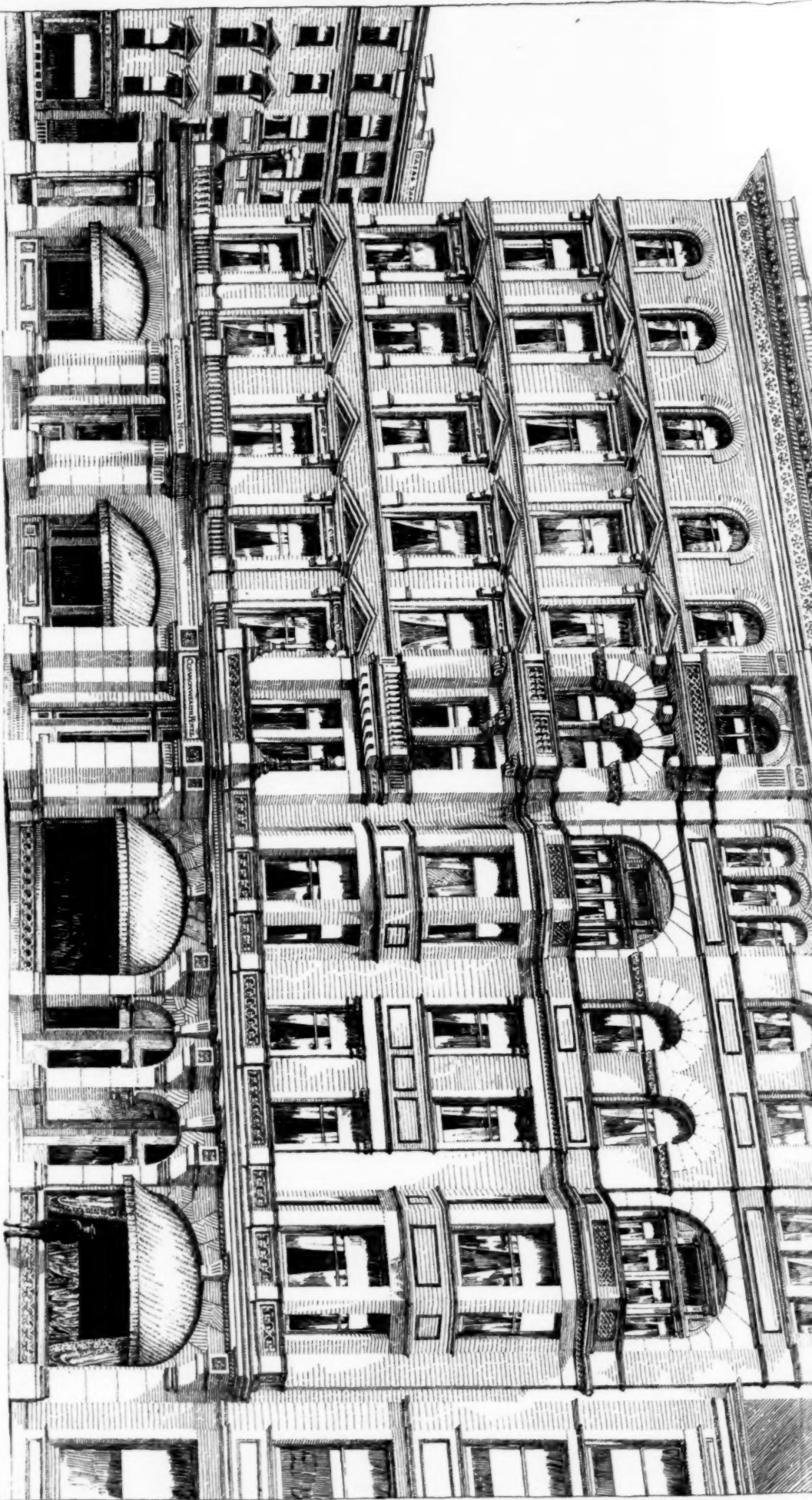


ILLUSTRATION OF BOSTON

No. 864.

