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CONTENTS.

TEXT: pp. 89—96.

EDITORIAL SUMMARY.

WINTER PICTURE SHOWS IN LONDON.

**MAHOGANY AND OTHER FANCY WOODS AVAILABLE FOR CON-
STRUCTIVE AND DECORATIVE PURPOSES.**

THE LIFE OF A BIG TREE.

COMMUNICATIONS.

NOTES AND CLIPPINGS.

ILLUSTRATIONS.

SAVINGS BANK BUILDING, WARE, MASS.
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THE AMERICAN ARCHITECT AND BUILDING NEWS

Vol. LXXXIII

SATURDAY, MARCH 19, 1904

CONTENTS.

SUMMARY:—

A threatened Attack on the New York Building Department.	
— The Responsibility for Defective Speculative Buildings.—	
When an Architect may deserve a higher Fee.— The Restorations at Mont St. Michel.— Death of Edouard-Jules Courroyer, Architect.— Death of Erastus Dow Palmer, Sculptor.— The Coming Exhibition of the Boston Architectural Club.— The North River Tunnel open from Shore to Shore.— Permanent Injunction may lie against Individual Members of a Trade Union.	89
WINTER PICTURE SHOWS IN LONDON.	91
MAHOGANY AND OTHER FANCY WOODS AVAILABLE FOR CONSTRUCTIVE AND DECORATIVE PURPOSES.	91
THE LIFE OF A BIG TREE.	94
ILLUSTRATIONS:—	
Savings Bank Building, Ware, Mass.— Workmen's Model Cottages, Port Sunlight, near Liverpool, Eng.— Cutter Memorial Library, Farmington, Me.— Suggestion for a Pentagonal-library Plan.— The Mary E. Beale Memorial Tower, Bakersfield, Cal.	
Additional: House of J. M. Colton, Esq., Jenkintown, Pa.— Lawn Front of the Same.	95
COMMUNICATION:—	
Permanent Expansion of Cast-iron.	95
NOTES AND CLIPPINGS.	96

ONE of the interesting incidents connected with the coroner's inquiry into the "Hotel Darlington" disaster is the excuse given by a former Superintendent of Buildings, when called to serve on the jury, which was to be made up solely of architects, builders and real estate men. This gentleman declared he could not serve on the jury, as he was prejudiced against the present Department of Buildings, which he stigmatized as "rotten," and declared it to be his intention to "write an article exposing its methods." Although this statement has a certain air of peevishness, and seems to bear with unfair harshness on Mr. Hopper, who has just taken charge of the Department, and who declared a few days ago that "no one will be permitted to violate the law so long as I am in this office," we hope that the article may not only be written but be published, with full details and authenticated evidence in support of the charges now threatened. Such an article should be very instructive and interesting reading, as many architects know that some very peculiar things have happened in the Department under sundry chiefs. But we hardly expect to see the article in print, or, if prepared and printed, to find the allegations to be specific enough to warrant any purging action on the part of the mayor.

AS the "Hotel Darlington" disaster is at this time only in the hands of the coroner, it is not exactly *sub judice* and, so, discussion of the matter is still permissible in all its details. But it is as well to abandon further surmise and await the rendering of actual testimony, which, owing to the death of so many workman, who might have given evidence of great worth, may not be all that is desired. But there are two or three matters of general interest which are suggested by the catastrophe that it is well to mention. The structure belonged to the class of speculative buildings, which grows increasingly numerous in New York each year, and which generally fully deserves the disparagement with which it is mentioned. As the seller of these speculative buildings often is the contractor by whom they actually have been built, the blame for their shortcomings is usually assessed against him, whereas it really should be lodged farther back, or "higher up," as New York slang has it. The structures are in reality erected by the aid of building-loans provided by men who are the real speculators in the undertaking, although their mercantile risk is peculiarly well guarded. They "promote" the undertaking by securing the site, procuring what may pass for the plans, specifications and detail drawings with the Department of Buildings, and then inveigle some unscrupulous or ignorant contractor into undertaking the erection of the building, conveying the title to him under mortgage, and agreeing, on terms advantageous to the promoters, to provide the money needed to carry on the work. But the contractor's risk is not merely the final one of finding a purchaser of the completed building before the mortgage falls due, it is a much more complex one, and in its complexity is to be found the greatest element of risk to the future owner and to the general public. Although the promoters

agree to furnish the money to build, the condition is that payment shall be made in installments, but only after the work has been finished up to certain specified stages. The result of this is that, if, as often happens, the contractor has insufficient working-capital and poor credit, he has to buy his materials on short time and of as poor a quality as will serve, and then, in order to show completed work up to the prescribed stage, in time to secure the advance from the promoters before the bills of the material-men fall due, has to rush the actual building operations at a speed that precludes good work and almost inevitably compels slighting and scamping, when an inspector is not actually in sight. The real iniquity lies in the conditions under which the building-loans are advanced; the real evil-doer is more the promoter than the actual builder.

OFTEN these speculative buildings have fair and attractive architectural faces, so good, sometimes, that a purchaser is justified in surmising that the building was designed and supervised by a trained and competent architect, and, so, has his suspicions lulled. In such cases, the promoters have procured their design either from some capable designer working overtime, or maybe from some young architect who has dared to open an office before he has acquired experience in construction, or, again, possibly from some student at an architectural school whose drawings have been noted at a school exhibition. There are, too, architects of some ability who, lacking social connection, have for years together to depend for their living or doing this sort of work for speculative builders. All that is demanded of them is a specious front and a simulative specification, but first of all and always a low price for their service—a lump sum and not a large one at that. It is not so much that the promoter and builder desire to economize on architectural supervision, they simply do not wish any at all. There are two morals to be drawn from this state of things: Young architects who have been properly educated and know that they have real ability, who, because of the trying times through which they must pass before their reputations are established, are tempted to provide designs for speculating builders, will do well to think twice before they consent to have their future good name associated with any structures which they have not themselves thoroughly supervised. And, second, architects in general and the public at large ought to perceive that there may be instances where an architect ought to demand more, rather than less, than the full five per cent commission; for when the opportunity of supervising his own work is denied him an architect deserves added compensation for the risk to which his unguarded reputation is exposed.

ANY one who has visited Mont St. Michel-en-Mer before the building of the dyke made it easily accessible to all, doubtless would be glad to revisit the place, to ascertain, among other things, how far the restorations have impaired the singular and individual charm that used to enshroud this wonderful example of a fortified abbey church. The first night we passed on the Continent of Europe was spent at Mont St. Michel, and the impressions of that night are ineffaceable, beginning with the drive in an open wagon, in the teeth of a howling storm—the Breton driver of the pair of rough ponies having all the air of having just slipped over from Cork—the church-crowned rock, opening and shutting before us as rain and cloud swept between, as the wagon toiled over the stretch of sands in the winding route staked out by high poles as safe from quicksand; the break-down of wagon-spring and rope harness, as the ponies tried to pull the load up out of one of the numerous chance gullies that the ebbing tide had left cutting across the path; the anxious consultation whether the breaks could be repaired before the quick-mounting *marée* should sweep in again,—all these things properly prepared the mind for the more acute impressions that followed, on passing within the gate. Then, the eager climb up the steep street, the rapid journey through the lower halls, corridors and nave, that final darkness might not fall before a complete idea of the object of the pilgrimage had been grasped, and the final exit out into the wonderful little cloister at the top of all things, there to linger till the way down and through the buildings could be found only by the aid of a match lighted from time to time, all produced such a sense of hush and

solemnity that the young American could only feel that the Present was far away, while the Past was all about him. Such impressions as these, as well as those roused the next morning by the sight of a long procession of pilgrims winding slowly over the sunlit sands—once more tide-deserted—the solemn sound of their chanted hymns rising clearly, are no longer within the reach of the traveller, who now smuggly reaches the rock over the new causeway, only to find abbey and abbey church more or less thoroughly restored by M. Edouard-Jules Corroyer, who died at the end of January last.

THE reason that this important piece of restoration was entrusted to Corroyer was that he was a pupil of Viollet-le-Duc's, one who, moreover, had shown a marked aptitude in the methods of ratiocination which enabled that eminent architectural archaeologist to produce, on paper, such admirably logical and well reasoned restorations, though too often, in execution, they turned out to be cold, stiff and unsympathetic. It is because we would like to know just what changes Corroyer wrought during the sixteen years he was conducting the restorations at Mont St. Michel that we would like to revisit the spot. Born at Amiens in 1835, Corroyer's first success was achieved at the age of twenty-seven, when he won the competition for the Hôtel de Ville at Roanne. From that time onward he was busily engaged with a considerable private practice, while in the way of public work, mainly ecclesiastical, he carried out sundry restorations for the Commission des Monuments Historiques, his most important work, perhaps, being the reconstruction of the Comptoir d'Escompte, at Paris, between 1878 and 1882. Besides filling many offices in the Société Centrale des Architectes Français and being one of the founders of the Caisse de Défense Mutuelle des Architectes, he was chevalier of various foreign orders, officer of the Legion of Honor and Membre libre of the Académie des Beaux-Arts; and, besides having carried off gold medals at the International Expositions at Rome, Vienna, Amsterdam and sundry others at the Salon and at the Paris Expositions, he was awarded the Grand Médaille d'Archéologie of the Société Centrale. But it is as a writer that M. Corroyer is best known to the profession at large, through his monograph "*Le Mont Saint-Michel*" and the two similar books "*L'Architecture Romane*" and "*L'Architecture Gothique*," the latter of which is well known in this country through Armstrong's translation. Although broad-minded enough to appreciate whatever was good in architecture, no matter what its style, the influence of Viollet-le-Duc on his youthful mind naturally resulted in his having a marked predilection for Gothic work.

IN the Hall of Statues in the Capitol at Washington, one of the two figures which represent the State of New York is that of Chancellor Robert R. Livingston, a replica of which is in the Capitol at Albany. The author of this statue, Erastus Dow Palmer, passed away last week at the ripe age of eighty-seven, an age which assures him a place in the ranks of the earlier American sculptors. A large part of his work consisted, as did the work of other contemporaries of his mature years, much more than now, largely of portrait statues, busts and medallion portraits, generally speaking of citizens of New York; but he also produced some notable pieces of imaginative sculpture, as, for instance, "*The Angel of the Sepulchre*," now in the Rural Cemetery at Albany, "*The White Captive*," a nude bas-relief "*Peace in Bondage*," a full-length recumbent figure in Grace Church, Utica, known as "*Morning*" and others equally noteworthy. He manifested his skill early, being noted in boyhood for his clever wood carvings; but he did not suspect the strength of the ability that was in him and took up the calling of joiner, which he followed for some years. One day it occurred to him, after seeing an Italian cameo, to try to cut a cameo portrait of his wife, and, succeeding, then devoted the next ten years of his life to cutting cameos. In this way he advanced gradually to the modelling of bas-reliefs and statues, the most ambitious of which is said to be his "*Landing of the Pilgrims*," a group whose fate we do not know but which he hoped to see placed in the Capitol at Washington. He was quite self-taught and did not have a chance to visit Europe and its galleries till he was long past middle life.

A SHORT time ago, the New York *Evening Post* openly repented because it seemed to be impossible to hold in New York such satisfying exhibitions as those which the Copley Society seemed to prepare with such ease and success for the pleasure of Bostonians. After reflection, it was inclined to find an explanation in the fact that, whereas New York

exhibitions were almost wholly in the hands of picture-dealers and artists, whose main interest was a self-seeking and pecuniary one, in Boston such affairs were to a large degree managed by amateurs of art. It occurs to us that it might not be a bad thing for the Boston Architectural Club, which is to hold one of its occasional exhibitions at the Boston Art Club during the first two weeks of May, to act on this hint, and, next time, place the control in the hands of qualified amateurs of architecture, who should be guided by a determination to show, not so much the things which architects and draughtsmen desire to show, but rather the things which the public desires to see. Possibly there might not be any very discernible difference in the result, whether effected by professional or amateur committees, for, as a rule, the exhibitions of the Architectural Club have had an air of quiet distinction quite as genuine as any exhibition prepared by the Copley Society, and have really been attractive to the public. The policy of having occasional, and we believe irregular, exhibitions is a better one than that of holding annual shows at fixed dates, which rather tend to encourage the preparation of show drawings, often the work of the same specialists in rendering, though working for different employers. Intending exhibitors at the coming show are expected to send the entry-blanks of their drawings or photographs to the Exhibition Committee, Boston Architectural Club, 720 Colonial Building, Boston, on or before April 4.

MANY people have felt relief that a stigma that has too long rested upon American enterprise, daring and skill was at length removed last week with the announcement that the two headings of the North River Tunnel had at length met and joined, with satisfactory engineering accuracy. The varied history of this tunnel, which connects Fifteenth Street, Jersey City, with Morton Street, New York, has been recited from time to time in these columns. It is enough to recall now, that it was begun more than a quarter of a century ago, has been the cause of financial disaster to both American and English undertakers, and has been the scene of fatalities not a few to workmen employed in its construction. As the traffic requirements for which the tunnel was originally designed have altered materially, and as there was no method by which the size of the unfinished tunnel could be enlarged, the just-completed structure is now to be but one of the pair of tunnels which present traffic requires; so, though some slight use will be made of the first tube, it will be some years before the second one, on which work is already progressing steadily, is finished and the full system in complete working condition.

LITTLE by little those of us who have not yet been compelled to join labor unions find the hope that such adhesion may after all be escaped growing stronger, thanks to the willingness of one judge after another to find earlier decisions against coercive measures sound in law and equity. Courts of high degree and low degree have recorded so many opinions on labor matters that, should they be codified, it would be apparent that the laws still do protect men in their individual rights whether they wear or do not wear a union "button." General principles having been adopted or, rather, such principles having been as it were reaffirmed, the courts everywhere seem desirous of discovering to what lengths their own reasoning can properly be carried. Only a short time ago it was generally felt that in the non-incorporation of labor unions there was to be found an insuperable bar to securing the enforcement of a court's mandate, and much clever casuistry has been expended in arguing both sides of the question, and as it now appears, quite needlessly. Last week in the Superior Court of Ohio, Judge Hosea carried the principle of the law's real control of every action to its farthest legitimate bounds. The case before him was concerned with the attempt of the Journeyman Plumbers' Association and the Building Trades Council to control the action of the master-plumbers of Cincinnati. Judge Hosea makes permanent a temporary injunction against these two meddlesome, but unincorporated, trade bodies, and does it in such a way that each individual member of these bodies is permanently enjoined and cannot relieve himself from the court's restraining hand upon him, by any change that may be made in the name of the organization or the composition of its membership. One more step only is needed, and the next judge may take it and lay a permanent injunction on each individual member of a labor union no matter where he goes or what other "local" he may join. This done, mankind in this country will be brought back again to its normal condition of entire equality before the law, and that is all that the so-called "enemies of labor" desire.

