

they are too small to supply the necessities of life; and also self evident that in a well regulated social state there should be no valid excuse for idleness and destitution; when the oppression of the upper classes becomes to severe to be borne, the masses overturn the existing state, and seek to inaugurate a better; but they fail from ignorance, where their rulers failed from greed. Before the case comes to this crisis; it is well to look into the matter, and endeavor to find a satisfactory solution of the problem.

In studying the question these two facts are brought to the attention of the student with great distinctness.

FIRST—There is a certain amount of idle labor that seeks employment.

SECOND—There is ever an immense amount of work that needs to be done to satisfy the wants and increase the ease, comfort and enjoyment of society, both individually and collectively.

As long as these two conditions exist (and they always will exist) it simply remains to find the most advantageous way of making them neutralize each other. As long as the efforts of individuals are sufficient for the accomplishment of this object, well and good; when individual efforts becomes insufficient, it is time the collective efforts of the individual, that is to say the government, should step in and by appropriate legislation supply the deficiency. How this may best be accomplished is not an easy question to satisfactorily answer; we shall make some suggestions in a future article.

THE Executive Committee of the American Forestry Association, report that the work of the association is at last beginning to be effective.

Not only has the policy of reserving public timber land for forestry purposes, established by the last Administration, been recognized by the present Administration—in reserving some 4,500,000 acres more (the Cascade Range and Ashland Timber Reserves in Oregon), making the total acreage in forest reservations nearly 18,000,000—but there is ground for hope that some rational legislation for protecting and utilizing these reserves may be enacted, thanks to the warm interest and energetic work of the Hon. Thos. C. McRae, of Arkansas, Chairman of Public Lands Committee.

BEQUESTS FOR A HOSPITAL.

A notable instance of private generosity for philanthropic purposes is brought to light by the filing for probate the will of the late Mrs. Kate Johnson.

The full third of her estate, the entire amount allowed by law for charitable purposes, has been bequeathed for the erection, endowment and maintenance of a free hospital for all sick women and children, without regard to religion, nationality or color.

In the petition for the probate of the will the value of the estate is given nominally as \$1,000,000, and its income at \$4,500 per month, but the real value will probably approximate \$2,000,000, so the one-third bequeathed to the free hospital will not fall far short of \$700,000.

The clause in the will having particular reference to the proposed hospital is as follows:

I give devise and bequeath to Archbishop Patrick W. Riordan of San Francisco, California, all my pictures and valuable bibelots; also all that certain real property situate in the city and county of San Francisco, state of California, and described as follows, to wit: Horner's addition blocks numbered 173 and 174, bounded on the north by Twenty-ninth street, on the east by Castro street, on the south by

Thirtieth street and on the west by Diamond street; also, my new warehouse known and designated as the Gibraltar Warehouse and the lot on which the same is situated at the southeast corner of Sansome and Filbert streets; also, such a sum of money as will, with the real and personal property aforesaid, comprise one-third of my entire estate; all of the same to be held in trust by him to and for the uses, intents and purposes following, that is to say:

THE FOUNDING OF THE HOSPITAL.

It being my desire to found and endow a free hospital to be located in said city and county of San Francisco; all said money and property is to be by said trustees paid, conveyed and delivered over to a corporation to be hereafter formed by a society to be composed of the Roman Catholic Archbishop of San Francisco and R. C. Tobin, Dr. C. F. Buckley, Dr. W. S. Thorn and Dr. Luke Robinson, or the survivors of them, and such other persons as they or their survivors and successors, in their discretion, shall elect to fill vacancies in said society; said corporation to be formed under the laws of the State of California; the name of said corporation to be Mary's Help Hospital; the purposes for which such corporation shall be formed to be to receive endowments and acquire property for and establish, erect, maintain and conduct a free hospital for all sick women and children of the poor, without regard to religion, nationality or color, excepting such as the officers of the hospital consider dangerous to other inmates; such hospital to be conducted by the Roman Catholic Sisters of St. Vincent de Paul, commonly called the Sisters of Charity, under the direction of the Board of Directors of said corporation.

The place where the principal business of said corporation shall be transacted shall be the city and county of San Francisco, State of California, and the number of its Directors shall be five; and I direct the said trustee, Archbishop Patrick W. Riordan, to pay, convey and deliver over to such corporation when so formed all of the money, property and estate aforesaid. It is my wish that the Roman Catholic Archbishop of San Francisco be a member of said society and ex-officio one of the Board of Directors of said corporation, and that the others of such Directors shall at all times consist of one business man and three physicians, and that the medical staff of the hospital shall have the right to give clinical instruction in the hospital to students and graduates of medicine.

THE CITY HALL TOWER.

THE above question will be settled at last by the adoption of a design for a dome surrounded by tiers of colonnades.

Mr. Frank Shea, the architect of the Board of New City Hall Commissioners has prepared the preliminary drawings and the specifications for the completion of the central feature that is to crown the front of this edifice and in submitting them to the Board made the following statements:

"The specifications of the copper, cement and interior decoration work have not yet been prepared, as I thought it wise to defer their compilation, because many months will elapse before the work will be required. The general plan of construction of the dome consists of a complete frame of metal, commencing at a line on top of the present circular brick wall and interior columns. The entire upright frame, except that portion resting upon interior columns, will be encased in brick and terra cotta walls cemented on the outside, in order that the character of the work of the present building may be maintained. The dome will be covered with copper. The specifications have been prepared separately, so as to permit the receiving of bids, or estimates, upon the work in part or as a whole, and the time set for completion of all the contracts is July 28, 1894.

"I have spared neither time nor labor in the study of the construction of the dome, and I feel confident that in the plans presented the best results possible from a practical and esthetic point of view have been attained, and that, when

completed, the New City Hall will be surrounded by a dome in perfect harmony with the great building at its base.

"I have estimated the entire cost at \$300,000. It will take twelve months to complete the dome with due haste. The work will give immediate employment in the shops, yards and on the ground proper to 600 men, and continual employment to at least 350 workmen."

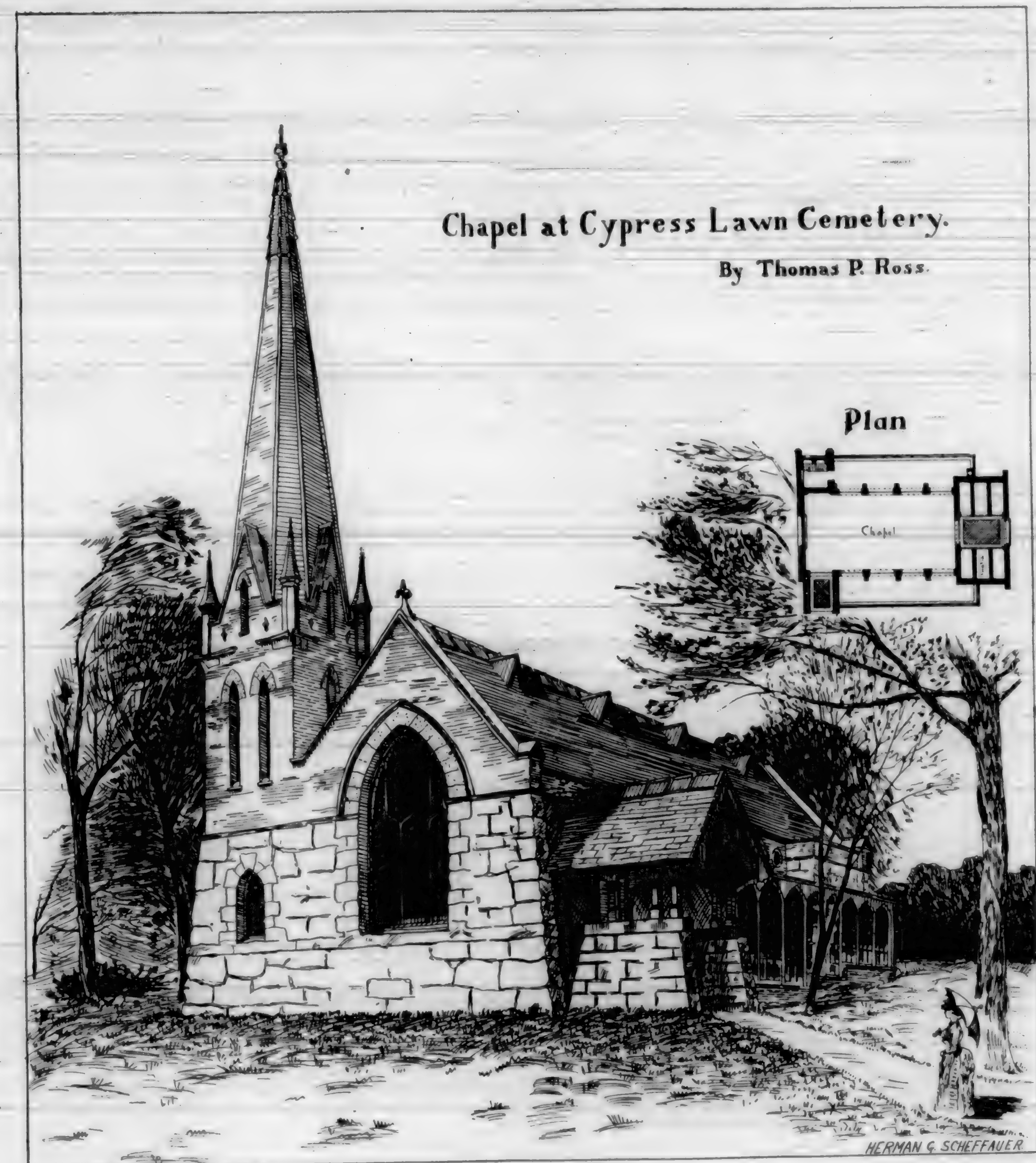
The plans have been examined by the Board and accepted and now all that remains is to take bids and start the work immediately.

it was then my privilege to deliver was Progress, and from that standpoint I noticed some subjects of professional interest. Progress leads to Attainment, and it is therefore a natural sequence to pass from the means to the end, and from the higher platform to review some points that may be supposed to interest the architect, and less directly the public.