AMERICAN ARCHITECT AND BUILDING NEWS, JUNE 16, 1892.

COPYRIGHT 1892 BY TUCKER & CO.

• THE • COMMONWEALTH • HOTEL •

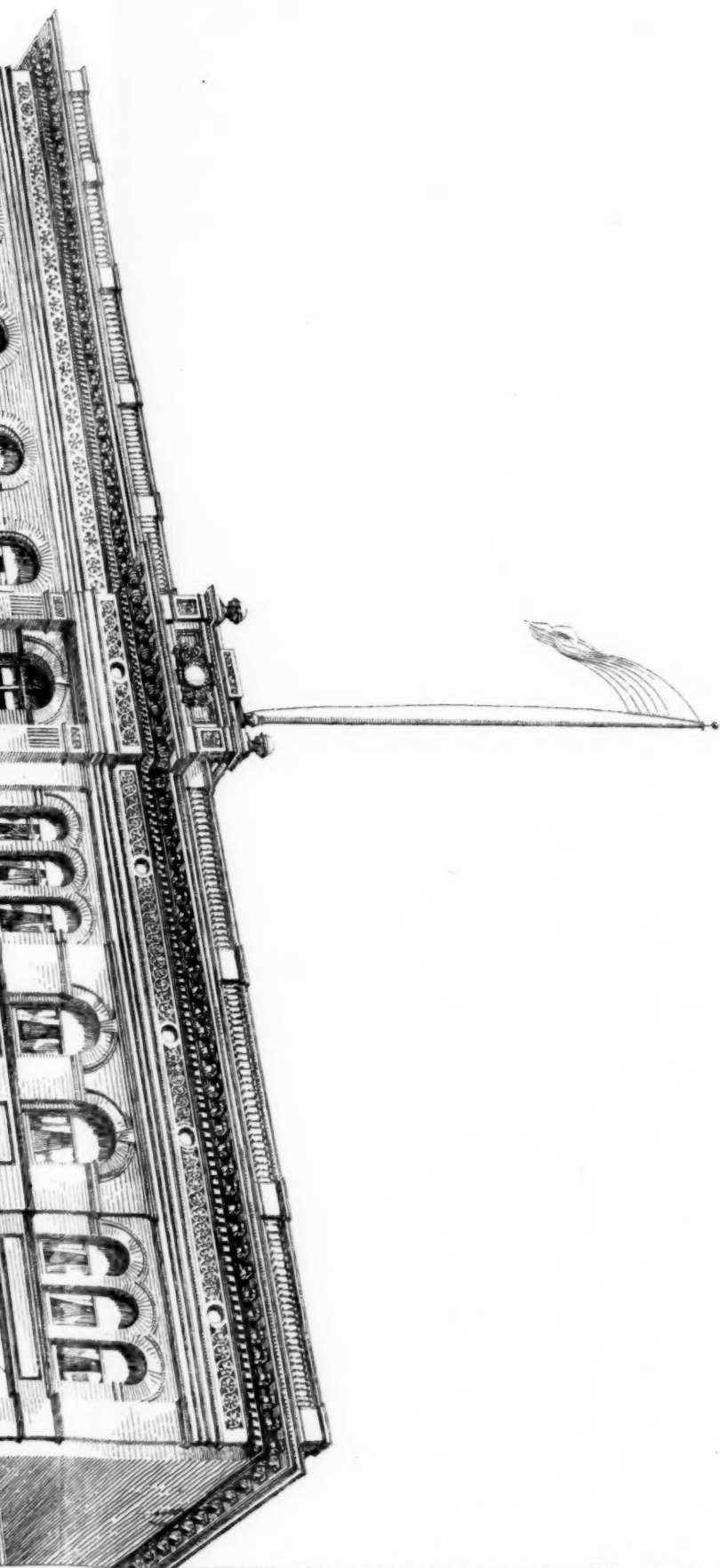
• HARRISBURG • PA •

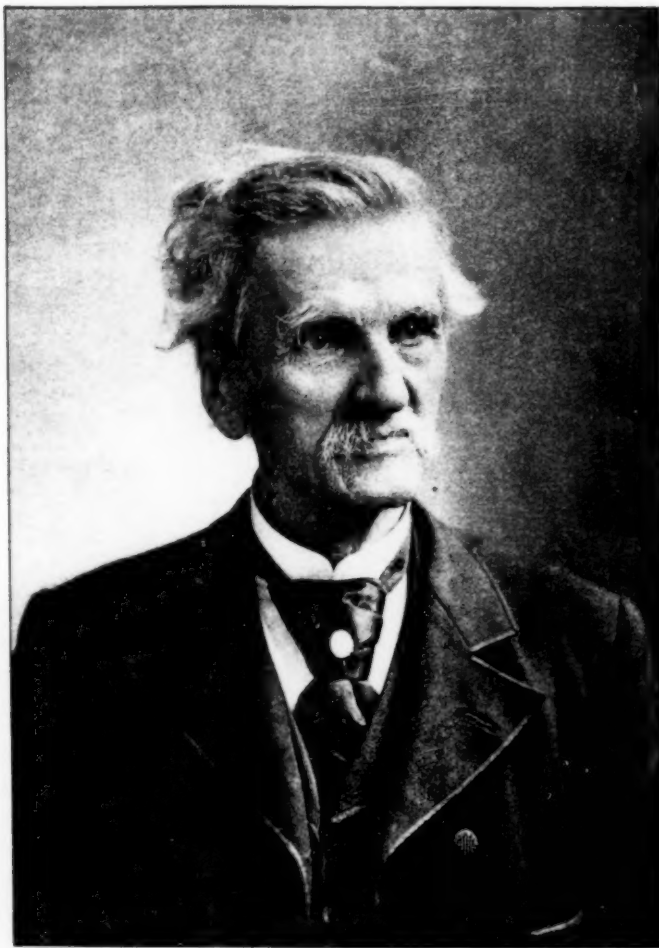