WINTER PICTURE SHOWS IN LONDON.

IT is a pity that Sir Thomas Lawrence worshipped rank and beauty to the extent of sacrificing strength and character. His ladies are not exactly fashion-plates, but they run uncomfortably near that kind of art—in a word, every woman he painted was pretty and affected. When under the influence of Reynolds, Lawrence was masterly in his handling of the brush, as we may see in his portrait of the celebrated actress, Miss Farren, afterwards Countess of Derby, painted in 1790; whereas in the portraits executed twenty years later, we find the well-known Lawrence work—little light and shade, a long neck, an affected turn of the head, and the flesh painting smooth and oily—quite different to the handling of the garments. Here this painter was always more or less masterly. The velvet of *Master Lambton's* red suit, the white satin of his many ladies, the tights of the first Lord Ribblesdale, are, in their several textures, admirable. Concentration and sacrifice, a little more truth to nature, and less desire to be before all things pretty, would have made Lawrence a fine painter. As it is he is immeasurably below Reynolds, Romney, Gainsborough, Hoppner and Raeburn amongst British artists. When one looks at the Farren portrait (so well known through the engraver) one cannot but reflect, what would this happy pose, this figure swathed in a fur-trimmed satin mantle, have been had the brush of either of those great artists painted it.

The exhibition is rich in other painters' work. A splendid portrait of *Juan de Pareja* by Velasquez, from Longford Castle, and Lord Northampton's *Lady* by Rembrandt, are magnificent examples of those master's work. Several Van Dycks are notable. As for Sir Francis Grant's pictures, the less said about them the better. That such worthless stuff should have been turned out by a President of the R. A. is marvellous; but that a poor lady in a red petticoat and looped-up gown over a crinoline standing on snow, should have been re-exhibited in the year 1904 is astounding. Can the Academicians value the *Red Petticoat* as art?

Whether the bronzes lent by Mr. Pierpont Morgan are absolutely the work of those sculptors to whom they are attributed, is questionable. Cellini, Pollainollo, Il Riccio, and other celebrated workers in bronze are represented. Some of the statuettes are fine, but doubt is thrown upon the attribution of these names to them. Nevertheless, Mr. Morgan's is an interesting collection.

The late Onslow Ford's *Applause* and other works are side by side with those of his fellow Academician Harry Bates, both witnessing to the renaissance of sculpture in England.

At the new gallery in Regent Street the International Society's fourth show is on view. The catalogue is still covered with brown paper, à la Whistler, and there are other little affectations in the galleries; but on the whole it is an excellent exhibition.

As you know, M. Rodin came over with a phalanx of French artists and found us wallowing in London mire and mist; but they seem to have been pleased with their reception. Some of the speeches were rather highflown, but we English, in learning to express the enthusiasms we have always felt, have somewhat run to the other extreme. M. Rodin is a great sculptor, but scarcely the "greatest" of modern times. The French have many as great, in a different line, and our own Alfred Stevens was a very great man. M. Rodin has the imagination of a Blake—but he also knows how to model the human figure.

Whistler's *Symphony in White, No. III*, is as charming as ever. And how exquisite is the modelling of the reclining girl's knee; and how subtle! But might there not be a little more perspective in the pattern of the carpet, and the Japanese fan? M. Thanlow's *Déjel* is at once realistic and poetic; and the same artist's colored etchings are beautiful examples of this process.

The Spanish painter Zuloaga produces powerful work, but all on one plane. His color is crude, but his manner of expressing what he aims at is marvellous. *Le Mot piquant* means much that is not necessary to understand, in the way of *double entendre*. His models are from the dregs of the population—*Gitanes*, etc.; and in looking at his pictures one feels soiled as by the work of Aubrey Beardsley. It is a pity that artists should so prostitute art for the sake of notoriety.

"Art in its perfection is not ostentatious," is the motto of an exhibition of landscapes in Piccadilly. Perfect in their way are the nine contributed by Mr. R. W. Allan; Mr. Peppercorn's *Twilight*; and Sir Ernest Waterloo's *Evening among the Olives*. If art does not charm, what is its value? Nature is our master, and the pupil is bound to follow in his masters' track—the path of beauty.

S. BEALE.

MAHOGANY AND OTHER FANCY WOODS AVAILABLE FOR CONSTRUCTIVE AND DECORATIVE PURPOSES.¹

WHILE accepting the great honor of the invitation of your Council to read a paper on the above, a privilege highly appreciated, still one cannot but feel that the time allowed makes it impossible to deal fully with, and to do justice to the subject. The importance of timber in our commercial economy is well recognized

by your Society, seeing that you have devoted several evenings to the consideration of various phases of timber and timber supplies.

We are now said to be living in an iron age, and while it is true that metal enters more largely than formerly into our constructive and general economy, it is also an undoubted fact that our modern requirements of timber are depleting the world's forests far in excess of natural reproduction; nor is it appreciated, that while timber is exhaustible, it is restorable; but, as yet, practically nothing is being done to conserve or reproduce what is, to man, as vital as even "food supplies."

The cynic may say, "Let futurity take care of itself; it has done nothing for me." Granting the truth of the cynicism, is it not also true that we inherited a world most bounteously timbered? Shall we not then do something to hand on to future generations that heritage unimpaired? There is no need for panic, but there is need for prompt action, and if we are to maintain our industrial supremacy something must be done to inaugurate an extensive and scientific system of the reafforestation of the United Kingdom and Ireland with such timbers as experts may agree upon as being likely to thrive.

We hear much of the open-air treatment of consumption, and see a vast number of the unemployed in our large cities, and there is far too much cant about the liberty of the subject; but it would be a kindness to compel the inefficient to return to the land, and find them employment in forestry.

It would be a folly to delay action until a timber-famine is upon us, as merchantable timber cannot be grown in a season, like so much grain or cotton.

Literature, bearing upon timber available for commerce, is meagre, much of what there is, is either too academical, or it is written by some party interested in pushing some unknown and untried wood, with a view of proving that in its users would find a material that in itself excels all other tried and proved timbers.

Such writing betrays much ignorance, it cannot be too distinctly understood that each wood has its own economy. Our object must, therefore, be to learn the special characteristics of those which enterprise and modern transportation have placed at our disposal, and while, however, imperfectly enumerating the purposes for which each is peculiarly adapted, it is essential not to hold a brief for any, only so far as they fulfil such requirements, which common experience demands of a wood, if it is to be recognized as being suitable for high class work. There is a beautiful avenue of trees at Bushey Park, but it does not follow that they would yield good timber.

Mr. Stone recently read before you a paper on the identification of woods,² so that it is unnecessary to spend much time on that point; it may, however, be permissible to state, that to identify different woods, it is necessary to have the knowledge of the definite invariable differences of their structure, besides that of the often variable differences in their appearance. The craftsman who handles different woods intuitively recognizes them, yet notwithstanding this familiarity, he is frequently unable to state the points of distinction, nor can even an expert determine the identity of what is to him a strange wood.

The needs of general building are in the main well provided for with soft woods, but our purview is that of something beyond a mere granary, so that it is necessary to consider the varied requirements of the architect, engineer and naval constructor; also the railway-carriage and coach builder, the needs of the cabinet-maker and shop-fitter, followed by those of the silversmith and cutler. The makers of fancy knick-knacks can utilize many beautifully fine woods, which on account of their small sizes are not adapted for large constructive purposes.

To draw a strict line betwixt what is constructive and what is decorative might be arbitrary, thus the companion-way of a modern steamer may be fitted with the finest fancy woods, and while the work is primarily constructive, it becomes essentially decorative.

In furniture, domestic or otherwise, apart from the utility of the article required, the idea is to embellish, in other words to make it decorative, hence the demand for high-class fancy woods.

When considering what particular wood to use in any prospective undertaking, if the result is to be satisfactory, the choice demands much thought.

To judge from many years of observation, it is extremely doubtful if wood, as an aid to constructive and decorative art, is appraised at its proper value in first-class buildings. Too frequently architects embody in their original designs some charming features of woodwork, only to find, when the tenders are submitted, that the gross cost of the entire building is beyond the ideas of the principal or building-committee.

Then commences the paring down, which usually results in the exclusion of high-class woodwork; this can only be compared to a lady ordering a silk gown, and accepting it with cotton trimmings. In the North, there is at the present moment a Roman Catholic Cathedral being erected, where the woodwork is of very ordinary soft wood, not in harmony with the richness of the stonework. With reference to the proposed Liverpool Cathedral, it is to be hoped that the architect and building-committee will avoid the repetition of such a blunder as the cutting down of wood at the expense of stone. Surely the wealth of Liverpool should provide sufficient money to ensure that every piece of wood shall be oak or teak, either of which if properly selected and manipulated is almost imperishable, and

¹ A paper by Frank Tiffany, read before the Society of Arts and published in the *Journal* of that Society.

² *Journal*, vol 1, p. 48.

certainly more durable than stone. The glory of our old cathedrals consists largely in their fine woodwork, and there should be no insuperable difficulty in procuring for the new cathedral woodwork that will be for the admiration of all who pass through this gate of the sea — East and West.

With further reference to the "choice of woods," what can be more incongruous than a mahogany pulpit in a Gothic building, or to see drawing-room furniture made of oak? Certain woods are unsuitable for Chippendale or Sheraton furniture; for these styles, Spanish mahogany is decidedly most suitable. Obviously it would be impossible to classify all woods and define their adaptability for each specific style and purpose, but possibly the suggestions named will ensure some little attention.

Apart from style, there is also the question of the utility of a given wood for a specific purpose; thus, in the introduction of fine woods into the fittings and furniture of public buildings, offices, hotels and steamers, where hard wear has to be withstood, the architect should seek to procure such woods as will not readily indent or absorb the dirt and smoke incidental to the places named. To avoid these objections, it is necessary to choose woods containing most of the essential features which give fancy woods their value.

Briefly summarized, the salient features of what is required of any fancy wood is that it shall possess more or less of the following attributes: Hardness of surface, but it must not be of such hardness as to render it "potty," or brittle, so as to be too difficult to tool; evenness of texture, that is an absence of undue variation of alternate layers; cohesion of fibre, along with an absence of resinous galls. It is also necessary that the wood should season more or less readily, without a tendency to tear itself into shreds, or to twist and warp when seasoned; nor should it swell and shrink with every slight variation of atmospheric conditions. Color and figure are points which allow a considerable latitude of choice; it is, however, desirable, in high-class woods, that their color should improve with age; it militates against value when they fade, go black, or become lifeless.

In cabinet-making, glue pays an important part; any wood which will not take glue is worthless for this class of work. It is also essential that a fancy wood should be capable of yielding a fine surface when polished; a wood which unduly absorbs polish is discounted. Many woods which possess the attributes named lack size; but those which have the essentials, combined with length and width, are invaluable in constructive and decorative art.

An important point for the architect, before stipulating for any particular wood, is to learn if its specification will yield the sizes required; an iron girder can be made to any size, but the length and depth of an oak beam is limited to what the tree will yield.

Having thus enumerated the features of the wood in general, it is now desirable specifically to name those woods which are on the market, and in doing this, to give, as far as possible, the peculiar characteristics of each. Perhaps it will simplify the classification to ignore all botanical distinctions and genera; merely giving their well recognized commercial names.

Recognizing the fact that each wood has its own special utility, and that no one wood is for every purpose an absolute premier, there are three distinct woods: namely, mahogany, oak and teak, each possessing many important characteristics so as to justify the expenditure of labor in their manipulation, and rank them as leading fancy woods.

Mahogany, if placed first, must not take that place to the disparagement of either oak or teak. The commanding position of mahogany is not due to any mere freak of fashion, but to its own intrinsic merits, along with the abundance of supply. Thirty feet is not an unusual length, and the squares range from 12 to 50 inches.

Mahogany seasons readily, with an absence of splitting and checking. Much of it is firm grown wood, not too difficult to tool. It stands when wrought, and is practically non-inflammable; it is capable of a high finish in polishing, and, as a groundwork for paint, it is without an equal. Broadly it can, with advantage, be used for almost every purpose of high constructive and decorative work.

The range of sizes and quality, the variety of color, and the diversity of figures (or absence of figure, if so required) is, indeed, marvellous. While special logs fetch high prices, the average value does not exceed that of waney pine, hence the range of purposes to which it can be applied.

Mahogany is defective in color when its paleness approaches that of birch, or it may be too highly colored; it is considered good when between the two extremes, that is to say, of a bright ruby appearance.

Grain or texture. — Wood of good quality, when firmly grown, should be fine and free in the working, without being too hard.

Figure. — A log handsomely figured, if of good color and texture, commands in price shillings as against pence for ordinary wood; the selection for figure affords considerable scope for the judgment of buyers. The different figures are technically known as "roe," "mottle," "cross mottle," "dapple," "fiddle-back," and "pium pattern," along with "curls," but the latter are not much sought by English buyers.

In the main, botanically, our mahogany supplies are the same, but there is a great range of quality, especially in the African shipments.

As to the classification of the various imports, it would be misleading to say that one district yields all good and other districts all bad; but, speaking generally, the imports of Spanish mahogany, that is, St. Domingo and Cuba wood, possess the finest texture, and have, in a marked degree, those chemical constituents which cause the

wood to mellow and improve in color with age, giving them a charm which is distinctively their own.

The supply from St. Domingo is now insignificant, and consists chiefly of small chairwood. The Cuban shipments, notwithstanding a great quantity of small wood, affords a good range of sizes which fit them for the highest purposes of constructive and decorative art. The wood is of firm, silky texture, without being too hard, and when wrought, there is no tendency to warp. Much of it is only slightly figured; when richly figured, it commands high prices. It would be difficult to give rules to enable the layman to distinguish Spanish mahogany from other varieties, but its silky texture, with small white specks in the bait (while the specks in bay wood are usually black), are useful as guides. Another feature of Spanish wood is its intense coldness of touch compared with bay wood.

The next mahogany in order of merit is Honduras bay wood, especially the shipments from Belize and Trujillo. These come in larger sizes than Spanish wood, hence their greater adaptability for larger work. Their silky texture, along with a general freedom from serious heart shakes, causes the wood to be much appreciated. In point of size, Honduras wood is excelled by the Tabasco shipments; the latter also yields fine textured, good colored wood, but the heart shakes are usually more serious. Mexican shipments are much softer, and frequently contain corky heart wood, but the supplies to this country are practically nil.

Nicaraguan mahogany, chiefly shipped in the round, is of mild texture, but the supply is insignificant, and is controlled by a Boston syndicate. Panama mahogany, while it is of good texture, is subject to worms, and it comes in such a shockingly battered condition, that it only realizes low prices, and the shipments are too erratic to give it a place. From Guatemala there is a nice quality of mahogany shipped, but the heart shakes are serious.