No one who regards life as a serious reality fails to set up some goal, in the attainment of which life is passed. The

Chapel at Cypress Lawn Cemetery.

By Thomas P. Ross.



THE OPENING ADDRESS TO THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

DELIVERED BY THE PRESIDENT, J. MACVICAR ANDERSON, AT THE FIRST GENERAL MEETING, MONDAY, 6th NOVEMBER 1893.

COLLEAGUES AND GENTLEMEN:

THOSE of you who were good enough to honor me with your presence at the opening Meeting of last session may remember that the keynote which pervaded the Address

goals of some wither with possession—the object is too material, attainment too easy. The noblest, as well as the happiest, lives are passed in the pursuit of an ideal, the standard of which is so lofty that it is never fully attained. Point after point may be gained, each one higher than the last; but, as with the Alpine climber, ever in front is displayed the as yet unattained excelsior of excellence, which for the architect is enshrined in Truth and Beauty. And so it comes to pass that in such aspirations the oldest men are still students, because their ideal of excellence is so lofty that

life is too short to attain it. But, just as the highest life is sustained and inspired by Hope, which can alone find full fruition hereafter, so the life of the artist is ennobled by the yearning for the attainment of excellence, which no disappointment can extinguish, and no success can satisfy. This is the Art life worth living.

Architects, however, are sometimes reproached with incapacity because they fail to attain an ideal which the public choose to establish. Such reproach has often been cast at the architects of this century because they have not created



Tower of St. Giles,
Saragossa, Spain.

what is called a new style of architecture. No indication is vouchsafed of what is meant by those words, probably because no reflection has been bestowed on the subject. It is sufficient to censure a body of educated men by accusing them of want of originality, and of slavishly copying the works of others. In order to meet the accusation, it is necessary to apprehend what architecture is. When men began to multiply on the face of the earth, when they had to work, when they founded communities, when they erected buildings to provide for their necessities, and when such buildings were constructed with regard to beauty of form and proportion, architecture was born. Thus, architecture is the product of the necessities of life coupled with the aspiration for the beautiful. The development of this germ has found expression in the buildings, monuments, and shrines of succeed-

ing generations; and what are known as styles of architecture are simply the adaption of this germ to climatic influences and conditions of life in different parts of the world. With the modification of such conditions they become subject to variation. Thus, the architecture of feudal times, when warfare was the rule, not the exception, was characterized by massive solidity, unbroken wall-space, diminutive openings, and bald simplicity. Such characteristics, necessitated by the hardy severity of a warlike age, would obviously be ill adapted to the advanced civilization and luxurious refinement of these days of peace and accumulated wealth; and so solidity gives place to lightness, wall-space to fenestration, simplicity to ornamentation.

If, then, architecture is the outcome of actual conditions of life, it follows that to create a new style is beyond the power of any individual or any body of architects, no matter how bountifully he, or they, may be endowed with the power of original design. Are the conditions of life in our day distinctively different from those which prevailed in the days of our fathers? Our climate, much as it is abused—and, as I think, unjustly—remains much the same. We eat, we drink, we work, we sleep, we marry and are given in marriage, and in all essential conditions we live and die as our ancestors have done before us. Is it, then, reasonable to anticipate the advent of a new architecture? Cause and effect are inseparable. With new conditions of life, a new architecture will be called into existence; but so long as the conditions of national life remain unchanged, it is as absurd as it is illogical to traduce the architects of this age for having failed to attain to the creation of a new style of architecture.

But it is alleged further that our system of education, and, resulting from that, our programmes of examinations, tend to rivet the chains that bind and restrict us to the past; that we inculcate the study of schools of architecture which were called into being by conditions that no longer exist; that we teach forms and proportions defined by masters in such schools, which were beautiful because appropriate to the conditions of life in their day, but which are not appropriate, and therefore not beautiful, now; that we encourage the student to paraphrase Greek, Roman, Romanesque, Gothic, Saracenic, Renaissance, Hindoo, Burmese, Siamese or Chinese art; that historic styles have nothing to do with architecture; that English Composition, Geography, History, Latin, French or German, have no connection with it—in a word, that we look on the essential as unimportant, though most rigorously insisting on what is of no use. Instead of this, we are told that we should inaugurate a system of education and examination that would not disturb the oblivion of the dead past, but that would tend to develop native power by encouraging students to realize the actual requirements of a living age, and to design forms and proportions such as may be best adapted to them; that if we want to test real progress we should see what students can make of a story-post, a cast-iron column, a wrought or cast iron girder; how they can adorn a door or window, or group them; if they can light efficiency or aesthetically when light is only wanted to produce a mental impression; or if they know what forms and proportions are good for sound.

In this and in all such representations there is, no doubt, much that is plausible and calculated to attract and captivate the unthinking; nay, more, there is much in which we cannot but concur. We all desire to encourage and to develop original power. It is inevitable that those who cherish the architecture of a past age to which they are passionately devoted, and which in their judgment is not inapplicable to the wants of the present day, should exercise an influence on their pupils and assistants in the direction of their preference; but it by no means follows that preference for forms or features which a past age admired and practised restricts the development of native power. Is it not apparent that

such representations as I have referred to rest on a fallacy? The inferred assumption is that originality may be the product of education. Now, individuality—that which educes original work, instead of reproducing the work of others—is a natural endowment which education and examination can neither create nor smother. That it is rare is demonstrated by the fact that in Art, as in other callings, the possessor secures a following, and founds a school. The majority of men are only too willing to follow where one master-mind leads. The fact of having studied and been imbued with admiration for proportions and forms which are the legacy of a past generation will not prevent originality from finding expression; nay, it is certain that creative power will in no sense be injured, but rather refined, by the study of beautiful forms and chase proportions attained by past masters of the art, and by the principles on which such forms and proportions were based. If it be true that Latin and History have no connection with Architecture, it is in the same sense true that the dead languages have no connection with the life's work of most of those who are taught them; but experience has proved that such teaching is the best possible mental and educational foundation on which to rear the work of life; and it would be as absurd to banish the teaching of Latin or Greek from our schools, as to exclude a knowledge of Latin, French, German or History from the education of architectural students. The more highly educated our students are—not merely in technical training, but in respect of general attainments and a familiar knowledge of the past—the better will it be for the future of architecture. Sir Joshua Reynolds has well said: "He who is acquainted with the works which have pleased different ages and different countries, and has formed his opinion on them, has more materials, and more means of knowing what is analogous to the mind of man, then he who is conversant only with the works of his own country." In the same relation, the gifted President of the Royal Academy addressed to students words as eloquent as they are true when he asked them "to believe that the gathered experience of past ages is a precious heritage and not an irksome load, and that nothing will better fortify them for future and free development than the reverent and the loving study of the past."

And if it be right that the education of architectural students should be not merely technical but liberal, does it not follow that an examination which is established for the purpose of testing the knowledge which they ought to possess should be co-extensive? The range of subjects embraced in the study of architecture is wide, because there are so many cognate subjects of which it is essential to know something; and, further, because it is desirable that the professor of a Fine Art should not merely be technically an expert, but that he should be also a man of refinement and culture. I have little sympathy, therefore, with the carping criticisms that occasionally reach me respecting the details of our scheme of examinations. The experience which can alone be acquired by time will no doubt lead to the modification of some, or the expansion of other features. No one has been so foolish as to claim perfection for a scheme which is as yet in its infancy. I confess, however, that to my mind the fact that there has been so little to remedy, and that the scheme has already met with so large a measure of success, speaks volumes for the wisdom and the enlightened foresight of the Board of Examiners and of their Chairman. Some of you, indeed, have thought—and I confess to have sympathized with you—that too little prominence has hitherto been attached to the subject of Design; but the Board of Examiners have evinced their desire to meet any legitimate objection by extending, as they have now done, the time to be devoted to this important subject from six hours to two entire days out of the six days to be occupied by the Final Examination, as compared with half a day to be given up to History, Architectural Features, Hygiene, Materials, Construction and Specifications and Professional Practice, respectively, the sixth day being devoted to the Oral Examination. This is a change for the better, which will no doubt be appreciated by students, and which meets with my entire concurrence. I should, however, deplore any undue limitation in our Progressive Examinations in respect of literary or historical subjects, which are not only of vast utility in themselves,

but are essential elements in the equipment of one who aspires to be qualified as an architect to take his place with men of education and learning.