• EXTENSION • AND •
• ALTERATIONS •

• FOR • MESSRS. D. & C. R. FLEMING •

• ALBERT • W • DILKS • ARCHITECT •

• PHILADELPHIA • PA •

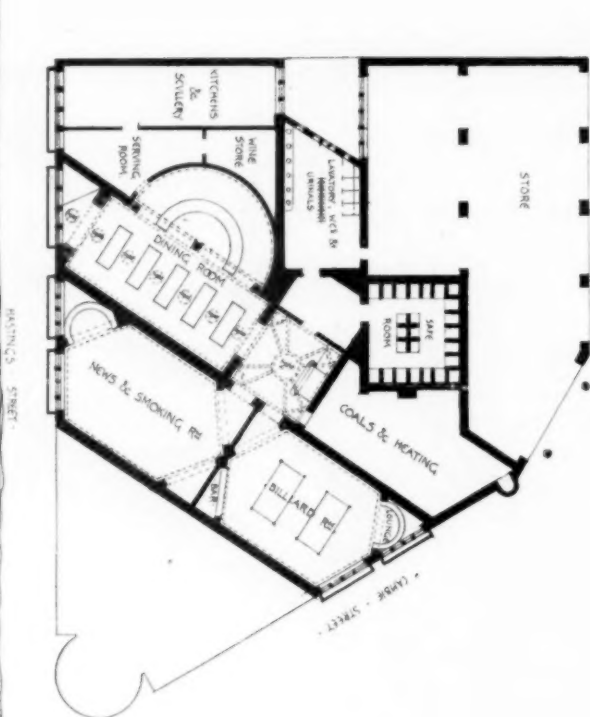




STEPHEN DECATUR BUTTON: ARCHT.