The Costa Rican and Columbian shipments are so variable in quality, and the shipments too uncertain to enable them to be ranked as standard imports.

Unfortunately, whatever may be the merits of the mahogany shipped from the Central American ports the quantities arriving in this country are diminishing. But this is compensated by the development — especially into Liverpool — of the African mahogany business. Although the character of this wood varies, it embraces timber which contains, in a marked degree, those characteristics which make for value. The quantity received is simply enormous, representing the product of different districts; the wood of each has its own utility, but probably the following classification will meet the approval of experts: —

Lagos wood, in color and silkiness of texture, more closely approximates to the Tabasco shipments, but in size it is generally small.

Benin wood affords an excellent range of sizes, and the logs are well squared. The wood, having a splendid texture, commands a leading position.

Axim and Assinee wood is usually well squared, and yields enormous sizes, the color is generally good, but the texture is softer than other shipments; it is also found that the logs are more or less liable to cross fractures, which cannot be seen until the logs are cut into. Bathurstwood represents the hardest mahogany from Africa, but the sizes are somewhat small.

There are other African ports from which good merchantable timber is shipped, which, however, does not require any special notice, but Gaboon wood is very little better than birch in color and texture, and, as a furniture-wood, it should be avoided.

Sapeli wood comes in fine, large, well-squared logs, but is scented like cedar, the color and texture being extremely variable; it is certainly not growing in favor with buyers, some of whom doubt if the wood is in reality a mahogany.

There can be no doubt that African mahogany is a most desirable addition to our stock of furniture-woods, and if properly selected will hold its own, and the mere fact that figured logs sell at prices ranging from 5s. to 12s. 6d. per foot of inch, is sufficient to show how highly it is appreciated.

Passing to Asiatic mahogany, it lacks the brightness of color which is usual in other varieties. Of Australian mahogany, occasionally small sample shipments are made; while the wood is deeply colored, it is very dense, and has a tendency to split in seasoning. It is doubtful, even if nursed under a preferential tariff, if buyers would take kindly to it so long as they can obtain supplies from the true mahogany belt.

Oak is the king of hard woods grown in the temperate zone. The different varieties are so diversified in color, density and size, that it would be impossible within the limits of this paper to bring out all the attributes of a wood which enters so largely into heavy constructive work such as bridges, roofs and the underparts of rolling-stock, all of which are subject to strains and stresses requiring a tensile strength and a flexibility, not equalled by any wood known, even if its specific gravity is forty or fifty per cent greater.

For church and other interior fittings, or for furniture, whether required for hard wear or for the highest decorative art, oak stands unrivalled; but the variety must be considered in relation to the purpose for which it is intended.

For fine work with intricate details, possibly the best available is the Austrian wainscot, which, owing to its large mild growth, seasons without unduly checking and splitting; its evenness of color renders it invaluable.

Crown logs are imported in billet form, clear of heart, and should

have deep sides and a narrow sole, otherwise they yield too much wood, narrow and without figure.

Wainscot oak from Lebanon and Odessa is of smaller growth and of a more dense nature, hence more apt to split and check, nor can it be produced as clear of heart, as is not only desirable but necessary; it should be avoided in first-class work.

The American equivalent term for "wainscot" is "quartered," and by this system of conversion, all the boards or planks show the figure on the face; the wood is shipped square-edged, one edge with the sap on; the range of width varies from 3 to 18 inches, but anything above 8½ inches average is special. There are so many dealers here in cheap lines, that unless one knows the source of supply, there is no guaranty as to evenness of color, but the right stock is obtainable from reputable importers, the uniformity of color and the excellence of quality of the best imports from the States cannot be surpassed by European wood. Taking now the heavy oak trade, let us for a short time return to European shipments.

From Odessa, Dantzic and Stettin, are received partially squared butts and logs 6 to 30 feet long, 12-22 inches deep; these yield good tough wood, some clean and much that is rough, yet it is useful for heavy constructive work not requiring elaborate manipulation.

Formerly, fine handsome well-squared logs were shipped from Quebec. The States now send hewn logs, which are useful for general work and wagon building; but the Southern States oak has a great tendency to check, and should not be employed in work requiring a high finish.

There is also an enormous trade done in scantling planks and boards, some good, and much indifferent; but the capacity of our general market is great. There is what is known as Red Oak, a porous wood, extremely useful for many purposes; and it is surprising that it is not more appreciated in this country.

In naming English Oak, the last, it is not because its merits are the least; from a patriotic view it occupies a very high position, and it yet remains to be proved whether the costly armor-clad vessels will do the country better service than the ships of oak. English oak, by its density and toughness, is especially applicable to work requiring strength; for vehicular construction it is second to none, but neither the quantities nor the sizes available would touch the fringe of our necessities. In seasoning, especially thick stuff, it is apt to check and warp, and at the best it is a tedious process.

Whether English brown oak is a variety, a freak, or the result of old age, time will not permit of consideration, but for absolute beauty there is no wood with which to compare it. Its knotty gnarled grain causes an endless variety of shade and color, but to bring out the best results, all flat work should be used in the veneer. The present price of labor makes such work costly, but the result would be better.

Teak.—Had this wood been available when Solomon built his temple at Jerusalem, probably, with his wealth, he would have preferred it to the cedar of Lebanon; it is, however, used in the pagodas of the East, and, as a preferential treatment to our greatest dependency, it is to be hoped that it will be the one wood used throughout in the building of the great cathedral at Liverpool.

Teak, while it is not difficult to tool, contains an essential oil which renders it imperishable; as it resists the alternations of damp and dryness, heat and cold, there is in it an absence of swelling and shrinking or warping, so that the architect has at his disposal an excellent wood either for external or internal fittings. In high-class work there is hardly any purpose to which it could not with advantage be applied. Its general uniformity of color and grain is unique. Considering the many high essentials found in teak, and the remarkably fine sizes obtainable, both in logs and planks, and the freedom from defects in the latter, it is by no means a dear wood for good work. The best shipments are from Moulemein and Rangoon; the Java wood is too hard and gritty for work with much detail.

Having spoken somewhat at length on what are undoubtedly the three leading fancy woods, let us briefly place in alphabetical sequence the minor fancy woods and hard woods.

Amboyina, an Eastern product, whose botanical position is not well defined, can only be used in veneers which form extremely pretty panels. It is useful in highly decorative work. In appearance it is not unlike brandy-snap, but with more variegation of color and figure.

Ash.—Most varieties are close, tough wood, and it is used chiefly in vehicular framework, but has neither life nor color to recommend it as a furniture wood.

Quebec Ash, being of a milder texture, was for a time used in moderate-priced bedroom furniture, but its increased cost and the difficulty of getting it free from discoloration causes it to fall into disuse.

Hungarian Ash is frequently richly figured, but its varying grain, unless special care is taken in laying the veneer, allows the glue to discolor it; this, with the cost of labor, puts it out of the running.

Beech, while it is a useful material, cannot be classed as a furniture wood, unless it be for cheap chairs.

Birch was, for a time, in vogue for bedroom suites, when everything was veneered; it is now only used in cheap chairs, and the frames for stuffed chairs; and for other purposes requiring hard wear it is a useful, cheap wood.

Black Ebony.—Of the many varieties, the largest comes from Ceylon; then there are the shipments from East India, Calabar, Madagascar and Mauritius; logs come in the round, 1½ inch to 3 feet and longer. The wood is extremely dense, and is highly

suitable for small ornamental work. When applied to decorative fittings, it is chiefly used in veneers and mouldings in relief.

Blackwood, from East Africa, is used largely in musical instruments.

Boxwood is essentially an engraver's and rule-maker's material, but it is suitable for small decorative panels, and for handles and shuttles where an extreme hardness is required; in color it is similar to satinwood. It is imported in the round, 3 to 12 inches diameter. The best comes from Persia and Kuysna; that from the West Indies is inferior.

Brazilwood is used for violin bows.

Brigalow, an acacia from New South Wales, is an extremely hard, heavy, dark-colored wood, which smells more or less of violets; it is used for small ornamental turnery and fancy tobacco pipes.

Californian Redwood or Sequoia.—One would hesitate to rank this as a furniture wood; it is a poor material for dovetailing, being short in the grain, and a great absorbent of polish. Considering the large flitches it yields, it is a pity that it cannot take a better position, as the wood is so remarkably clean, but it lacks a cohesiveness of fibre.

Canarywood.—This is distinctively a hard wood, and while not a first-class fancy wood, it is extremely useful for the inside parts of fittings and furniture. The best qualities are cleaner than yellow pine, and the evenness of its texture renders it suitable for staining; the lower grains are largely used for cheap furniture.

Cedar hardly comes within the category of fancy woods, nor is it a hard wood; its character varies, some being very mild-textured; it was formerly used for the inside parts of furniture.

Pencil Cedar, of a deep-red color, with a pungent smell, was formerly appreciated as a moth-destroyer, but it is now almost impossible to get it in sizes for constructive purposes.

Chestnut in character is something betwixt ash and oak, lacking the medullary rays of the latter, and is much softer; it is subject to ring shakes and the ravages of the pin-worm; it has no beauty to recommend it as a furniture wood.

Cocobolowood is imported in small diameters; the wood is dense, and is used in fancy turnery.

Curupay, like most of the South American woods, is extremely hard, heavy and potty; it is neither a mahogany nor a rosewood; when an occasional consignment arrives it is generally neglected by buyers.

Greenheart, from British Guiana, is shipped in hewn logs, 12 to 20 inches deep, 20 to 40 feet long. Its chief use is in dock-gate construction; it is long in the fibre and dense in texture; but there is nothing in its color and appearance to justify its adoption in general work, and it is difficult to tool.

Hickory, while a good wheelwright's wood, has no feature to commend it for furniture.

Jarrah.—A hard dense wood of no beauty in appearance; considering the large sizes to which it grows, it is a pity that its uses in this country do not appear to be available for much beyond that of a paving material, for which it is undoubtedly fitted, as it can be obtained clear of sap; but this is hardly the time to discuss the relative merits of hard-wood paving.

Karri.—A similar wood to Jarrah, but of much greater tensile-strength; to a small extent it is being used for the under parts of rolling-stock, but whether it will be found to possess or retain that flexibility so characteristic of oak, remains to be proved, and its great weight adds materially to the dead-load of the train. There is nothing in its appearance to commend it for general purposes.

Kingwood or Violetwood is used for ornamental handles and similar purposes.

Lancewood is a splendid material for shafts, but it hardly comes within the scope of our observations.

Letter or Snakewood, a fine ornamental timber, which is used for fancy walking sticks, etc.

Lignum-vite, without doubt the hardest product of the tropical forest, is invaluable for many purposes, but for decorative work it is too difficult to tool, and it has no beauty.

Maple is too insipid in appearance for furniture, etc., unless we except the bird's-eye variety. Its chief uses are for the interior of tram-cars.

Plain hard maple makes an excellent factory or ball-room floor, as it does not shell in the grain. It is used in machinery, and for washing-machine rollers.

Myallwood is used for purposes similar to that of brigalow.

Olivewood does not enter largely into our imports. In closeness of grain and color it is not unlike satinwood, but it is variegated with many dark streaks. It is, however, a useful fancy wood for knick-knacks.

Podouk is shipped from the Andaman Islands in fair sized hewn logs; is of a deep red color, which fades with exposure. It will not take glue. When wrought it stands well, but it is costly to manipulate. Where extreme hardness is required, it makes a good counter-top, but the general run of lengths are too short. It is also a splendid wood for gun-carriages, etc.

Partridgewood is occasionally used for furniture, also for fancy knick-knacks and walking-sticks.

Rosewood thirty years ago was considered a first-class drawing-room furniture wood, but it has fallen into disfavor, although it is still used for pianoforte cases. As a wood it is costly and the sizes small, and is difficult to work. When newly worked it possesses a dark and frequently richly variegated figure, but fades with age,

becoming very lifeless. As a moulding wood in relief it is very effective.

Sabicu, a hard dense wood shipped from Cuba and the West Indies, occasionally from Africa, is used by naval constructors, and where hardness is a desideratum, it makes a capital counter-top, but for work with much detail there is nothing in its appearance to justify the labor.

Satinwood is probably the gem of the forest, but the quantity available is small, and where used the style should be so arranged to adapt it to the sizes available. In texture and figure it is closely allied to Spanish mahogany, but the color is of a pale lemon tint. Its appearance when finished justifies any labor which may be necessary.

Sycamore is white in color, and while it is a good kitchen wood, there is nothing to recommend it as a general furniture material.

Thuya is the burr of the cedar and makes an excellent veneer for panels and inlaying, but the color and figure is not so fine or rich as that of amboyna.

Tulipwood, a small fancy wood used in veneers and inlaying.

Walnut, up to the seventies, when veneering was in vogue and the hours of labor longer and wages lower, Italian, Circassian and English walnut was largely used by the cabinet-maker; the burrs of the two former yield pretty and varied figure; the pianoforte-case makers still use it largely. With the change of style in domestic furniture and the more general adoption of fancy woods in general fittings, there arose a demand for black walnut; its large mild growth lent itself to the new need, but owing to the depletion of supplies it is now difficult to get logs, clean and suitable for large work; there is no doubt that for a while walnut will continue to arrive, but it will be chiefly ill-grown, harsh, small wood. There is a quantity of low-grade timber arriving for the cheap furniture trade, but the few large and prime logs and first quality lumber will always command high prices, and it is not an economical wood to convert and manufacture.

The color and coarseness of texture and general pottiness of the South American and Corinto walnut render them unsuitable for this market.

Satin-walnut (so-called) is in reality a gum-wood and is used for cheap bedroom suites. Whether it will prove to be a good paving material you have in this city an opportunity of ascertaining.

White walnut, or butternut, is a mild-textured wood, but in color too insipid and the supply very insignificant.

Yew tree, on account of its flexibility, is used for archer's bows; occasionally the trees yield a fine figured burr suitable for panels.

Zebrawood, a tropical product, as its name implies, is stripy in color, and is used for inlaying.

Incidentally it may be mentioned, that apple, cherry and pear, are close, even textured woods, which may occasionally be obtained for carved panels; they are also useful for ebonized veneers and mouldings.

It is not, for one moment, claimed that the list given represents all the fancy woods, but the endeavor has been to keep within the title of the paper. Comparing the woods enumerated with a good botanical guide, one cannot fail to notice the limited range of woods which have commanded a position.

The method of shipping sample woods is neither satisfactory to the shipper nor to the trade on this side.

Mr. Gamble, in his lecture at the Royal Colonial Institute, spoke of the difficulty of introducing new woods, which is quite true.

Merchants and consumers here have also enormous obstacles to face if they attempt to push an unknown wood. Unfortunately, timber cannot be assayed as readily as a mineral. If the former is to be properly assessed, it must first be thoroughly seasoned; to do this takes time.