It is alleged, as I have said, that the architects of our day are devoid of originality because they have not created a so-called new style of architecture, and that our system of education and examination is defective because it restricts the encouragement of native power and rivets the chains that bind us to a dead past. Let the tree be judged by its fruit. If these allegations be true, the result would be apparent in the architecture of the day, which should be tame, insipid—a slavish reproduction of dead forms and proportions, devoid alike of interest and of life. Is it so? I am not expressing approval of all contemporary works; but I have no hesitation in asserting that, whatever may be said by adverse critics, our architecture exhibits characteristics the reverse of these.

AT VIRE,
FRANCE.



In point of material, the contrast with the past is striking, whether we like or dislike the free use of terra cotta, marble or faience, that is so much in vogue; while in respect to Design, I challenge any impartial observer to find precedents for many modern buildings, which seem to sparkle with the impress of novelty. To quote illustrations from the works of living architects would be invidious, but many examples will occur to you which exhibit remarkable ability and originality on the part of their authors. I conclude, therefore, that the allegations to which I have referred—although occasionally emanating from those whose position entitles their opinions to respect—are groundless, and are refuted by the attainments of contemporary architects, whose works, whether we admire them or not, are the expression, not of a dead art, but of life and power.—*Journal of the Royal Institute of British Architects.*



The management of this journal desires to extend a cordial invitation to all architects on this coast and elsewhere to contribute designs for publication.

Drawings should be made with perfectly black lines on a smooth white surface. Good tracings, if made with black ink, answer the purpose.

The designs selected will be published without charge. All drawings, whether accepted or not, will be returned to their authors, who must bear express charges both ways.

THE Bohemian Club Building on the corner of Sutter and Mason streets is by Pissis & Moore, Architects.

A sketch for a tower is by Willis Polk, Architect.

FILMORE street, two dwellings by Martens & Coffey, Architects.

OPENING THE TRADE SCHOOLS.

THE New York Trade School, founded by the late Col. Auchmuty, began its thirteenth season Monday evening at its buildings, First avenue and Sixty-seventh street. The classes in bricklaying, plumbing, carpentry, house painting, stone cutting, fresco painting and blacksmith's work opened at seven o'clock Monday evening, while the class in plastering will not begin till December 11th. The day instruction in plumbing, house and fresco painting, sign painting, bricklaying and carpentry will not begin till January 1st. The course in printing will be started, however, on November 13th.

The school has every reason to feel assured of increased success this year. It is expected by the assistant secretary, H. V. Brill, that there will be fully 550 students in attendance on the various courses, an increase of seventy-five over last year. Mr. Brill said that the increase would be even greater were it not for the effects of the present financial stringency.

As to the courses, there will be no essential changes in the conduct of any of them. The class in plumbing is by far the largest attended, over 200 registering in that alone last year. Mr. Brill expected that the class in printing, which was begun last year, and is consequently the latest addition to the curriculum, would probably show a greater relative increase than any. — *Architecture and Building.*

SPURIOUS HARDWARE.

SOME of the leading hardware merchants of Toronto complain that duplicates of some of the more favored and expensive patterns in American hardware are being manufactured in cast iron in Toronto, and after being plated are placed on the Canadian market, represented to be the genuine article. At first appearance the spurious goods are a good copy of the genuine and can be detected only by very careful examination. To make detection still more difficult, a genuine lock is often used with a counterfeit escutcheon. A close inspection will usually reveal that the counterfeit article, while perhaps identical in color, is slightly smaller in size than the genuine. This is due to shrinkage in casting, in the process of which one of the genuine articles is used as a pattern. The genuine article is made of bronze

metal, which to a considerable extent is impervious to the action of the atmosphere. The imitation is as we have said made of cast iron, and will retain its appearance at the longest only a few months. The importers of expensive American hardware claim that they should not be placed in competition with a spurious article which can be produced at a tithe of the cost of the genuine. If architects are satisfied with cheap goods they are quite willing to compete on that line, but they should not be expected to place a genuine article in competition with one to which the same name and appearance have been given, but which is counterfeit. Architects would do well to enquire into this matter. — *The Canadian Architect and Builder.*

THE FRANKLIN TRADE SCHOOL.

BENJAMIN Franklin, in his will, gave the citizens of Boston, Mass., in 1791 the sum of £1000, which he directed to be loaned in sums at five per cent interest to young married artificers of good character, under the age of twenty-five, who had faithfully served an apprenticeship in that city. Dr. Franklin estimated that the £1000 would increase in 100 years to £131,000, and then the managers of the fund were to lay out in some public work £100,000, the balance continuing on interest for another 100 years. The whole sum will then revert to the people of the city of Boston and the State of Massachusetts. The trustees under the will are the Selectmen (now the Board of Aldermen), united with the ministers of the oldest Episcopal, Congregational and Presbyterian churches in Boston.

The 100 years having expired, a meeting of the Franklin trustees was held on November 10th, to decide on the appropriation of the available money, amounting to some \$415,000. Out of twenty-seven suggestions for its disposition, it was finally decided by vote that the whole amount should be devoted to the purposes of one object, and that object the establishment of a trade school, pure and simple. It was further agreed that the school is to be an independent one, unconnected with the public schools, and that it shall bear the name of the famous donor. This disposition of the fund seems particularly fitting and in harmony with the desire of Dr. Franklin, and the action of the trustees has met with general approval. It is proposed to combine in this school the experience of similar undertakings in the country, and an effort will be made to establish the institution on such lines as will secure the greatest possible benefit to "the young mechanic." It is thought that the New York Trades School, founded and maintained by the late Col. Richard T. Auchmuty, will be the example which will have the greatest weight with the trustees of the Franklin school. Those who are most prominently connected with the educational interests of Boston are wholly in accord with the proposed school, and have commended the movement as certain to fill a need that the city has long felt. The first steps towards the erection of a building for the schools was taken on November 10th, at a meeting of the City Architect, President of School Board, Corporation Counsel and the trustees of the fund. In his last annual report to the trustees the treasurer made the following statement of the condition of the fund February 1, 1893:

Amount of fund February 1, 1892.....	\$398,841.51
Interest accrued during the year.....	15,958.02

Amount February 1, 1893.....	\$414,799.53
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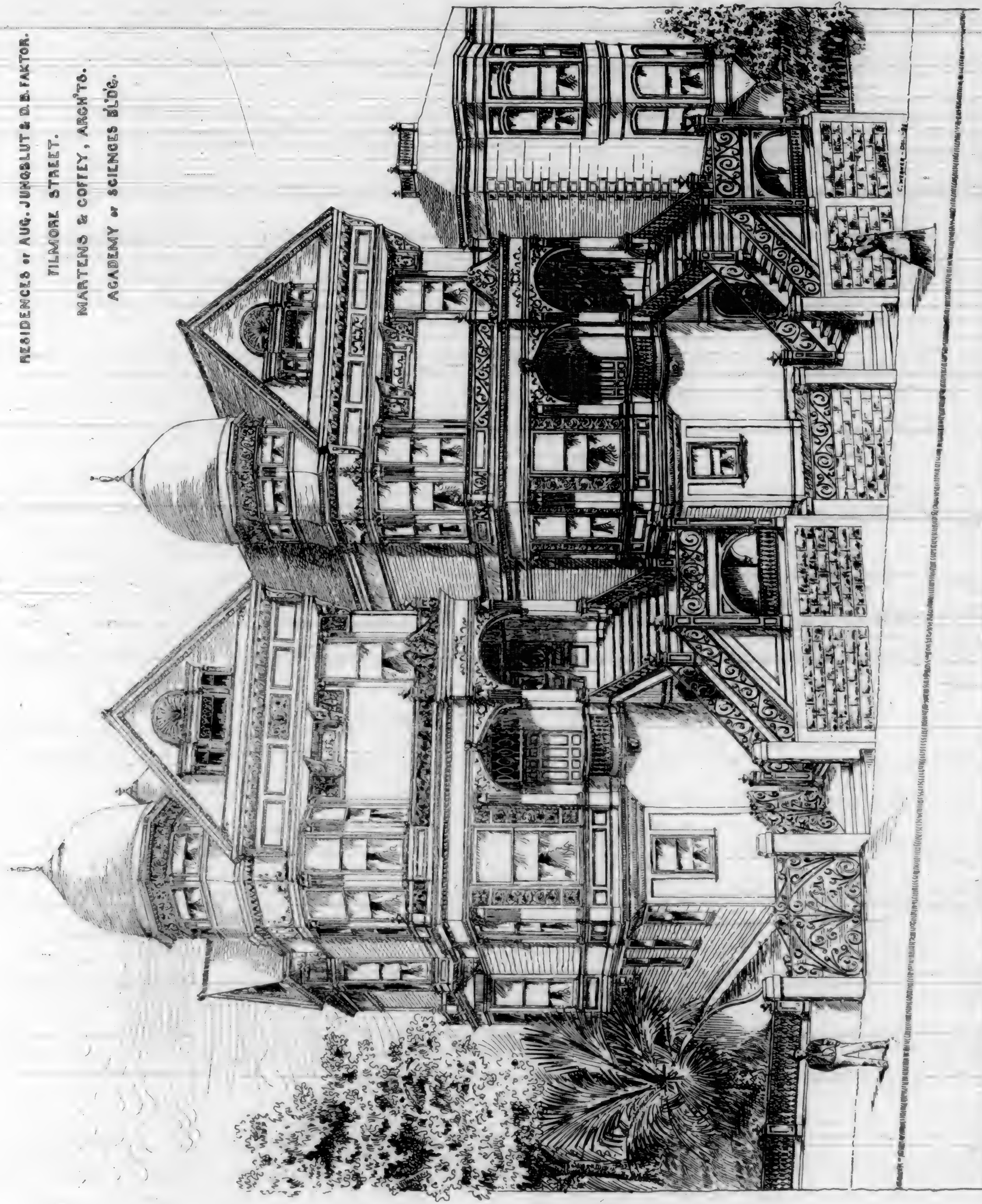
This amount consists of:

Deposits in Massachusetts Hospital Life Insurance Company.....	\$411,100.38
Deposits in Suffolk Savings Bank.....	3,489.02
Cash.....	.13
Balance of bonds, for loans.....	210.00

Total.....	\$414,799.53
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— *Carpentry and Building.*

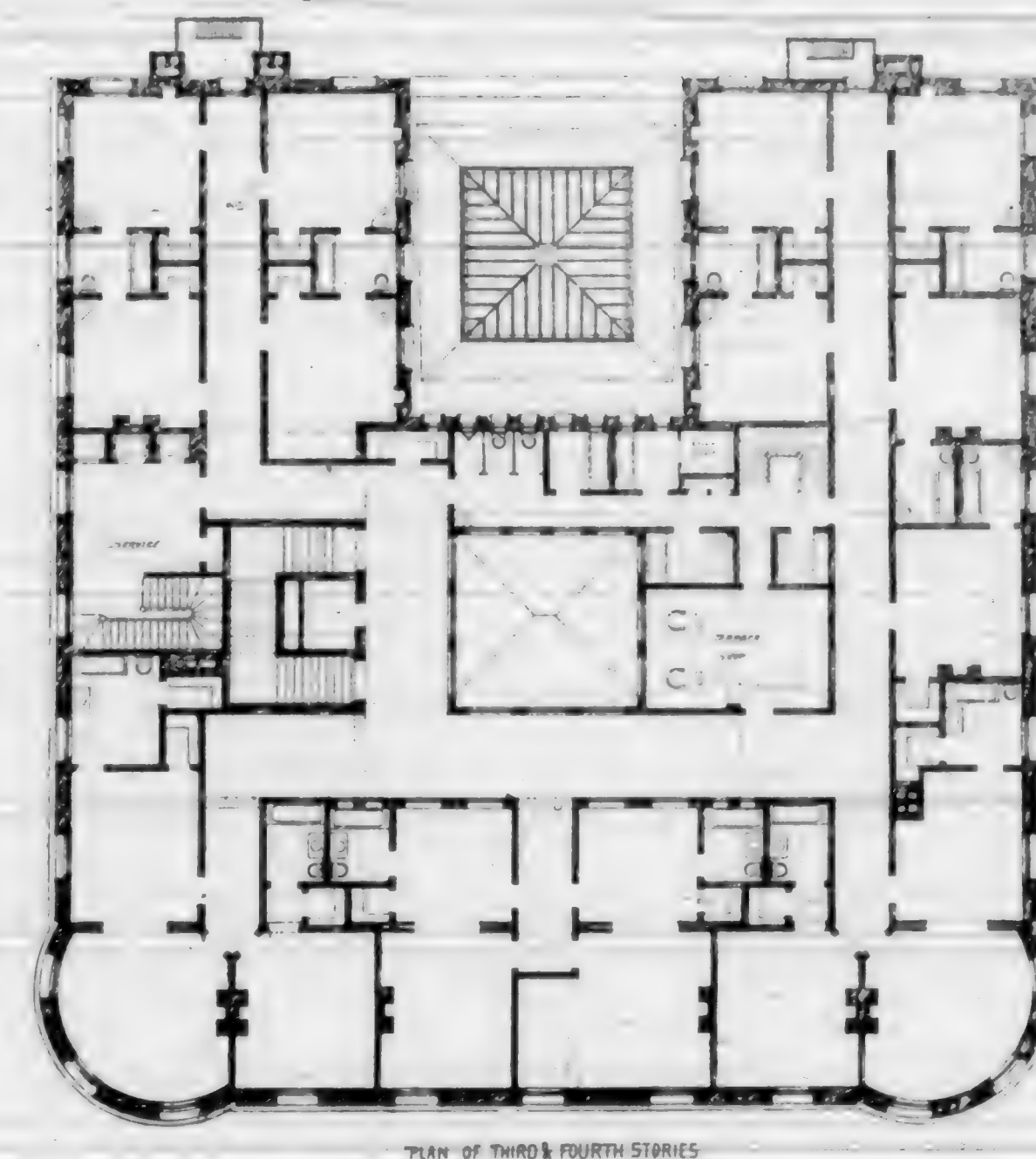
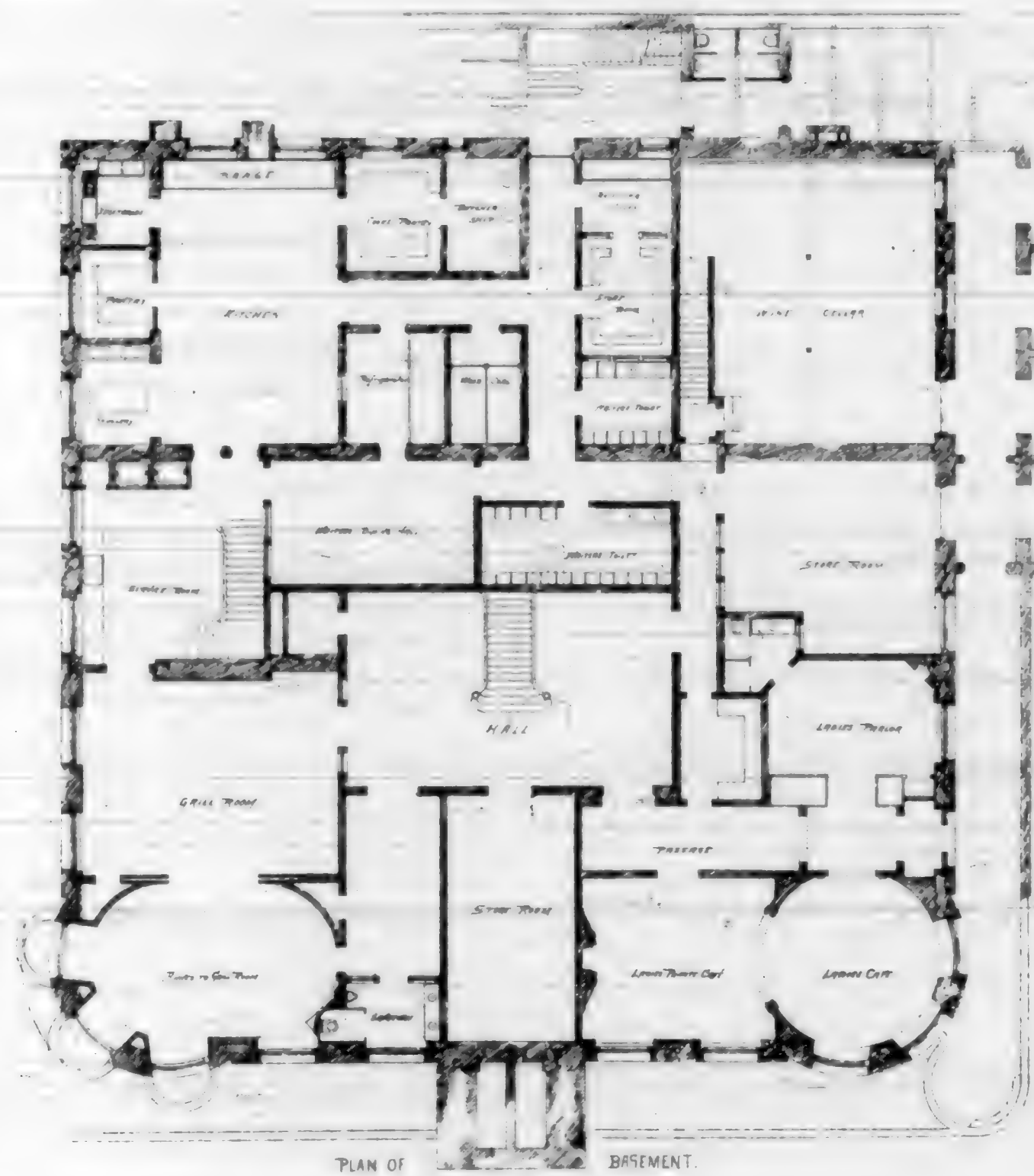
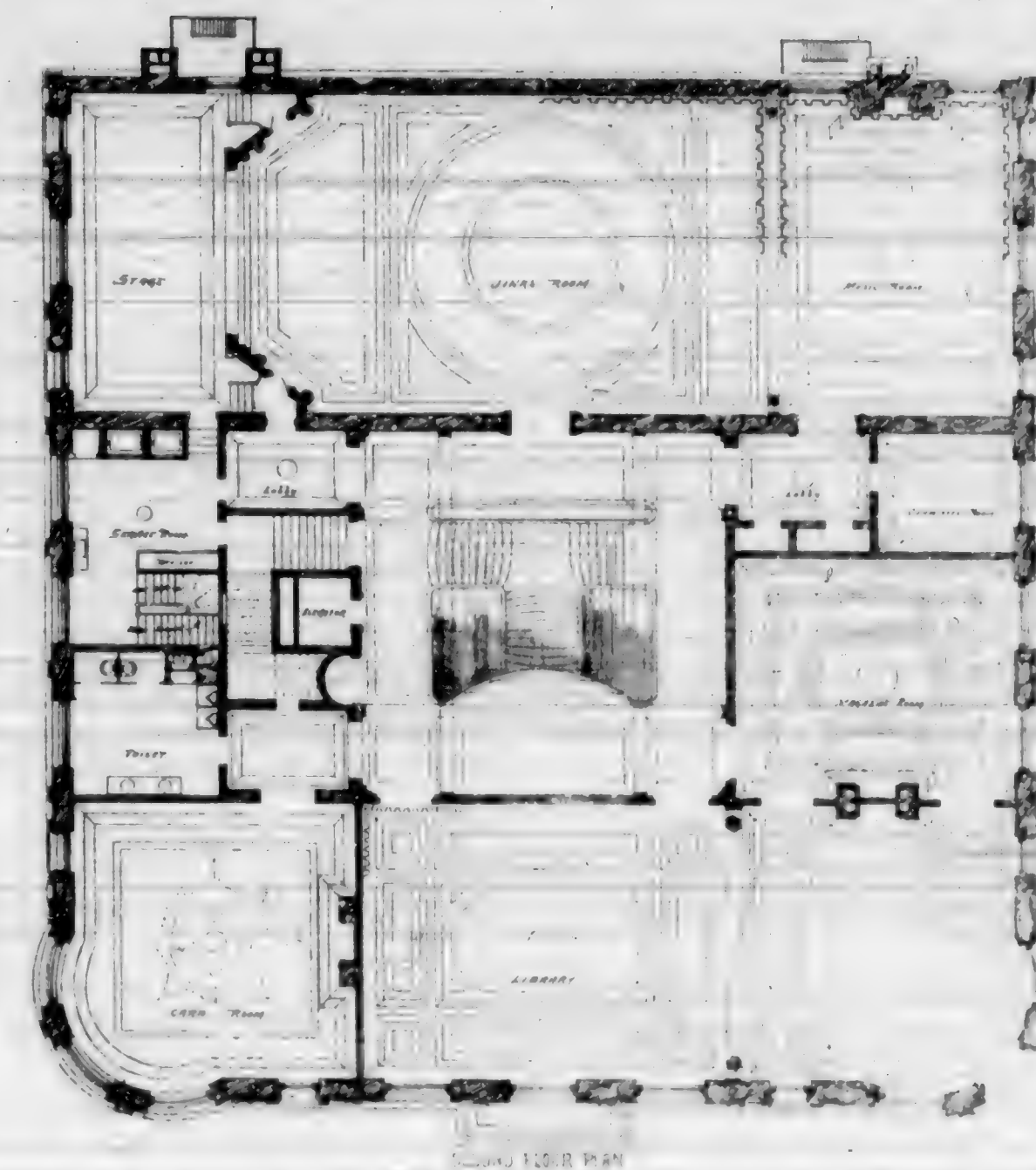
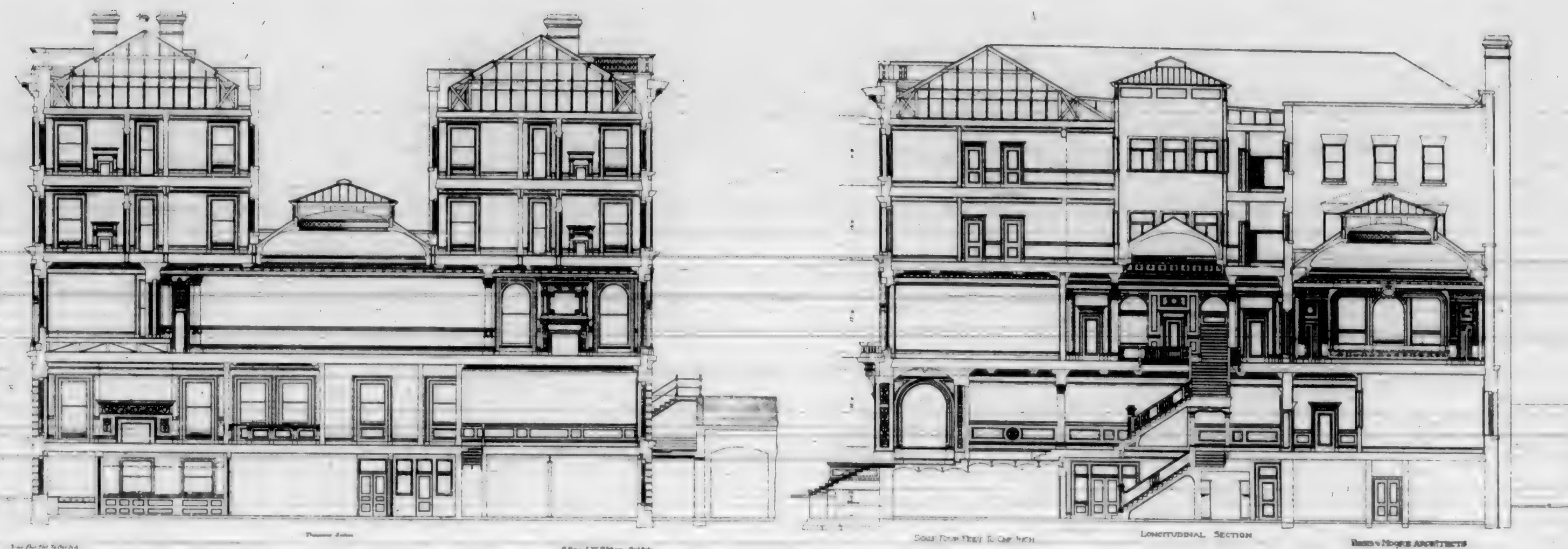
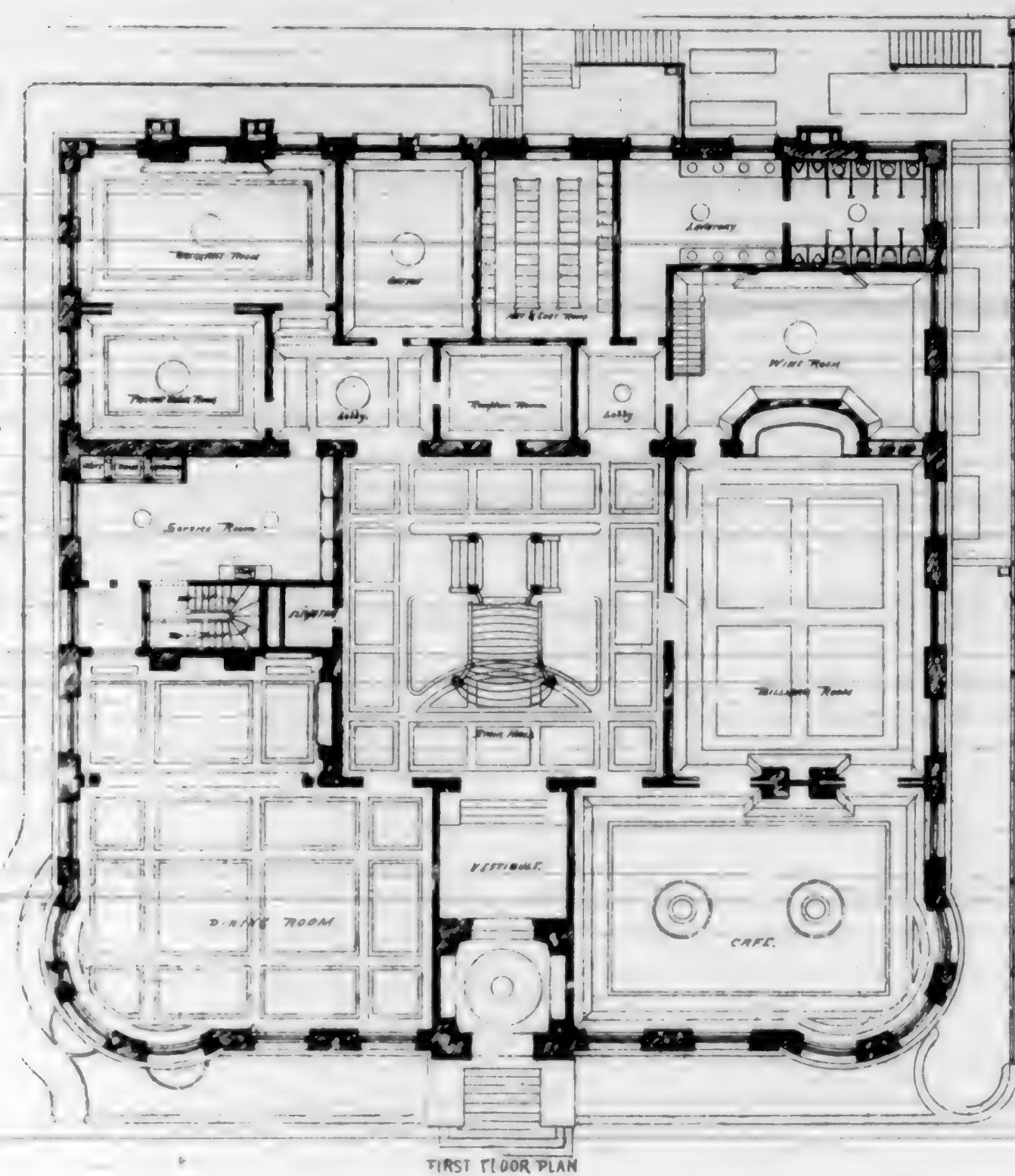
RESIDENCES OF AUG. JUNGSLUT & DE FAKTOR.
WILMORE STREET.
MARTENS & COFFEY, ARCH'TS.
ACADEMY OF SCIENCES BLDG.



CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

BRITTON & REY, PHOTO LITH.

VOL. XIV. No. 12. DECEMBER, 1893.



— BOHEMIAN CLUB BUILDING —



A Towne Clock Tower



In an editorial on improvements in electoral methods, the *Examiner* has the following:

It is manifest that the party system, under present conditions, is inconsistent with true democracy. The people do not rule, except possibly in one thing at a time. To have their way in that one thing they must give their agents power to thwart them in everything else.

The imperfections of the present political methods could be remedied by two devices, the referendum and proportional representation. It is unfortunate that the advocates of these reforms do not always work in harmony. They should not exclude, but supplement one another. The referendum can never supersede representative legislative bodies, and proportional representation can never make a legislative body so good, wise and responsive to all the complexities of public opinion, as to dispense with the need for the referendum. But both together would give us an ideal political system, would destroy bossism and the rule of party machines, would eliminate bribery, disarm corrupting corporations, and enable the people to express their will on each subject by itself without entanglements with any other.

Proportional representation was made the subject of one of the World's Fair congresses, participated in by a number of the leading thinkers of the country. Various plans were discussed, some recognizing parties and some ignoring them, but the most promising of all seems to have been the Hare Preferential system, now in operation in the elections for Trustees of the Mechanics' Institute in this city. By this scheme all necessity for party organization is dispensed with. Candidates are elected in groups, each voter having a right to name as many as he pleases in the order of his preference, but his vote being counted for only one. The total number of votes cast is divided by the number of places to be filled, and the result is the quota which each candidate must reach to be elected. In an election for Supervisors in San Francisco, for instance, there would be twelve places to be filled. If there were 60,000 votes cast, each candidate would have to receive 5,000 votes to be successful. The first-choice votes would be counted first. Any candidate who received more than his quota of these would be declared elected, and the surplus transferred to other candidates, according to the preference expressed on each ballot. If an elector voted for Smith as first choice and Brown as second, and Smith proved to be elected without his help, his vote would go to Brown. If the quotas were not all filled in this way the candidates receiving the smallest number of first-choice votes would be successively eliminated, and their ballots counted for the highest in order of preference. This process would be continued until there were no more candidates left than there were places to be filled, when all the survivors would be declared elected.

If this plan had been in force at the last election the present Board of Supervisors would have consisted of the most popular men on the Democratic, Non-Partisan and Republican tickets. In the same way the Congressional delegation of a State could be made perfectly representative of all the

political elements within it, and the gerrymander would become extinct.

Proportional representation would give us servants in whom the people had confidence at the time of election, but it would not preserve them from temptation after they were elected. To do that we need the referendum. We have had Legislatures, Railroad Commissions and Boards of Supervisors apparently composed of the best men in the community, and has seen them succumb to the advances of the sack as the chaste snowdrift yields to the ardent wooing of the summer sun. Such things may be expected whenever men are placed in a position in which their interests as individuals are opposed to their interests as citizens. The corrupting power of corporations, which is comparatively harmless when spread over the whole body of the people, becomes irresistible when concentrated upon a few legislators. The referendum would relieve legislative bodies of this pressure, since it would not be worth while to buy a decision that could be reversed by an appeal to the people. California has tried the referendum sufficiently to know how it works. The people have voted on constitutional amendments, bond issues, city charters and expressions of opinion, and they are satisfied that they know how to act for themselves without serious mistakes. With officials elected by a plan that would dispense with bossism, and the power of popular review of legislation as a check upon the officials, we should have as good a government as we deserved, and no community can expect anything much better than that.

A New York company is now manufacturing a white brick. It is so hard burnt as to be almost vitrified, and when broken shows a texture much like white marble. It is made of porcelain clay, and shows great crushing strength. The manufacturer's claim that it will not discolor when exposed to the atmosphere.

In view of the great scarcity of black walnut, once so plentiful in Canada, Mr. Joly has proposed to the farmers of Quebec that they should cultivate the walnut tree, as has been done in some of the Western States. The nuts after being left out all winter in heaps, covered with earth and straw, are in the spring planted two inches below the surface of the ground. The walnut tree is said to have a rapid growth. Mr. Joly's suggestion seems to be a valuable one, and we hope will receive the attention of the Forestry Department of the Government.—*Canadian Architect and Builder.*

A new idea has been carried into effect in hardwood flooring. It is simply tonguing and grooving the ends of each board. The idea itself is not new, but until recently no plan was hit upon to do the work cheaply enough. It is said, says the *Southern Architect*, that the work can be done by the new process for a cost of one dollar per thousand feet.

Where the end joints are made on a sleeper, or floor beam, and both ends nailed down well, we do not see any great advantage in the end tongue and groove. But where the joint is made between the supports it is certainly a good idea. Besides preventing the ends from rising or being depressed above or below the general surface, it will save a great deal of labor and considerable lumber in laying a floor.

INDIVIDUALITY IN ARCHITECTURE.

There is no more interesting problem than the question of the architect's individuality in his work and the part it takes in his success. A painter may be as individual as he please, may invent a wholly new style, introduce a totally fresh vogue, if he is so minded and has the ability to carry out his innovations. The same liberty is given the sculptor, and all the schools of painting and of sculpture have their origin in this circumstance. The architect has none of this freedom. He must conform to styles and conditions, to limitations and to circumstances, to men and to times as no painter or sculptor need. But there should be no complaint on this score. These are the conditions the architect will meet throughout his professional career, these the circumstances he knew would attend him the moment he chose his career.

It is quite a mistake to place the architect in the same category with the painter and the sculptor. Sister arts all three undoubtedly are, and in the Renaissance there were numerous artists in one branch who were also accomplished in others. This, however, implies no organic union, nor does the later differentiation of these arts imply a retrogression. All three have gained by specialism and must continue to do so. But the architect, every now and then, looks at his brother artists and sighs for their unrestricted fields, and wonders why it is he cannot follow the same unrestrained path, quite ignoring the fundamental position of his own art and the wide differences between it and the others.

The architect is thus hemmed in by conditions that may be broadly stated to be unartistic; his possibilities for producing individual work are therefore relatively small. But though not so free as the painter there is no reason why the architect should despair of impressing his personality and his individuality upon his work. He cannot create a style, it is true, and he should above all things avoid setting the fashion for a fad, but between these two extremes he can accomplish a great deal of earnest, thoughtful, individual work, which will be his own as entirely as the picture of the painter or the statue of the sculptor. Not every architect can accomplish this, perhaps, but certainly it is in some men to do so. The possibility of doing it is wholly within the architect himself. The conditions of his art, the limitations under which he works, do not in the least prevent it.