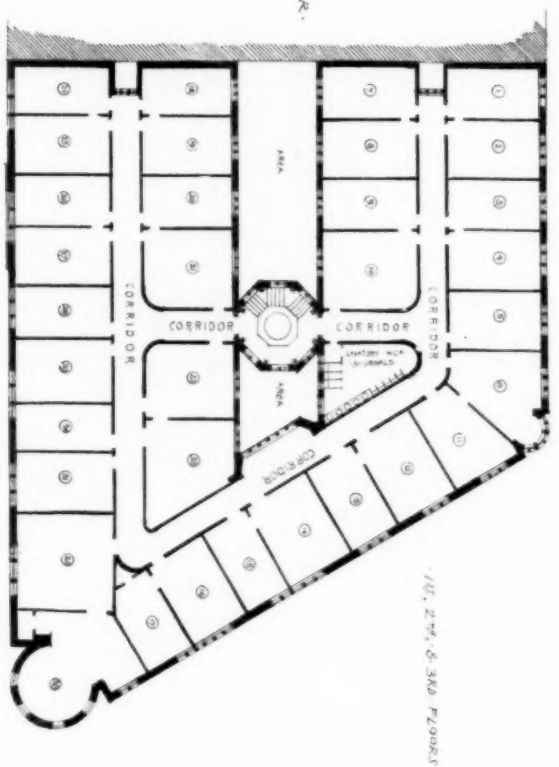
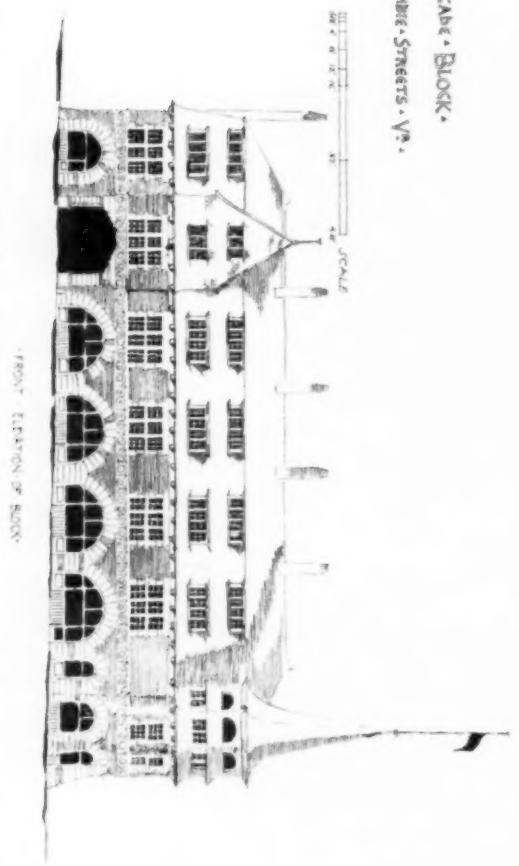
HELIOGRAPH PRINTING CO, BOSTON

COPYRIGHT 1892 BY TUCKER & CO



VANCOUVER ARCADE BLOCK.
HASTINGS AND CANINE STREETS - V.A.