Very few people can determine the chemical constituents of one wood as compared with another, nor are there many who have capital to sink on a wood for which there is no market or demand, and for which the fashion has to be created.

The carrying of seasoned stocks of recognized fancy woods is in itself a heavy tax on capital, without loading it with an unknown and unproved wood, and if a merchant takes the risk he has no guaranty as to the continuity of supply at a price that would enable him to compete with recognized stocks. Why should an architect specify in his contracts any woods which may prove to be unattainable?

Can there be any wonder then, as was remarked by a speaker in the discussion on Mr. Scammell's paper, "that merchants do the plain business thing, and stock such woods as mahogany and oak"? The introduction of new woods involves a considerable amount of missionary enterprise, which rightly should belong to those whose interest it is to secure their introduction and acceptance. Primarily the trade here is not concerned as to what strange wood may be waiting for the logger, as engineers and architects naturally specify those woods which are known to commerce and approved by experts.

Native woods may no doubt fitly meet the needs of a primitive civilization; but in this country there is the choice of proved products of the forests of the world; and so long as this is the position, there is no inducement for the railway-carriage builder, for the sake of saving a ten pound note in a £1,200 carriage, to risk not only the lives of passengers but his own reputation. It is astonishing how few new woods have made a position during the present generation.

This much, however, is certain, that should the present demand for fancy woods and hard woods continue, there must in the near

future be new sources tapped, and there is a golden opportunity for anybody who could find, ship and maintain a continuity of supply of woods at present unknown or unrecognized, but these must at least possess some of the essentials enumerated at the outset, and be able to compete in price with the recognized imports.

It is, however, futile to send here unlabelled samples which brokers cannot classify, and consequently give them such unmeaning names as "fancy woods" or "furniture wood," and hence they are frequently auctioned at prices which do not cover freight and charges.

If a wood is worth sending it should have proper foster-parents, who can give the trade some idea of the quantity available, and the more important question as to the continuity of supply and the cost at which it can be placed on the market.

If, however, a wood is of great specific gravity, this adds materially to the cost of freight, and it will be difficult to work; this is another factor against its general adoption, so long as mild and free working fancy woods are available. Nor should it be expected that initial shipments will prove to be a gold mine to the consignors, but any wood possessing a fair share of the essentials laid down, if properly sponsored, is bound to force a market if backed up with sufficient missionary enterprise, but whether this work should be undertaken by the individual company, or the Government at the point of origin is a matter for them to settle amongst themselves. I have endeavored to show what is required of woods if they are to find a place in our commerce, and I may add that there can be no doubt but there are as yet vast tracts of virgin tropical fancy woods unexploited. One looks forward with considerable interest to the enormous possibilities which the completion of the Panama Canal will afford modern enterprise in opening up the virgin districts on the Pacific coast. Our Consuls there should do something to grasp the position before it is found that the Americans have obtained concessions and monopolized the best supplies.

In conclusion, whatever may be the outcome of the present fiscal inquiry it is sincerely to be hoped that the products of the forests, especially tropical (as they are essentially our raw materials), will be accorded the most favored clause, if not admitted absolutely duty free.

THE LIFE OF A BIG TREE.

SENATOR Platt, of Connecticut, has presented to Congress a remarkable document giving the record of an American tree recently cut up for lumber which had lived for more than two thousand years and had been successively attacked by forest fires exactly 1,659; 463; 324 and 204 years ago, these dates, at least one of them, occurring before the beginning of the Christian era, being more accurately and unassailably fixed than many important events in the past century. This astonishing record is contained in a letter to the Senator from Prof. William Russel Dudley, vice-president of the American Forestry Association, and head of the Department of Systematic Botany at Leland Stanford University, in support of the movement to preserve the California big trees. Professor Dudley in 1900 visited the mountain lumber camps to study the trees and obtained the data by counting the concentric rings of growth on the cross-sections of the felled trunks. The oldest so examined had begun its existence 525 B. C., and although Professor Dudley was satisfied that extended scrutiny would bring to light a few older trees, he does not expect to find any over three thousand years old. He has repeatedly demonstrated that in the climate of the Pacific Coast, with its sharply marked wet and dry seasons, there can be no question that each annular ring of structure seen in cross-sections represents a year's growth, certainly in the *Sequoia gigantea*. But Professor Dudley's most interesting discovery related to the remarkable recuperative power following an injury to these big trees. He says:—

The effects of certain tremendous forest fires occurring centuries ago were registered in the trunks of these trees and the record completely concealed by subsequent healthy growth. Among a number of similar cases the most instructive record of these ancient forest fires was observed in a tree of moderate size, about 15 feet in diameter, 5 feet from the ground. It was 270 feet in height and 2,171 years old.

This tree when felled had an enormous surface burn on one side 30 feet in height and occupying 18 feet of the circumference of the tree; this was found to have been due to a fire occurring in A. D. 1797. The tree when cut, in 1900, had already occupied itself for 103 years in its efforts to repair this injury, its method being the ingrowing of the new tissue from each margin of the great black wound. When the tree was cut the records of three other fires were revealed. The history of the tree was as follows:—

271 B. C. it began its existence.

The first year of the Christian era it was about 4 feet in diameter above the base.

245 A. D., at 516 years of age, occurred a burning on the trunk 3 feet wide. One hundred and five years were occupied in covering this wound with new tissue. For 1,196 years no further injuries were registered.

1441 A. D., at 1,712 years of age, the tree was burned a second time in two long grooves 1 and 2 feet wide, respectively. Each had its own system of repair.

One hundred and thirty-nine years of growth followed, including the time occupied by covering the wounds.

1580 A. D., at 1,851 years of age, occurred another fire, causing a burn on the trunk 2 feet wide, which took fifty-six years to cover with new tissue.

Two hundred and seventeen years of growth followed this burn.

1797 A. D., when the tree was 2,068 years old, a tremendous fire attacked it, burning the great scar 18 feet wide.

One hundred and three years, between 1797 and 1900, had enabled the tree to reduce the exposed area of the burn to about 14 feet in width.

It is to be noted that in each of the three older burns there was a thin cavity occupied by the charcoal of the burned surface, but the wounds were finally fully covered and the new tissue above was full, even, continuous, and showed no sign of distortion or of the old wound.

The above details are given to show the wonderful vitality and freedom from disease and decay possessed by these trees. If protected from fire and the lumberman they would undoubtedly live to a much greater age than at present, and would furnish the best living objects for scientific study and measurement covering a long period of years extending from one human generation to another. These measurements would have a bearing on our knowledge of the laws of growth as affected by periods of varying climatic conditions. It happens that the only measurements already made were made on the Calaveras big trees thirty years ago by the Geological Survey of California. It comes near being a crime, not only to destroy objects among the most interesting in the world, but to throw away data useful to the science of the future, as will be done if the Calaveras trees are felled.

So long as these trees are not in the hands of the United States or the people of it they are not safe from destruction. Railroads are now approaching them. Machinery is in use quite adequate to the destruction of the largest trees, and the trees will be cut by the lumbermen "when it will pay."

The State of California does not attempt this purchase because it has recently appropriated (1901) \$250,000 for the purchase of a park for similar purposes: namely, to preserve the Sequoia sempervirens (the Coast Range redwood). This park has already been purchased, and by the act of its legislature the State is bound to forever protect these trees "for the benefit of succeeding generations and the glory of the commonwealth."

The citizens of the State are also raising funds for the purchase of a forest park on Mount Tamalpais, adjacent to San Francisco. California, with only 1,500,000 people, has responded generously and as fully as her resources will allow.

All the big trees (Sequoia gigantea) occupy the heart of the great forest belt of the Sierra Nevada mountains, and their preservation is, therefore, important to stream protection and to the irrigation works contemplated for the San Joaquin Valley; nevertheless the utilitarian plea is not here entered in asking for the purchase of the Calaveras groves. We ask it because the species is unique, it is found in no other country, no other State, nowhere but in a portion of the Sierra Nevada range, and hence it is appropriate it should be under the control of the nation. We ask it because the Calaveras trees are historically by far the most interesting of the big trees; because their preservation will afford the highest and most innocent gratification to the thousands of people who will visit them; and, lastly, we believe their preservation will be most useful to the scientific observer of the future in his work on problems in the origin and history of species, in climatology, in the laws of growth. All this work has a bearing on the practical problem how to treat our forests so as to equalize the varying amounts of precipitation of moisture in the semi-arid region to the best advantage of our water-supply. — *N. Y. Tribune.*



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

SAVINGS BANK BUILDING, WARE, MASS. MESSRS. GAY & PROCTOR, ARCHITECTS, BOSTON, MASS.

This building is now partially built.

WORKMEN'S MODEL COTTAGES, PORT SUNLIGHT, NEAR LIVERPOOL, ENG. MESSRS. W. & S. OWEN, ARCHITECTS.

This plate is copied from *Zeitschrift für Bauwesen*.

CUTTER MEMORIAL LIBRARY, FARMINGTON, ME. MR. W. R. MILLER, ARCHITECT, LAWRENCE, MASS.

SUGGESTION FOR A PENTAGONAL-LIBRARY PLAN, DEVISED BY MR. W. A. BORDEN, LIBRARIAN.

WITH this illustration we have received the following letter from the layman who has devised this interesting scheme, which, as he is a layman only in the sense that he is not an architect, deserves

all the more consideration as being the conclusions of one instructed in the proper usage and usefulness of library buildings.

NEW HAVEN, Jan. 30, 1904.

Dear Sirs,—I send herewith floor-plan of a large library, and one capable of indefinite extension. The elevations I am content to leave to others. The availability of the pentagon as a basis for buildings extensive enough to require light-wells has occupied my attention for several years past. It is more economical of room than the square and yields itself to more variety of treatment.

In the plan herewith the front pentagon with its public rooms is intended to be built first. This, with three-story stacks, will store about 750,000 volumes. The next step is the addition of the rear pentagon, increasing the capacity to about 2,000,000 volumes. Each face of the rear pentagon thus forms the anchorage for another of equal size, increasing the capacity to about 7,000,000 volumes. Further increase is along the outer edge of the last pentagons, beginning at the rear and working either backward or sideways as the available land shall determine. Each pentagon stores about 1,300,000 volumes.

The packing-rooms, bindery, workshops, store-rooms and boiler-rooms are, of course, in the basement.

The buildings containing the book-stacks should be high enough to allow three stories of 7-foot stacks, and should be 32 feet wide (inside), allowing room for a broad aisle between the 12-foot cases. A larger capacity per square foot of ground could be had by making the stacks five stories high instead of three, but this might make the lower stories a little dark, as the light-wells are about 42 feet wide.

In the plan the fire-walls are so arranged as to allow no light-well to be entirely surrounded by any one section, thus giving the fire-department access to any fire from both sides of the burning building. These fire-walls are also to be used to limit the portions of the library kept open to the public.

The newspaper-room, reading-room, and library-staff room are 68 feet in diameter and 21 feet high; lighted by eight 6-foot windows. The buildings containing these rooms may be carried up two stories or more if necessary to the design and the upper rooms used for museums, class-rooms, etc., or for special libraries.

The delivery-room is 72 feet in diameter and should be carried high enough to allow a row of windows above the roofs of the adjoining stack buildings. How much higher than this it is carried depends upon the design the architect fixes upon. This building will, of course, be the keynote of the group in any design selected. The whole plan naturally selects the castellated or Neo-Classical.

The plan was designed from the standpoint of the circulating library. From that of the reference library, the central building would be the general reading-room, and other uses could be given the other large rooms and passages.

The whole plan is offered as a suggestion from a librarian to architects.

Yours very truly,
W. A. BORDEN, Librarian.

THE MARY E. BEALE MEMORIAL TOWER, BAKERSFIELD, CAL.
MR. CLINTON DAY, ARCHITECT, SAN FRANCISCO, CAL.

The first story is of light-gray face brick, with cream-colored stucco above to cornice. The roof is covered with red Spanish tile.

Additional Illustrations in the International Edition.

HOUSE OF J. M. COLTON, ESQ., JENKINTOWN, PA. MR. HORACE TRUMBAUER, ARCHITECT, PHILADELPHIA, PA.

LAWN FRONT OF THE SAME.

[NOTE.—We regret to have to explain, once more, that an accident, which happens at the last moment to one of our forms, does not allow time for substitution of other illustrations in place of those on which the mishap fell. — Eds.]



[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.]

PERMANENT EXPANSION OF CAST-IRON.

1600 HAM LTON ST., PHILADELPHIA, PA., March 14, 1904.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—In looking over an index of "Reprints of Papers" I find that you printed in your issue of April 11, 1896, a full abstract of my original contribution to the *Proceedings* of the American Institute of Mining Engineers on "The Mobility of Molecules of Cast-iron." Accordingly, I am sending you, under separate cover, a supplementary paper having the same title.

The cast-iron bars shown in the illustrations were exhibited by me recently in Boston to the New England Foundrymen's Association, and, on returning to my hotel after the meeting, I found a letter

awaiting me there which was mailed from Philadelphia for my use at that meeting. I think the following extract will interest you. The letter was from the Trust office of The Land Title & Trust Co., of Philadelphia, dated Feb. 9, 1904.

"The Chief Engineer of the Land Title Building, who went to Baltimore to inspect the effect of the conflagration upon the Continental Trust Company's sixteen-story steel building, tells me that while the entire inflammable contents of that building were 'roasted' and consumed, the steel framework is apparently plumb and intact. He also says that the cast-iron framework of the doors (which was set in granite) has expanded and bent to a considerable extent and has not again contracted."

My recent investigations show that when steel or wrought-iron is subjected to prolonged heating it does not permanently increase in dimensions, while cast-iron, on the contrary, continues to grow in cubic dimensions until it has increased more than forty per cent in volume.

From other inquiries I have made, I have some reason to believe that if the framework of the doors of the Continental Trust Building had been of pressed steel, instead of cast-iron, and the doors sheathed with steel plates (or made of non-combustible material), the contents of this building need not have been lost.

At all events, it seems to be evident that cast-iron, owing to this remarkable property of permanent increase in dimensions when subjected to prolonged heating is unsuitable for the use to which it was put in that case, and in many other similar cases. If the principles enunciated in the paper had been known and fully understood by architects and constructing engineers, I do not believe that cast-iron would have been used. In conclusion, I may say that, if steel behaved in the same way that cast-iron does when subjected to prolonged heating, I do not believe that one of the tall steel structures in the fire district in Baltimore would have remained standing to-day.

Yours truly,

ALEX. E. OUTERBRIDGE, JR.



WATER DENIED TO STRIKERS.—The United States Steel Corporation lately ordered the pumps stopped in two shafts of their Leedsdale coal mines. This will effectually shut off the water-supply of the whole town, as the water from the mines has hitherto been pumped into a reservoir, where it was filtered for consumption. Without water the strikers will either have to come to the terms of the Steel Corporation or move from the town. The latter will prove difficult, as they are without funds. — *N. Y. Times*.