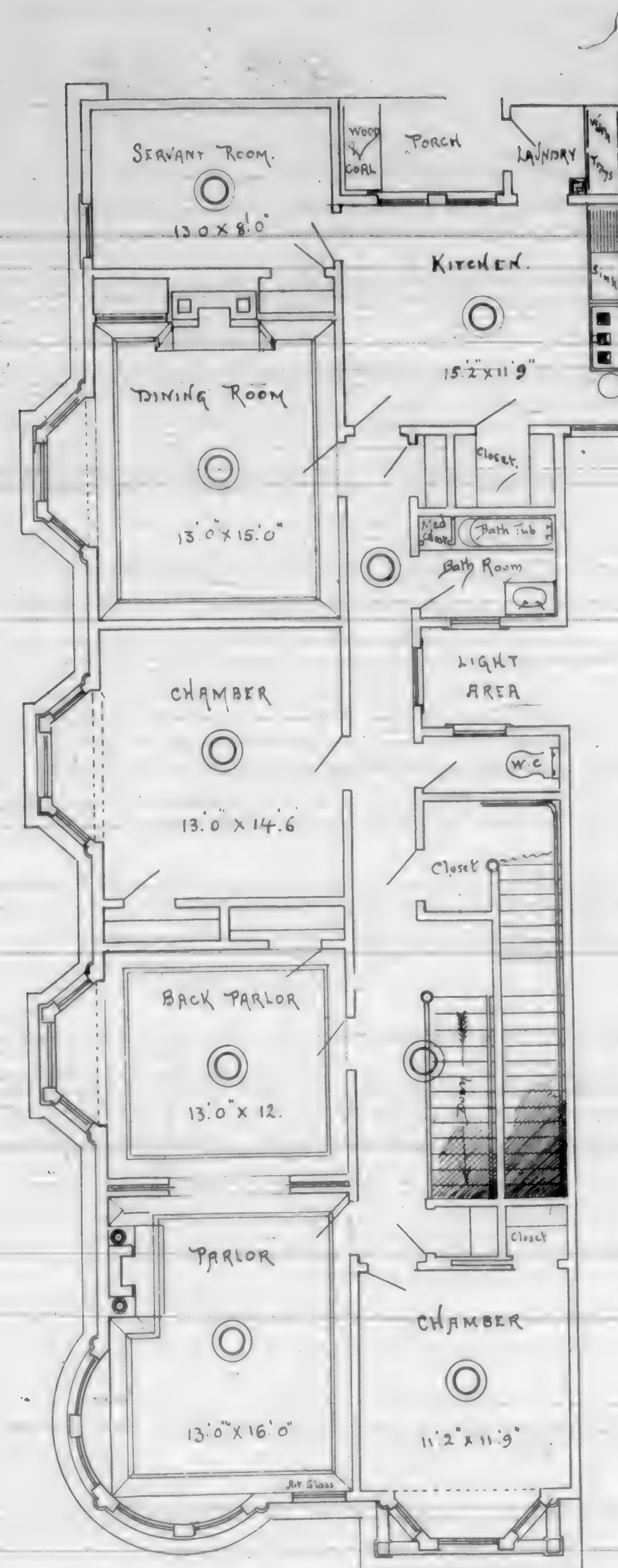
However the architect may strive to make his work individual the conditions cannot be forgotten. The design

may be wholly his, but he has followed another's programme, or rather a programme made up by limitations that have no architectural meaning or signification. Hence there would seem to be no reason why an architect should sign a building in the same sense the painter will sign a painting. The architect has made the design, he has superintended the erection of the structure, he has impressed it with his personality so that the ideas are his own self, but with all this he is contending with limitations of site, of municipal restrictions, with the individual wishes or desires of the owner,



PERSPECTIVE VIEW OF FLATS, CORNER OF FRANKLIN STREET AND HICKORY AVENUE.

which last, in many cases, frequently dominate the design as much as any part of the architect's thought. There is, therefore, a limit to the exercise of the architect's individuality. Even the great structures of the World's Columbian Exposition, which were designed under conditions practically unlimited, were designed with reference to each other, and the architect's own personal feelings and inclinations were held in check on more than one occasion. And this limiting of individuality which is found in these buildings is much more marked with the smaller structures that make up the bulk of the architect's practice.—*Architecture and Building.*



SECOND FLOOR PLAN OF FLATS CORNER OF FRANKLIN STREET AND HICKORY AVENUE.

TENDERS TO BE RECEIVED.

Treasury Department, Office Supervising Architect, Washington, D. C., November 20th, 1893. Sealed Proposals will be received at this office until 2 o'clock P. M. on the 27th day of December, 1893, and opened immediately thereafter, for all the labor and materials required for Mail Platform Enclosure and Approaches at the U. S. Post Office, etc., building at Sacramento, California, in accordance with drawings and specifications, copies of which may be had at this office or at the office of the Superintendent at Sacramento, Cal. Each bid must be accompanied by a certified check for a sum not less than 2 per cent of the amount of the proposal. The right is reserved to reject any and all bids or to waive any defect or informality in any bid, if it be deemed in the interest of the Government to do so.

so. All bids received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked, "Proposal for Mail Platform Enclosure and Approaches at the U. S. Post Office, etc., at Sacramento, California," and addressed to, Jeremiah O'Rourke, Supervising Architect.

LEGAL DECISIONS.

From a large number of Legal Decisions of the higher Court, of the different States of the Union, we select and publish in this column, such as appear applicable to this section of the country.

RIGHTS OF ABUTTING OWNERS.—Where one erects a building on his own lot the fact that it shuts out light and air from the adjoining owner gives the latter no remedy, though he has enjoyed the same for more than fifty years.

Knabe v. Levelle, Superior Court of N. Y. City, 23 N. Y. Supp. 818. 36.

ACTION TO FORECLOSE MECHANIC'S LIEN.—Where the statute relating to mechanic's liens requires that twenty-five per cent of the whole contract price shall be payable at least thirty-five days after the final completion of the contract, and also authorizes a claimant on establishing his lien, to recover costs and an attorney's fee, in an action by a material man to enforce his claim against the owner, the costs and attorney's fees are chargeable against the premises, where the sum so retained was not sufficient to satisfy the claim, and the contractor suffered a default, while the owner, contested the claim.

De Camp Lumber Co. v. Tolphy, Supreme Court of California, 34 Pac. Rep. 438. 108.

NECESSITY OF FILING CONTRACT.—The statute requiring contracts for buildings or improvements, where the price to be paid exceeds \$1,000, to be in writing, and the contract, or a memorandum thereof, setting forth, among other things, a statement of the general character of the work, to be done, to be filed for record, failing in which, the contract to be void, and the owner liable for work and materials, is for the benefit of laborers and material men, as well as the owner, and failure to file the plans and specifications for a building which are an essential part of contract for its construction, is fatal. It is immaterial that the contract does not expressly refer to the plans and specifications as a part thereof, where it appears that they did in fact form a part of it, and without them it would be too infinite and uncertain to meet the requirements of the statute.

Creig v. Riordan, Supreme Court of Cal., 33 Pac. Rep. 913. 158.

RIGHTS OF SUBCONTRACTORS TO MECHANIC'S LIENS.—Under the statutes requiring the contract for erecting a building to specify times when payments are to be made, and requiring twenty-five per cent of the price to be retained until thirty-five days after completion, partial payments, however they are specified as to time, may be safely made, provided no notice is given of their subcontract by material men, in the absence of which they must rely on the responsibility of the contractor, and the twenty-five per cent, required to be retained; and in such case they are not injured by any uncertainty as to the times of payment specified, nor by payments in advance of the specified time. All that material men can require, in such case, is that at the time they serve written notice upon the owner, or, if no notice is served, at the time their lien is filed, there shall be in his hands the amount required by the contract and the statute.

Dunlop v. Kennedy, Supreme Court of Cal. 34 Pac. Rep. 93. 166.

CONTRACT OF PURCHASE SUPERIOR TO MECHANIC'S LIENS.—Where building improvements are made on premises for one in possession under a parol contract of purchase only, a mechanic's lien for the improvements does not attach against the true owner. The fact that he knew the contractor was making improvements on land owned by him, for one in possession under a parol contract of purchase, does not estop him from denying the right to a mechanic's lien, where he did not know the contractor was in ignorance of the condition of the title.

Smith v. Huckaby, Court of Civil Appeals of Texas, 23 S. W. Rep. 397. 91.

WORK TO BE DONE TO SATISFACTION OF ARCHITECT.—A certificate which is not signed by the architect, but by his assistant for him, it is not such a certificate as is called for by a building contract which requires the contractor to do and finish the work, under and to the satisfaction of the architect, and provides that the payment shall be made on certificate of the architect, that the work has been done to his satisfaction; that any question arising respecting the contract shall be referred to the architect, whose decision shall be final; and that no certificate made under the contract shall be conclusive evidence of its performance.

McEntyre v. Tucker, Common Pleas of N. Y. City and County, 25 N. Y. Supp. 95. 113.

NOTICE OF MEETINGS.

SAN FRANCISCO CHAPTER, AMERICAN INSTITUTE OF ARCHITECTS, meets second Friday of each month at 408 California street.
 SETH BABSON, Pres. GEO. W. PERCY, Vice-Pres.
 OLIVER EVERETT, Sec. JOHN M. CURTIS, Treas.

TECHNICAL SOCIETY OF THE PACIFIC COAST, meets first Friday of each month at Academy of Sciences Building.
 C. E. GRUNSKY, Pres. CHARLES D. MARX, Vice-Pres.
 OTTO VON GELDERN, Sec. GEO. F. SCHILD, Treas.

CALIFORNIA ELECTRICAL SOCIETY, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
 GEO. P. LOW, Pres. C. O. POOLE, Vice-Pres.
 MAX CASPARI, Sec. H. T. BESTOR, Treas.

THE SAN FRANCISCO CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

THE regular monthly meeting of the San Francisco Chapter A. I. A. was held on Friday afternoon, December 8th, at the hour of 2 o'clock P. M. instead of in the evening at 8 P. M. as usual.

The innovation brought forward an unusually large attendance. The principal business of the meeting was the election of officers to serve the coming year, and after some lively balloting the following were declared elected:

Seth Babson, President; Geo. W. Percy, Vice-President; John M. Curtis, Treasurer; Oliver Everett, Secretary.