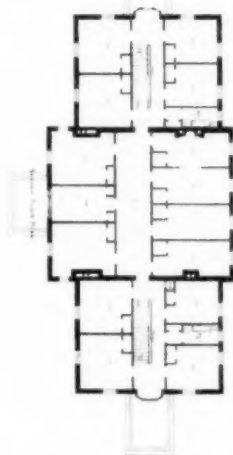
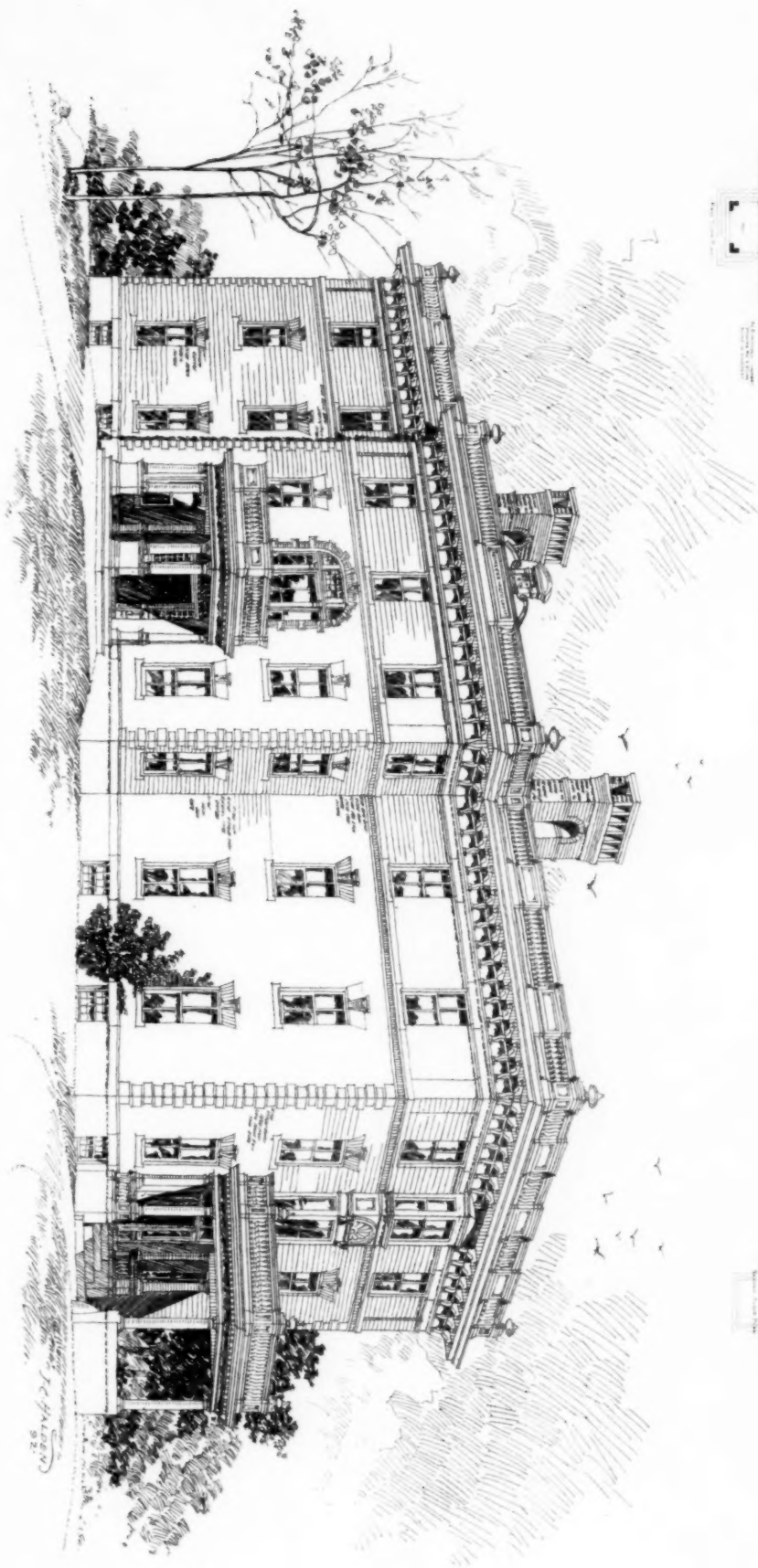
RIPL-WILZ BLOCK.
VANCOUVER - S. N. W. WESTMINSTER.



1ST, 2ND, & 3RD FLOORS

RELIANT PHOTOGRAPHY CO. BOSTON

COPYRIGHT 1892 BY TICKNER & CO.



HOME FOR AGED COUPLES.
JOHN A. FOX ARCHITECT.

COPYRIGHT 1892 BY TUCKER & CO.

DESIGN FOR GEORGIA STATE BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.
GEO. W. HARRIS, ARCHT., GA.

ELLIOTT & FISHMAN, CHICAGO