AZTEC AND MEXICAN MAIL SERVICE.—One need not go outside the history of the postal service itself to find how old is Mexico in many of the ways of civilization, and yet how new are its really modern ways. There was a mail service before the Spanish conquest in 1521, the Aztec and other kings communicating by means of couriers and their marvellous picture-writings. In the last days before the coming of the Spaniards, the service had been so far perfected that there were post-houses at convenient intervals for the couriers, relays being stationed at each, and the mails sometimes being pushed forward, it is claimed, as rapidly as three hundred miles in a day. No postal service was organized by the Spanish conquerors until 1568, and then only for Governmental communications. Just before 1600, as in Spain, private parties organized postal lines, and up to 1766, when the mail service for the public in general was first undertaken by the Government, the cost of sending a half-ounce letter was 25 cents, and an ounce letter cost \$1.50. The Government itself even increased these charges in 1812, and made the postage dependent upon the distance the letter must be carried, the price rising as high as \$2.50 for an ounce sent to the northern provinces, while to register a letter cost \$2. — *N. Y. Evening Post*.

THE CAHOKIA, MO., MOUND.—D. I. Bushnell, Jr., formerly of this city, and now in charge of the Peabody Museum of Harvard University, is leading a movement to wrest the secret of the Cahokia mound from its vast and utterly unknown interior. He asks the American Association for the Advancement of Science, of which he is a member, to assist him in the work, which will be undertaken during the World's Fair period. The Cahokia mound is better known to the people of London or Paris or Berlin than to the people of St. Louis, although it can be plainly seen from this city. It is one of the wonders of the world. It is 1,030 feet long. This is 280 feet longer than Cheops, the great pyramid of Egypt. It is 180 feet wide and 102 feet high. It covers an area of fourteen acres, which is an acre more than the area covered by Cheops. It was built by a prehistoric race far older and more interesting than the ancient Egyptians of the Nile Valley—that of the mound builders of the Mississippi Valley—and takes the form of a truncated pyramid. Like its small fellows of Yucatan, of Mexico and of Egypt, the latter including Cheops, the four sides of Cahokia mound face to the cardinal points of the compass. It is a marvel of constructive skill. But its chief wonders are hidden from the eye of man. They have been so hidden for ages. The Indian races that followed the mound builders as occupants of the North American continent regard Cahokia mound as the work of Manitou, the Great Spirit. They feared to disturb its sacred soil. It would be sacrilege. The white race that came across the sea and drove the Indians from their inheritance has been too busy to concern itself with the Cahokia mound mystery. It was a strenuous and material race, living in the virile

present and caring little for the past. Its indifference was the indifference of empire makers in the full rush of youthful achievement. Tasks more imperative than that of digging into old pyramids for archaeology's sake demanded their attention. So the mystery of Cahokia mound remained unsolved. But now the ancient place of wonders must give up its secrets. Congress will be appealed to for assistance. The plan is to convert Cahokia mound and its surroundings into a national park, a park that shall contain one of the world's greatest wonders. The mountain made by man's hands thousands of years ago will then be subjected to an exploration of its interior. It was in this way that old Cheops was made to give up its astonishing secrets. There is no doubt that the secrets of Cahokia mound will be even more astonishing than those of Cheops. — *St. Louis Correspondence Boston Advertiser*.

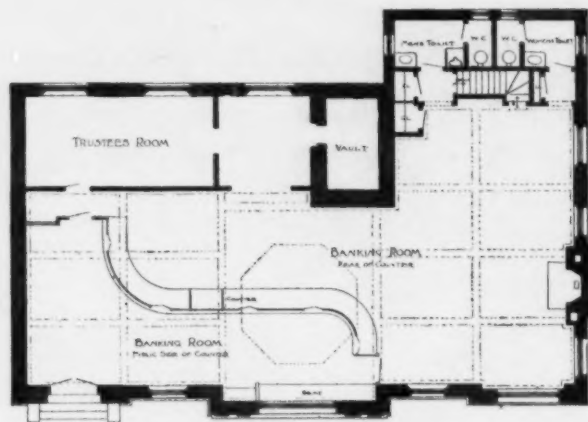
PROSECUTION FOR SELLING AN ITALIAN PAINTING.—Count Francesco Roncalli, of Bergamo, has been brought into court for selling to the Berlin Museum his fine specimen of Bellini, "The Resurrection of Christ." This picture has been in Berlin since September, 1902. The plaintiff is the Italian Minister of the Fine-Arts. The Count is accused of selling to a foreign museum a work of art which, according to Italian law, cannot be taken from the country without notifying the Government and allowing it to be bought for the home museums. Moreover, he did not pay the one per cent export duty nor the tax of five per cent on the selling price. Count Francesco's defense is that he did not sell it to a foreigner, but to Prof. Luigi Grassi of Florence. The latter and one Marinelli, who is supposed to have acted as broker in the sale, have been included in the suit. — *N. Y. Times*.

WESTRUMITE FOR ROAD-SPRINKLING.—Westrumite, the invention of Herr van Westrum, is a mixture of oil, which may be diluted as desired and sprinkled over a road with an ordinary watering cart. The water evaporates, leaving the westrumite as a moist film, which absolutely prevents the rising of dust. Tested in London on a dry roadway where every vehicle raised clouds of dust, the material so affected the surface that several automobiles at highest speed raised no dust whatever. — *Exchange*.

SOME ANCIENT ENGLISH INNS.—Somehow, one always hears with regret that one of England's famous old moss-grown, ivy-clad inns is about to be demolished. The Old King of Prussia hostelry is the latest to pass into the housebreaker's hands. This old inn is in Finchley, and from 1757, when the place was built, until the present day, the license has been in the keeping of one family—perhaps a record in the licensing annals of England. The Old King of Prussia is a picturesque half-timbered house, and many a noted highwayman has partaken of its hospitality. The grandfather of the present proprietor was quite a noted character, having vanquished several notorious highwaymen on Finchley Common. It is on record that he once had an encounter with Dick Turpin. Round and about London and its ever extending suburbs there may still be seen inns and taverns of great age and interesting associations. The Angel Inn, Highgate Hill, dates back to the time of the Reformation. Originally it was called the Salutation Inn. It is built entirely of wood. Another famous inn is the Bald-Faced Stag at Edgware. Nobody knows when it was originally built, and it would seem as though each successive proprietor has endeavored to place his mark on its architectural aspect, for many parts of it have evidently at different times been rebuilt. In the stables, it is alleged, Dick Turpin had his horse's shoes turned, so as to make his pursuers imagine he had gone in an opposite direction. Among the very oldest of suburban London inns are the Plough at Kingsbury Green and the King James and Tinker Inn at Enfield. The first is said to be 850 years old, and the latter was reputed to have been first built as an inn and under another name 992 years ago. Its present name is derived from an encounter which King James I is said to have had with a tinker at the door of the inn. The tinker's conversation so pleased the king that he made the mender of kettles "a knight, with £500 a year," the records of Enfield inform us. — *London Mail*.

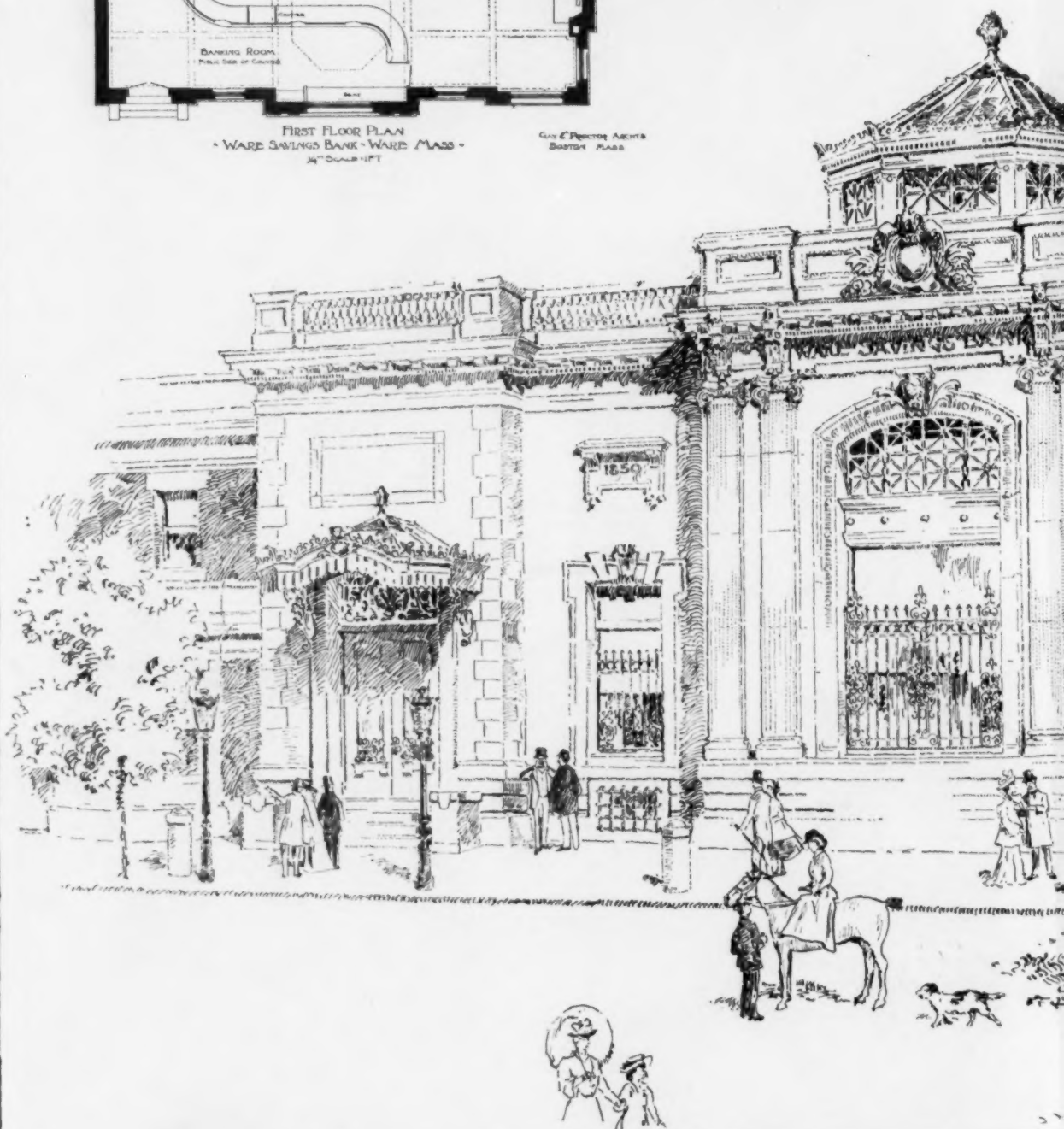
EUROPEAN RECOGNITION OF ARTISTIC ABILITY.—Two years ago in the old city of Antwerp, we chanced upon a whole quarter hung in flags and gay with triumphal arches, while all the windows up and down the streets were lined with rows of candles. Asking a waiter at one of the sidewalk cafés why the quarter was so gay, we got for an explanation that a student of this very quarter had carried off the honors of the three years' course in the Antwerp Academy of Art. "And that is no small thing to have done," said the waiter. Entreated by him, we waited to witness the event, and presently, led by a band with civic banners, amid a crowd of cheering citizens, escorted by the professors of the academy and dignitaries of the city, we saw the boy (he was no more) pass by to his very humble home, the home of people not rich evidently, literally loaded with laurels. Later, in response to the crowd, his white face appeared again on the tiny balcony, side by side with his parents. The boy will never be so pale again, and life will hold no second hour like that for him. With what solemnity Art must have been revealed to him that day! Touched by the deep significance and beauty of the little ceremonial, we commented on it. "Ah, Madame," said the waiter, with pride, "if it had been the Prix de Rome, the whole city of Antwerp would have been illuminated." The contrast with conditions in America is obvious. — *Grace Ellery Channing in N. Y. Evening Post*.

ARCHITECTS' DRAWINGS AND THE TARIFF.—The Board of United States General Appraisers has just ruled, in effect, that architects are "artists" and that architectural drawings, for tariff purposes, are dutiable in the same class with "paintings in oil and water colors, pastels, pen-and-ink drawings and statuary, not specially provided for." — *Exchange*.



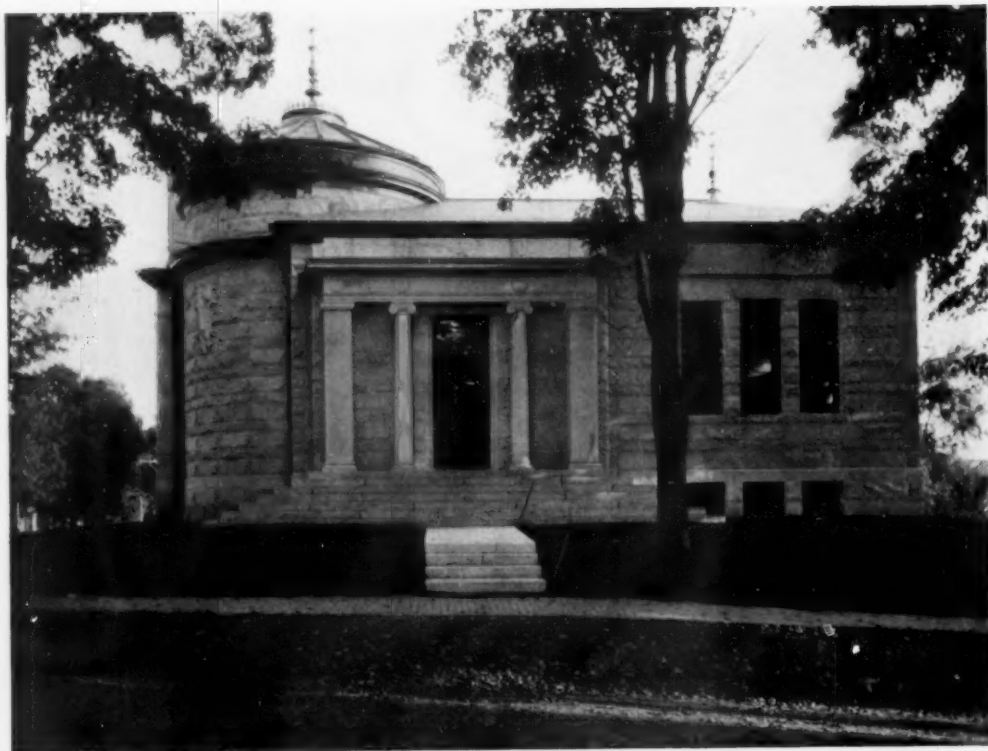
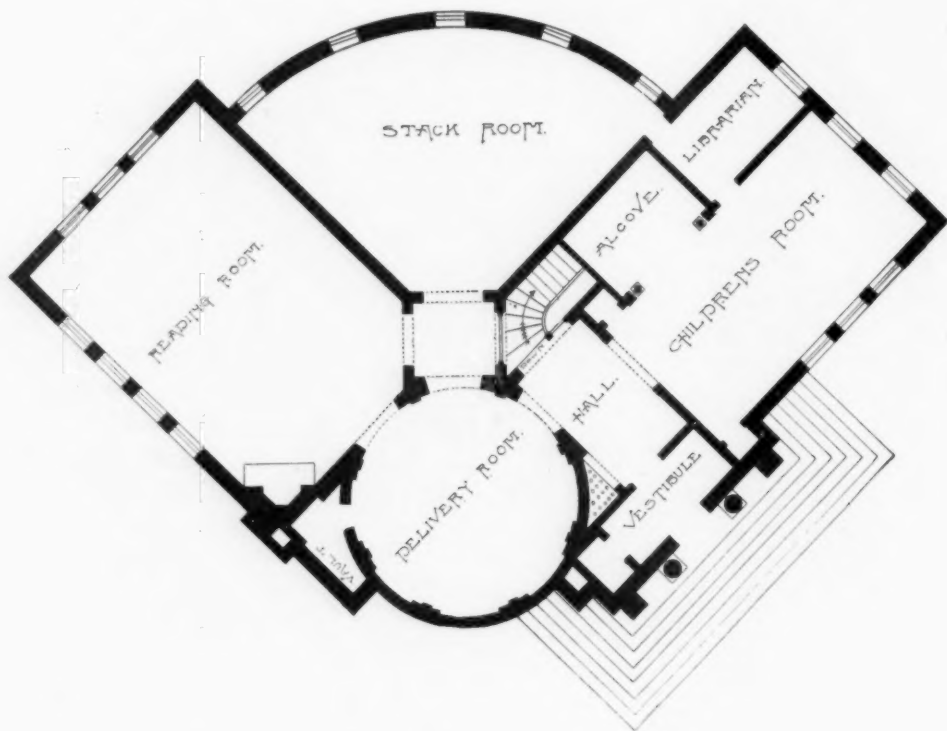
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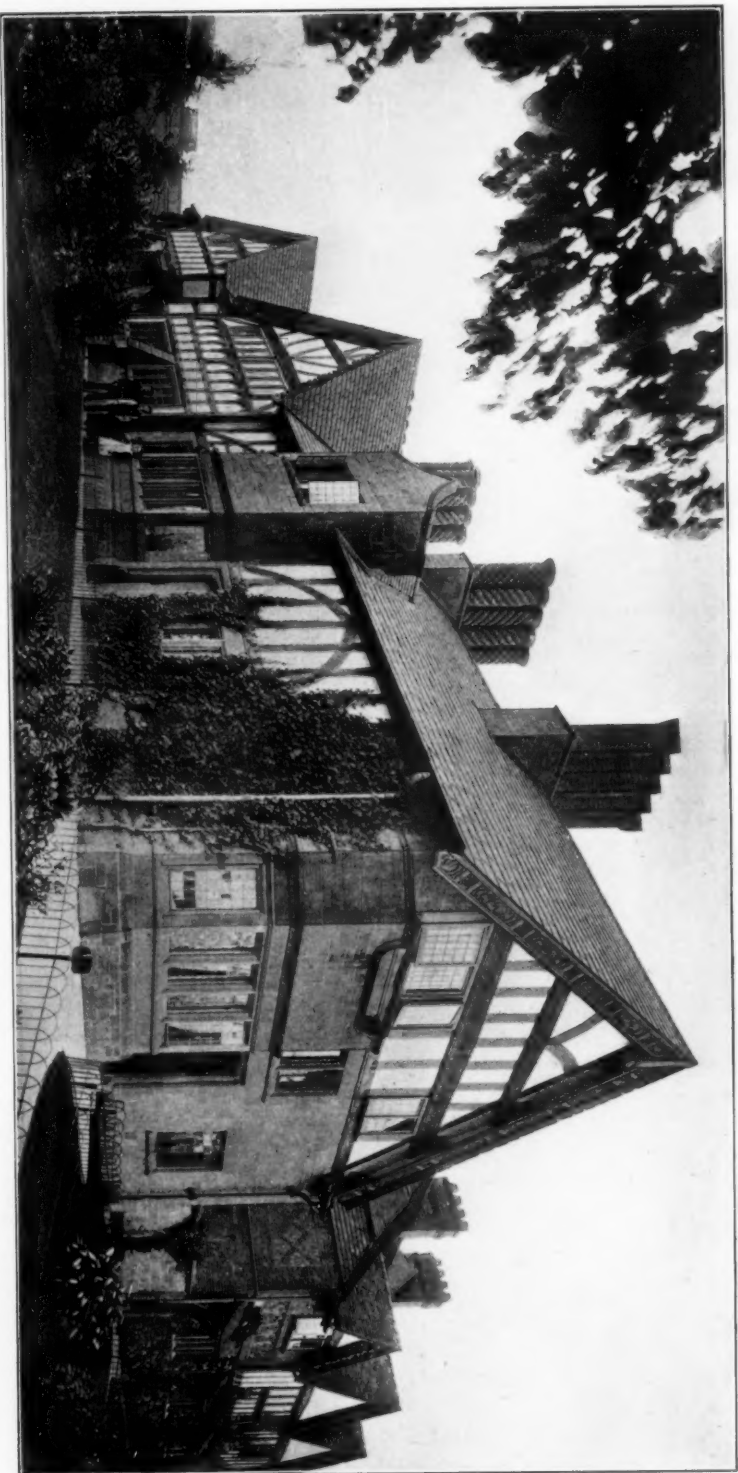


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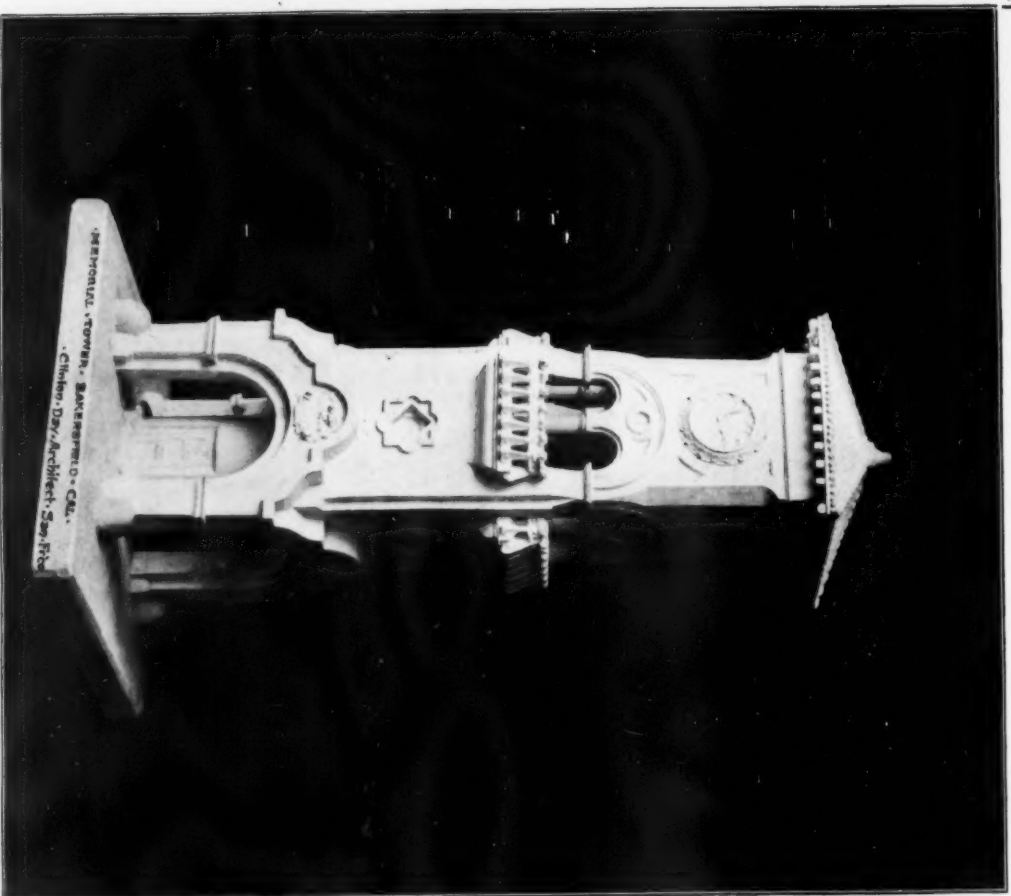




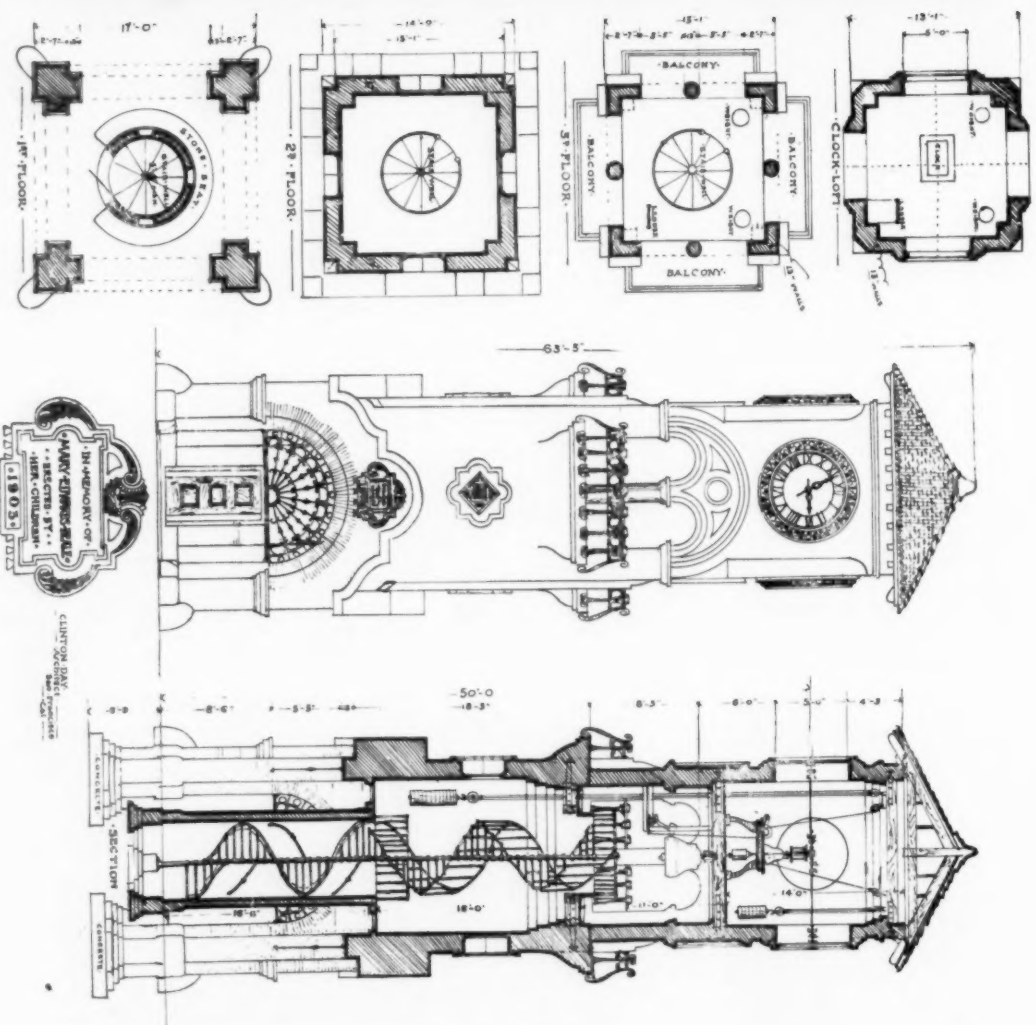
*Cutler Memorial Library, Farmington, Me.
W. R. Miller, Architect.*

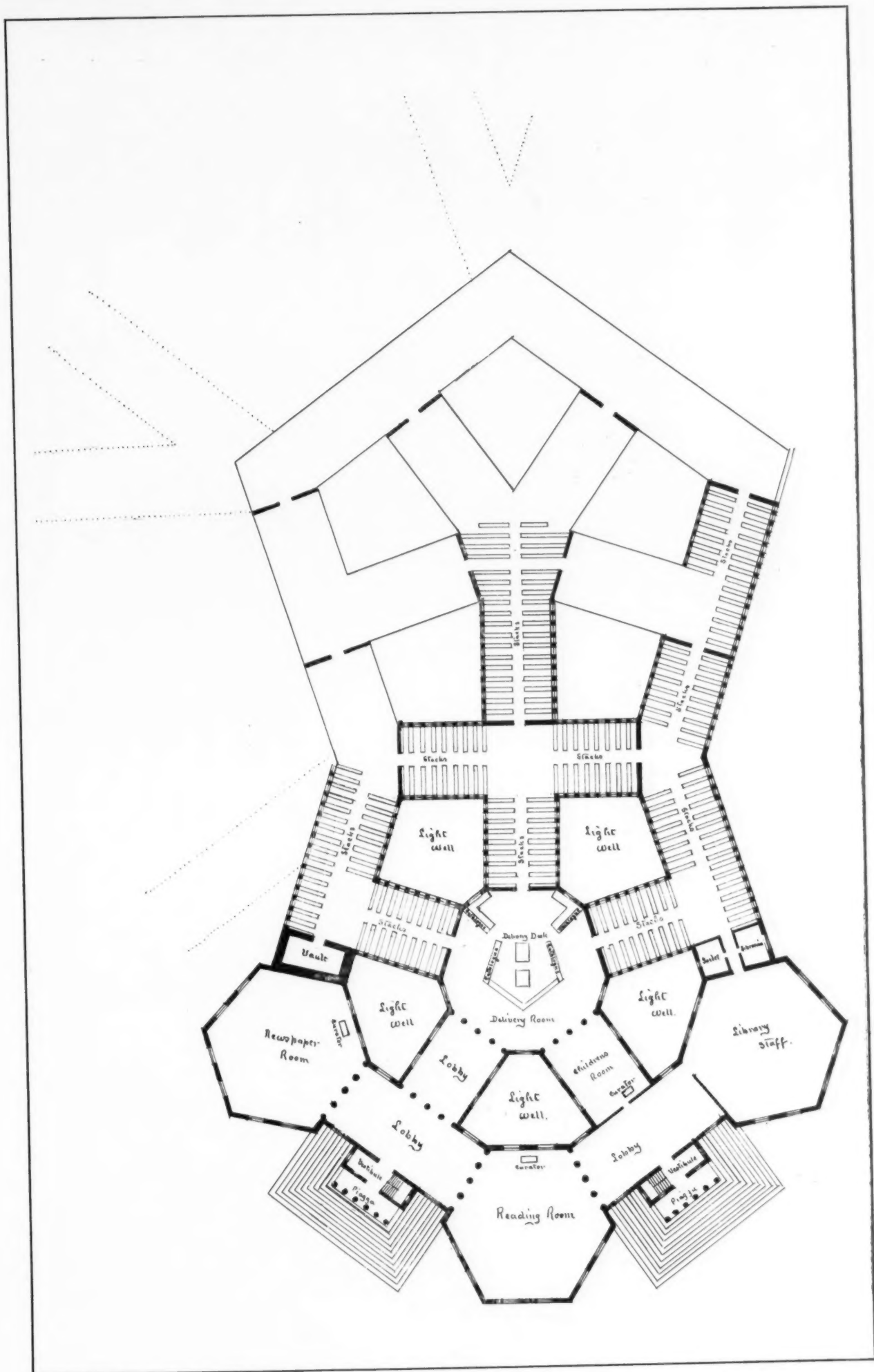


*Workmen's Model Cottages, Port Sunlight, England.
W. & S. Owen, Architects.*



*The Beale Memorial Tower, Bakersfield, Cal.
Clinton Day, Architect.*





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Suggestion for a Pentagonal Library Plan.
W. A. Borden, Librarian.

The American Architect
March, 19, 1904
No. 1473

THE AMERICAN ARCHITECT AND BUILDING NEWS

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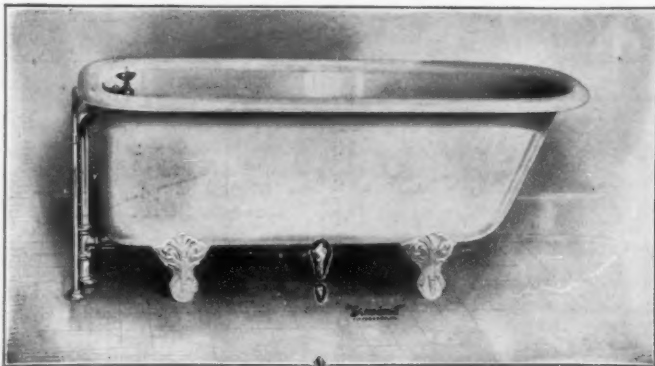


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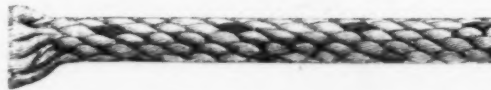
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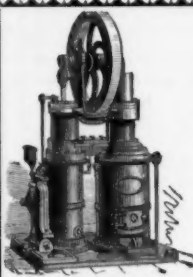
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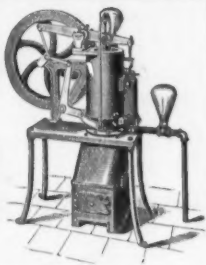
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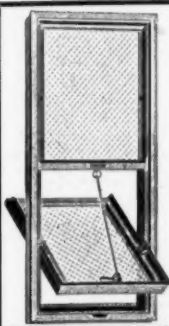
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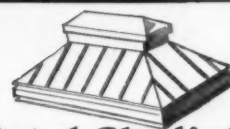
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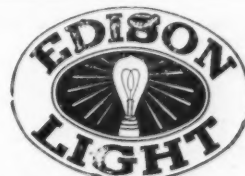
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M. R. THOMAS C. KENNEDY, F. A. I. A., whose office and contents were destroyed in the recent conflagration, desires to receive samples and trade catalogues at his new office 331 N. Charles St., Baltimore, Md.

THE firm of Bruce & Morgan, 707 Prudential Building, Atlanta, Ga., has been dissolved and Messrs. Morgan & Dillon have succeeded to the business.

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BUILDING INTELLIGENCE.

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

ADVANCE RUMORS.

Aberdeen, S. D.—Bids will be opened about May 1 for the erection of the sisters' convent. Plans by E. J. Donohue, of St. Paul.

Alameda, Cal.—The First Congregational Church Society is to have a modern house of worship, the cost to aggregate \$25,000. The new church will be erected on the site of the present one, at the southwest corner of Central Ave. and Chestnut St.

Albany, N. Y.—The work of making improvements to the Troy Club-house will be commenced at once. The club-house will be continued to the alley by the erection of a building on the site of the servants' quarters. The estimated cost is \$37,500, not including the architects' commissions.

Appleton, Wis.—The city has voted to erect a union high school at a cost of \$100,000.

Asheville, N. C.—The Senate Public Building Committee has reported favorably upon appropriation of \$60,000 for enlarging court-house.

Athens, Wis.—The Holy Redeemer Catholic Society will erect a church. Plans have been submitted and funds raised.

Atlanta, Ga.—The Senate Public Building Committee has reported favorably upon appropriation of \$1,000,000 for new post-office and court-house here.

Baltimore, Md.—The plans of the Baltimore and Ohio Railroad for building new central offices are taking shape. There is little doubt that the final plan will include the erection of an enormous passenger terminal, with a tall office-building over the train platforms. The new structure will be patterned largely after the Pennsylvania Railroad's Broad St. terminal in Philadelphia. The sum to be expended will be well over a million dollars.

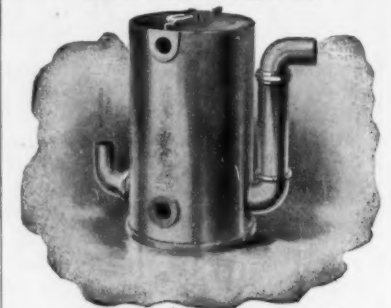
Beloit, Wis.—The Second Congregational Society will erect a church at a cost of \$25,000.

Boston, Mass.—A special meeting of the Twentieth Century Club was held recently to consider plans for a new club-house. The present quarters occupied by the Club at 2 Ashburton Pl. belong to the trustees of Boston University, and owing to the fact that the University is considering plans for rebuilding, which would include the present club location, it is considered advisable by the members to make a change. While no formal vote was taken at this meeting the sentiment was expressed that the club should remain on Beacon Hill if possible. No money was raised for a building fund, that being deferred until an estimate of the cost is submitted by the committee.

East Orange, N. J.—Wilbur N. Knowles, the architect, has completed plans of the proposed new edifice of the First M. E. Church which is to be erected at Park Ave. and Day St. at a cost of about \$60,000. The size of the lot upon which the new church is to be built is 150' x 150', and the material is to be of masonry, stonework being largely used. The architecture of the church is old English Gothic and it is to face Park Ave.

Emporia, Kan.—John F. Stanton, State Architect, has completed the plans and specifications for the new State Normal Training-school building to be erected here this spring and summer. It will be constructed of native stone, buff and red brick and terra-cotta, and will cost about \$30,000.

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Fernandina, Fla.—The Senate Public Building Committee has reported favorably upon appropriation of \$100,000 for a new post-office.

Flushing, L. I., N. Y.—Plans have been filed by the city of New York for a two-story brick laundry stable and dormitory building, 50' x 100', to be erected on Flushing Ave., between the towns of Flushing and Jamaica, for the new contagious disease hospital at a cost of \$50,000.

A bill introduced by Assemblyman William A. De Groot, which provide for the appropriation of \$75,000 for building a new armory for the Seventeenth Separate Co., has passed the Legislature. It has not been determined whether or not the present armory will be torn down and a new building erected on that site or an entirely new site chosen.

Fulton, Mo.—M. F. Bell, of this city, is preparing plans for a new State hospital building, and as soon as plans have been completed, the Bd. of Mgrs. of the Hospital for the Insane will let a contract for erecting a \$35,000 building.

Grafton, Mass.—The foundation has been laid for the new hospital for women to be erected at the State colony for insane. It is to be brick, three stories high, 85' x 165'. Estimated cost is \$60,000.

Haddonfield, N. J.—Architect C. E. Schermerhorn, of Philadelphia, has finished plans and specifications for a two and a half story frame dwelling to be erected on Linden Ave. for James D. Ash. The house will measure 31' x 35' and the interior will be finished in chestnut and cypress.

Hanover, N. H.—A committee consisting of Melvin O. Adams, of Boston, Charles F. Mathewson, of New York, Henry H. Hilton, of Chicago, and Ex-Gov. Frank W. Rollins, of New Hampshire, has been selected to raise the \$250,000 fund for three new buildings at Dartmouth College.

Iowa City, Ia.—Proudfoot & Bird, Des Moines, have drawn plans for the university museum building to be erected in this city. Work is expected to be started in the middle of the summer. Cost complete, \$300,000.

Jersey City, N. J.—It is stated that Butler Bros. are to erect a merchandise warehouse at Washington, Morgan, Warren and Bay Sts., at a cost of \$1,000,000.

Kansas City, Kan.—Work will be begun in a short time on the new St. Anthony's Catholic Church which is to be erected at the southeast corner of Barnett Ave. and 7th St. from plans prepared by Brother Adrian, of the Order of Franciscan monks, of St. Louis. The style of the church is Roman architecture and the building will be of stone construction. The cost with the furnishings will be about \$70,000.

Kearney, Neb.—Geo. A. Berlinghof, of Beatrice, Neb., was the successful architect on plans for the State Normal School. The present wing will cost \$50,000 and the building complete \$300,000.

La Crosse, Wis.—The National Bank of La Crosse has plans for a \$40,000 granite building.

Lawrence, Mass.—The new Bay State Bank Building which is to be built here this spring, will be of brick, with granite trimmings, the entrances on

(Continued on page xli.)

[PUBLISHED MARCH 5]

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Essex and Lawrence Sts. being flanked by massive granite columns extending to the third story. The building will be 200 feet long, and average 75 feet in width, and will be so constructed that every one of the 168 rooms will be lighted by outside windows. Mr. F. B. Davis is chairman of the Building Committee.

Long Island City, N. Y.—Now that the appropriation of \$75,000 for the repairs to the Queens County Court-house has become available, Superintendent of Public Buildings Philip T. Cronin will at once begin to arrange for plans and specification and advertise for bids for doing the work. The appropriation is not sufficient to make all the repairs needed at the court-house but the condition of the building is such that the money will be made to go as far as possible.

Los Angeles, Cal.—O. G. Wilhelm is to build an eight-story apartment-house on the west side of Grand Ave., between 6th and 7th Sts. The cost is estimated at \$120,000. Plans for the building, which will contain 81 three room apartments, are being prepared by A. L. Haley.

The Santa Fe will begin work within the next four months on a new hospital to be built here, which will be one of the finest in the West. The plans have been drawn for an affiliated concern known as the Southern California Hospital Association. The proposed building will cost \$75,000.

Louisville, Ky.—Mrs. Herman Straus has engaged an architect to make plans for a \$65,000 apartment-house to be erected at 1st and Hill Sts. The house will be 150 feet square, and will be built in the shape of a double "H." It will contain 36 flats of various sizes. It is expected contracts will be awarded for the work within two or three weeks.

Lowell, Mass.—Contractor Patrick Conlon has filed at the office of the superintendent of buildings at City-hall a description of the plans of the new Y. M. C. A. building to be erected where the John St. Church formerly stood and made possible by two gifts of \$60,000 from Frederick Fanning Ayer.

Madison, Wis.—The capitol building commission has invited plans from Cass Gilbert, of St. Paul, Ferry and Claas and H. C. Koch & Co., of Milwaukee,

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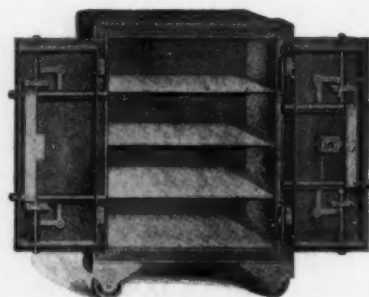
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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

architects, for the new State Capitol building. The building is expected to cost \$5,000,000.

Meriden, Conn.—At a recent meeting of the trustees of the Curtis Home it was voted to expend \$15,000 for a new building for a gymnasium and manual training department.

Milwaukee, Wis.—Preliminary plans for the new library building for Milwaukee-Downer College are being drawn by Alexander C. Eschweiler and will be submitted by the architect to the building committee of the College Board in the near future. The work of erection will be begun as soon as possible, as it is desired to have the building ready for occupancy before the opening of the college year in September.

A north side high-school building is recommended at a cost of about \$150,000; a new building for the first ward to cost \$75,000, and repairs to the twelfth ward building to cost \$10,000.

The city will vote April 5 on bonds for two engine houses to cost \$15,000 each, and \$50,000 for an isolation hospital.

The Fraternal Temple Association has been formed and will issue \$250,000 stock to erect a lodge temple.

Montreal, Can.—Plans prepared by Messrs. C. DuFort and A. Piche, architects, have been adopted for the new St. Cuneogonde City-hall. The building will be in the Renaissance style of architecture, and will cost \$50,000. Work will be begun in the early spring.

Mt. Vernon, N. Y.—H. S. Black, of New York, has broken ground for his new mansion. The structure is being erected on Purchase St., near the Trenor L. Parks estate. The residence will cost in the vicinity of \$500,000. Mr. Black is the superintendent of the Fuller Construction Co., of New York.

Nashville, Tenn.—The Tennessee Central Railroad will erect a \$40,000 freight depot in this city.

By the death of J. Hill Eakin, a retired banker and financier of Nashville, \$100,000 has been left for equal division between the Nashville Y. M. C. A. and the First Presbyterian Church. It is probable that with the \$50,000 from the Eakin estate the city will raise enough money to erect a new Y. M. C. A. building.

New York, N. Y.—Plans have been filed for the new \$100,000 club-house of the Lambs to be erected at Nos. 128 and 130 W. 44th St. The structure will be six stories high, and of fireproof construction throughout. On the first floor will be the grill room, on the second the reading and dining rooms, on the third the assembly-room and library, and the fourth floor will be devoted to a small theatre. The fifth and sixth floors will be divided into sleeping-rooms. McKim, Mead & White are the architects.

Augustus N. Allen, 571 Fifth Ave., is making plans for a four-story American basement dwelling for J. W. Cleveland, to be erected at 131 E. 34th St. It will have limestone front. Dimensions 20' x 100'. Ludlow & Valentine are at work on plans for the Lenox Presbyterian Church to be built at the corner of 141st St. and St. Nicholas Ave. It is to be Gothic in style, of limestone with open timber trusses. Also, church building for the N. Y. Board of Church Extension, to be built on 115th St., just east of St. Nicholas Ave.

It was announced at a recent meeting of the Trustees of Columbia University that the gift of \$300,000 for the erection of a dormitory to be known

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

as Hartley Hall, made by Mrs. Helen Hartley Jenkins, and Marcellus Hartley Dodge of the class of 1905, had been increased by them to \$250,000. Plans for the dormitory were adopted, and also plans for a second dormitory, similar in character, which will be paid for by university funds, in the expectation that later the cost of the building will be given to the university and will bear the name of the donor. The two dormitories are to be erected along the easterly or Amsterdam Ave. side of South Field, the more northerly of the two buildings to be Hartley Hall.

A skyscraper will be built at No. 12 Broadway for the N. Y. Produce Exchange Bank, which has just purchased the property, paying for it \$150,000. The new building will be twelve stories high. Work will be commenced at once and finished within a year. Ernest Flagg is the architect.

Plans have been filed for a dwelling-house with catering establishment annex, to be erected at Nos. 103 to 107 W. 49th St., for Antonio Mazetti. The buildings are to be of fireproof construction, 70' x 100', and will have a facade of limestone at the first story and brick with terra-cotta trimmings above. The residence will be five stories high and the annex six stories. Estimated cost, \$50,000. Architect, H. P. Knowles.

Niles, O.—Architects Dennison & Miller, of Youngstown, have made plans for a handsome new temple for the Odd Fellows of Niles. The building will be started this spring, and it is expected that it will be ready for dedication early next fall. The plans call for a three-story brick structure with stone trimmings. It will be erected on Main St., and will be 44' x 100' in dimensions. Cost, \$20,000.

North Hampton, N. H.—Work on the new library, for which the sum of \$5,000 was appropriated recently, will begin in the fall. The plans show a handsome building, 24' x 48', to be constructed of buff-colored face brick with granite trimmings.

Omaha, Neb.—Beebe & Runyan have cleared the site for their proposed eight-story factory and warehouse. Work will begin the coming summer. John McDonald, architect, has plans for a brick and frame residence for R. S. Anglin. It will be modern throughout and will cost about \$11,000.

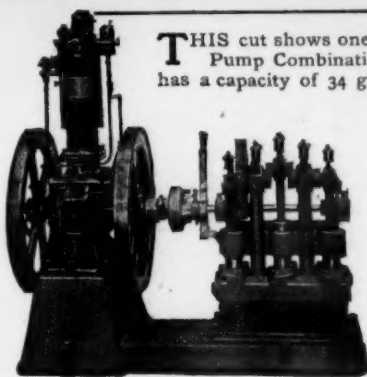
Pontiac, Mich.—The plans of Jos. E. Mills, of Detroit, have been accepted for the new court house to be built here. Appropriation, \$100,000.

Racine, Wis.—It is reported that the city will vote on the erection of a central fire and police station at a cost of \$25,000.

Rockport, Mass.—This town has voted to purchase the Tarr lot, on High St., and erect a high-school building. Also, to purchase the Fred Pool lot on Beach St., which, in conjunction with the town's lot, now occupied by the engine-house, will be the site for a Carnegie Library building. This action insures early construction of the library.

Sault Ste. Marie, Mich.—Edward T. Root, of this city, has prepared plans for an addition to the court-house and alterations. The addition will be two-story, of stone, 50' x 100', steam heat, maple and rubber tile flooring. Cost, \$25,000. Contracts will be let about May 15.

Seranton, Pa.—At the State Hospital (the Lackawanna) Edwin S. Williams has the contract for the fine new buildings which are to replace the old ones. Work has already started in the demolition of one of the old frame structures on Franklin



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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Ave., and this will be followed in a few weeks with the tearing down of the old three-story brick which has so long been the administration building of the hospital.

Seattle, Wash.—Cawsey & Carney, of this city, were the lowest bidders for the erection of the library building at \$229,361. The plans are to be revised to bring the cost within the appropriation of \$200,000.

Spokane, Wash.—E. J. Dyer will erect a three-story block at Port St. and Main Ave. Cost, \$35,000.

The Shaw-Wells Co. will erect a three-story warehouse, 100' x 100'.

Fred Sengfelder has let the contract to J. H. Clemmer for a two-story and basement block, 65' x 100'. Cost, \$23,000.

The Inland Empire Co. will erect a two-story building at Monroe and Broadway.

St. Louis, Mo.—A new theatre to cost \$125,000 will be built at Nos. 541 to 5857 Delmar Boulevard by a realty company in which St. Louis business men and out-of-town capitalists are interested. The plans have been drawn, permits taken out and work will be started March 21, the building to be finished in two months. The theatre will be 139' x 185' and about 60 feet high, and will be built of steel, iron, concrete and white brick with white stone trimmings.

E. Wind has purchased a lot 50' x 175', opposite the entrance to Delmar Garden. Mr. Wind will erect a temporary hotel and restaurant on the property.

Henry Lutz and Joseph Schmidt, owners of a lot 100' x 165' on the northwest corner of Delmar and Hamilton Aves., have started work on a 60-room temporary hotel to cover the size of the lot. The building will be three stories, and the ground floor arranged for stores. Improvements will cost \$25,000.

St. Paul, Minn.—Louis Lockwood has drawn plans for a residence to be erected on Lincoln near Milton St., for Mrs. H. Bell. It will be two stories, attic and basement, frame, containing ten rooms. Work will be begun on the excavation immediately. Cost, \$7,000.

Topeka, Kan.—J. C. Holland has submitted figures to the fire marshal on a new house to be built at a cost of \$25,000.

Washington, D. C.—The Senate Public Building Committee has reported favorably upon appropriation of \$750,000 for acquiring the square of land south of the Washington post-office, with a view to the erection of an addition to the present post-office building.

Waterbury, Conn.—It is reported that John H. Whittemore, of Naugatuck, who has purchased the old rink at the corner of Grand and Bank Sts., will erect a handsome five-story block on the site.

Architects have drawn plans for a store and tenement block to be erected at the corner of Walnut and Farm Sts. by M. Fleming. The building will be constructed of brick and wood, with a gravel roof. There will be two stores on the ground floor and three tenements above. The stores will be well finished and all the modern improvements will be installed throughout the building.

Wilmington, Del.—John E. Haley has received the

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

contract for the erection of the new building of St. Hedwig's R. C. Church at Linden and Harrison Sts. The new structure will be commenced as soon as good weather sets in and will be pushed to completion as rapidly as possible. The building will cost about \$60,000 and will be one of the finest churches of the size in this city.

York, Pa.—The York School Board has awarded to George W. Gilbert, a well-known local builder, the contract for the handsome new structure that is to replace the present Noell School Building in the 10th Ward. The new building will cost in the neighborhood of \$40,000.

PROPOSALS.

Gymnasium. [At Fort Yellowstone, Wyo.] Office Chief Q. M., St. Paul, Minn. Sealed proposals will be received at this office and at the office of Quartermaster, Fort Yellowstone, Wyo., until March 30, 1904, for construction of a frame gymnasium and post exchange building at that post and for equipment of same. Plans and specifications may be seen and blank proposals with full instructions had upon application here. J. McE. HYDE, C. Q. M. 1473

Sewer System. [At Dolgeville, N. Y.]

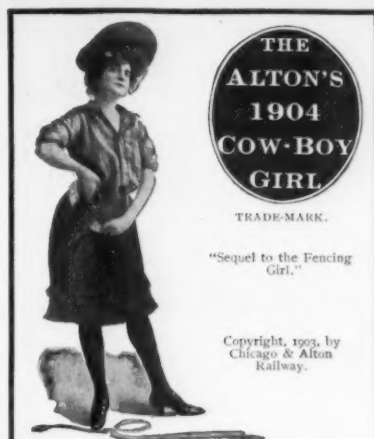
Sealed proposals will be received by the Board of Sewer Commissioners of the Village of Dolgeville, N. Y., for the construction of a sewer system in said village, at the office of said Board, until March 28, 1904. Approximately, 31,000 feet of sewer pipe, ranging in size from six to eighteen inches, will be required, and the same amount of trenching and back-filling ranging in depth from six to twenty-two feet, with the necessary flush tanks, manholes and lamp-holes. Also a large septic tank disposal plant for the system and a small disposal plant for factory, with gate-house, gates, pipes and pumps complete. Contract, specifications and detailed quantities will be furnished on application to W. H. Bacon, clerk of the Village of Dolgeville, and plans and drawings for the work are on file in said clerk's office, where the same may be seen and examined. JULIUS BRECKWOLDT, President. W. H. BACON, Clerk. 1473

High-School Building. [At Lakewood, O.]

The Board of Education of Lakewood has advertised to receive bids until April 2 for the new high-school building to be erected on Detroit St., Lakewood. L. W. Thomas, architect, No. 403 Bangor Building. Estimated cost of building, \$50,000. 1474

Bank Building. [At Lake Preston, S. D.]

Sealed proposals will be received by the Merchants Exchange Bank of Lake Preston, S. D., until March 26, 1904, for the construction of a bank building at Lake Preston, S. D., in accordance with drawings and specifications prepared by A. H. Shultz, architect, Watertown, S. D., copies of which may be seen at the Builders' Exchange, Minneapolis; Merchants Exchange Bank, Lake Preston, S. D., and at the office of the architect, Watertown, S. D. (Signed) Merchants' Exchange Bank 1473



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PROPOSALS.

Gymnasium. [At Fort Harrison, Mont.]

Office Chief Q. M., St. Paul, Minn. Sealed proposals will be received at this office and at the office of Quartermaster, Fort Harrison, Mont., until March 28, 1904, for construction of a brick gymnasium and post exchange building at that post and for equipment of same. Plans and specifications may be seen and blank proposals with full instructions had upon application here. J. McE. HYDE, C. Q. M. 1473

Hospital. [At La Pointe Agency, Wis.]

Department of the Interior, Office of Indian Affairs, Washington, D. C. Sealed proposals will be received at this office until March 31, 1904, for furnishing all the materials and labor required to construct and complete a brick hospital and brick employes' quarters at Hayward School, La Pointe Agency, Wis., in strict accordance with plans, specifications and instructions to bidders. For further information apply to S. W. Campbell, U. S. Indian Agent, Ashland, Wis. W. A. JONES, Commissioner. 1474

Treasury Department, Office of the Supervising Architect, Washington, D. C., March 16, 1904. Sealed proposals will be received at this office until 3 o'clock P. M. on the 25th day of April, 1904, and then opened, for the construction (including plumbing, electric wiring and conduits) of the U. S. Post-office at Chillicothe, Ohio, in accordance with drawings and specifications, copies of which may be had at this office or the office of the Postmaster at Chillicothe, Ohio, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1474

Treasury Department, Office of the Supervising Architect, Washington, D. C., March 16, 1904. Sealed proposals will be received at this office until 3 o'clock P. M. on the 20th day of April, 1904, and then opened, for the construction (including heating apparatus, electric wiring and conduits) of the U. S. Post-office at Richmond, Indiana, in accordance with the drawings and specification, copies of which may be had at this office or at the office of the Postmaster at Richmond, Indiana, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1474

Treasury Department, Office of the Supervising Architect, Washington, D. C., March 15, 1904. Sealed proposals will be received at this office until 3 o'clock P. M. on the 3d day of May, 1904, and then opened, for the construction (except heating apparatus) of the U. S. Post-office at Hastings, Nebraska, in accordance with the drawings and specifications, copies of which may be had at this office or the office of the Postmaster at Hastings, Nebraska, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1474

Treasury Department, Office of the Supervising Architect, Washington, D. C., March 3, 1904. Sealed proposals will be received at this office until 3 o'clock P. M. on the 12th day of April, 1904, and then opened, for the construction (including heating apparatus, electric wiring and conduits) of the U. S. Post-office at Torrington, Connecticut, in accordance with the drawings and specification, copies of which may be had at this office, or at the office of the Postmaster at Torrington, Connecticut, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1473

Church. [At Yankton, S. D.]

Sealed proposals will be received until March 29, at 4 P. M., 1904, and be opened at the office of L. B. French, Chairman of the Board of Trustees, for the erection of a church building for the First Congregational Church, at Yankton, S. D. Plans and specifications can be seen on file with C. W. Lay, Yankton, S. D., or with Turnbull & Jones, architects, Elgin, Ill., also at the office of the Builders' Exchange, St. Paul. It is the intention to award the contracts to the lowest responsible bidder, but the right to reject any or all bids is reserved. Bids will be sealed and marked "Proposals" addressed to C. W. LAY, Secretary of the Building Committee, Yankton, S. D. 1474

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Professional Ethics.

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. . . CODE OF ETHICS . . .

Prepared in Conformity with the Best Standards of Practice, and Recommended to its Members by the Boston Society of Architects, was

ADOPTED BY THE SOCIETY, FEBRUARY 1,
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SECTION 1. No Member should enter into partnership, in any form or degree, with any builder, contractor, or manufacturer.

SECTION 2. A Member having any ownership in any building material, device or invention, proposed to be used on work for which he is architect, should inform his employer of the fact of such ownership.

SECTION 3. No Member should be a party to a building contract except as "owner."

SECTION 4. No Member should guarantee an estimate or contract by personal bond.

SECTION 5. It is unprofessional to offer drawings or other services "on approval" and without adequate pecuniary compensation.

SECTION 6. It is unprofessional to advertise in any other way than by a notice giving name, address, profession, and office hours, and special branch (if such) of practice.

SECTION 7. It is unprofessional to make alterations of a building designed by another architect, within ten years of its completion, without ascertaining that the owner refuses to employ the original designer, or, in event of the property having changed hands, without due notice to the said designer.

SECTION 8. It is unprofessional to attempt to supplant an architect after definite steps have been taken toward his employment.

SECTION 9. It is unprofessional for a Member to criticize in the public prints the professional conduct or work of another architect except over his own name or under the authority of a professional journal.

SECTION 10. It is unprofessional to furnish designs in competition for private work or for public work, unless for proper compensation, and unless a competent professional adviser is employed to draw up the "conditions" and assist in the award.

SECTION 11. No Member should submit drawings except as an original contributor in any duly instituted competition, or attempt to secure any work for which such a competition remains undecided.

SECTION 12. The American Institute of Architects' "schedule of charges" represents minimum rates for full, faithful and competent service. It is the duty of every architect to charge higher rates whenever the demand for his services will justify the increase, rather than to accept work to which he cannot give proper personal attention.

SECTION 13. No Member shall compete in amount of commission, or offer to work for less than another, in order to secure the work.

SECTION 14. It is unprofessional to enter into competition with or to consult with an architect who has been dishonorably expelled from the "Institute" or "Society."

SECTION 15. The assumption of the title of "Architect" should be held to mean that the bearer has the professional knowledge and natural ability needed for the proper invention, illustration and supervision of all building operations which he may undertake.

SECTION 16. A Member should so conduct his practice as to forward the cause of professional education and render all possible help to juniors, draughtsmen and students.

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