For Trustees the following member were selected:—Bryan J. Clinch, W. P. Moore, Jas. W. Reid, Geo. H. Sanders and Edmund Kollofrath.

After the adjournment many of the members remained and talked over matters of interest to the profession; and discussed means for advancing the welfare of the Chapter. Several promising suggestions were made, and will probably be tested by practical experiment some time in the near future.

PHOTOGRAPHING THE FAIR.

THE managers of the World's Columbian Exposition at Chicago, having received a large sum for the privilege of selling photographs of the buildings and grounds, were obliged in turn to protect those who had purchased that right, by prohibiting the taking of views by the general public, both professional and amateur.

This action, however, was the subject of such vigorous protests, that the managers were forced to modify their just intentions, and ultimately decided to allow the use of hand cameras with which pictures not over 4x5 inches in size could be taken; charging a fee of two dollars a day for each camera entering the grounds.

It is to be hoped that the managers of our California Midwinter Exposition will be more liberal in this matter, and allow the photographer, both great and small, professional and amateur, to have freedom from the annoying restrictions which were imposed at Chicago, and which the *Photographic Times* comments on as follows:

"It is a matter of no little regret in an artistic sense that the restrictions accompanying the grudgingly bestowed pri-

vilage of photographing at the Columbian Fair have deprived the world of many a picture it would gladly cherish after the glories of that Fairyland has disappeared like the fading of a dream. For albeit the work of amateur photographers (worthy of being so designated) is nearly always vastly more artistic and satisfactory than that of professionals, save in portraiture alone, as witness the samples in the British Loan Collection at the Fair, and the Annual Exhibition of the Photographic Society of Philadelphia, New York and Boston—the barring of all save hand cameras not larger than 4x5 inches, left little scope for the exercise of their taste or skill. Had the best workers among our foreign visitors or of our own land been at liberty to use such apparatus as they choosed, without restriction as to size, we should have had illustrations of this unrivaled and unapproachable wonderland now, alas, unattainable. For be it remembered that the negatives from which the larger views sold at the Fair are printed, were all made by wage workers, men whose daily business is to make a certain number of exposures for a specific compensation. Excellent though their technique may be, for "practice makes perfect," the spirit which would lead the artist amateur to spend hours if not days, in the composition and lighting of his subject must perforce be absent in them. Never before, at least in this country, have such combinations of architecture and landscape been made possible, and it is not a little exasperating to have had the wonderful beauties within one's reach, and been unable to grasp them in a larger degree than that bounded by the dimensions of a 4x5 plate. Under these circumstances it is little wonder that a majority of the most capable amateurs who visited the Fair did not do so in company with their cameras. They have not objected to the stiff charge of two dollars per day for the privilege of using one, but to the fact that the results obtained would not be satisfactory to their artistic consciences. The fashion of making negatives purposely for lantern-slides has not obtained to any great extent on this side of the Atlantic, and their small size are not generally very satisfactory for prints, while the work of the ordinary hand camera is not good enough to admit of enlargement to any considerable extent. Hence, as stated, the best workers are greatly in the minority among those who have paid for permits to photograph in the White City. A great number of "push the button" amateurs have been in daily attendance, making snap shots on any and everything in their way, especially upon the Midway Plaisance, but the results of their labors, in so far as I have observed them, have not been above the average of their now well-known performances. Most assuredly the world's desire for artistic picture remembrances of the Fair will not be greatly benefited by them.

AN ELECTRIC ROAD FOR TOKIO, JAPAN.

WHEN an electric street railway was completed for public use in Bangkok, the capital of Siam, last year, by Ohio capitalists, the Rev. J. M. Law, a medical missionary in Japan, thought that a similar enterprise would be profitable and of great public benefit in Tokio, the capital of the Japanese empire, containing 1,400,000 persons.

A few months ago he got Ohio capitalists to subscribe \$100,000 to the scheme, with the assurance of additional capital after the plan was further advanced. Dr. Law then went to Japan, and, backed by the influence of American and other Ambassadors, obtained one of the most liberal charters ever granted by Empero Mutso Hita. The intention is to run a line from Tokio to Yokohama, a distance of thirty miles, and built a network of lines in both cities. J. W. Goss and Engineer Riblet have just sailed for Japan to inaugurate the scheme.—*Electrical Review*.

BUSINESS MOSAICS.

For Stairs, Rail, Posts, Balusters, etc., try the Excelsior Mill, Geo. R. Jesse, Bryant street near Fifth, who have constantly on hand a large stock and will promptly manufacture to order.

"What are you crying for, Fritz?" "Because my brothers have a holiday and I haven't!" "But why haven't you a holiday, too?" "Because I'm not old enough to go to school yet!"—*Fliegende Blätter*.

If you do not happen to know where you will be sure to get good paper of all kinds go to A. Zellerback & Sons 419-421 Clay street, Telephone 1133—we speak from personal knowledge.

Traveler—"The Chinese make it an invariable rule to settle all their debts on New Year's day." AMERICA HOST—"Y-e-s; but the Chinese don't have a Christmas the week before."—*Dollar Weekly*

The Joshua Hendy Machine Works are still at the front, as manufacturers of all kinds of machinery—making a specialty of engines and pumps for building, as well as architectural iron work, both light and heavy castings, 39 to 51 Fremont street; foundry and warehouse, Kearny, Bay and Francisco streets.

Mrs. Wimbleton—"Come, Mr. Twickenham, and let me introduce you to Mr. Shingle Nail, the coming architect." TWICKENHAM—"Thanks, but I have already met the young man. In fact he built a house for me." MRS. WIMBLETON—"Really? And was it a success?" WICKENHAM—"He seems to think so. He is living in it."—*Dollar Weekly*.

Todd & Peters General House Smiths, 53 Beale street and 230 Mission street—not only manufacture wrought iron doors, fences, railing, cresting, etc., but also promptly attends to all kinds of repairing.

Darley—"My dear, what plant bears the brightest flowers?" MRS. DARLEY—"I'm sure I don't know. Which is it?" DARLEY—"The electric-light plant."

W. H. Wickersham, building contractor, is still to be found at his old headquarters 1125 York street, he is too well and favorably known to architects to need any recommendation from us.

West Coast Wire Works 13-15 Spear street near Market under charge of Trowbridge & Son, is a place where all kinds of useful and ornamental wire work are made to order.

Stranger—"What a cheerless, dreary, depressing-looking build that is." NATIVE—"Oh, that's only a school. Do you like fine architecture?" STRANGER—"I do." NATIVE—"Then wait till you see our new jail."—*Good News*.

Now that the Mayor has advised us all to have our houses got in good shape for the Midwinter Fair—is the time to call upon J. L. Cahill that prince of painting and decorating, 107 Sixth street near Mission, with branch store 1115 Market street.

Tommy—"Say pa, when the world comes to an end and the last card of the game of life has been played what will happen?" FATHER—"I suppose Gabriel will trumpet."—*Rochester Democrat*.

D. C. Condon of the Western Engineering Company, Mills Building, San Francisco, make specialties of accurate computations of stresses and strains, including bridges, buildings, etc., in iron, steel, masonry and wood. One of the large domes at the Midwinter Fair is a specimen of his work in this line.

New Girl—"What does your papa like for breakfast?" LITTLE MABEL—"He always likes most anything he hasn't got."

Merchant's Roofing. We call attention to Merchant & Co's well known extra coated roofing, architects and contractors will be particularly interested in a new departure from the old style, this as will be seen from their advertisement in another part of this paper, is nothing less than American Continuous Roofing Plates. These plates are made in a continuous roll, are straight, 100 square feet. Each sheet is formed and joined automatically, and thoroughly soldered while in the process of coating. A stock of the above described plates are now in stock at the various agencies of Merchant & Company in New York, Brooklyn and Chicago, as well as at their headquarters in Philadelphia where full information as to price, etc., will be cheerfully given upon application.

In considering this well known brand of roofing it should be remembered it is manufactured at their works in Philadelphia under their personal supervision by the Palm Oil process only, thus it may be considered one of the softest and most reliable plates offered in the market to-day; affording protection to home industry, at the same time securing an unequalled article of roofing.

CITY BUILDING NEWS.

- Buchanan** and Golden Gate Ave. Two-story frame; owner, Bernhard F. Bruce; contractors, Patterson & Person; signed, Dec. 5; filed, Dec. 7; cost \$2,500.
- Bush and Gough.** To fit complete all electric and gas combination fixtures, etc.; owners, Rich Rectory, Vistory and Wardens; architect, A. Page Brown; contractor, S. F. Novelty Works; signed, Nov. 10; filed, Nov. 11; cost \$2,300.
- California** street No. 38. All interior finish and office fixtures; owner, C. E. Blackford; architect, Edward Kollofrath; contractors, F. W. Kreling & Sons; signed, Nov. 21; filed, Nov. 22; cost \$1,812.
- California** near Drum. One passenger service and two sidewalk elevators; owners, Luning Co.; contractors, Cahill & Hall Elevator Co.; signed, Nov. 21; filed, Nov. 22; cost \$3,071.
- Castro** and 26th. All work to build; owner, Frederick Raup; contractor, Henry P. Connady; signed, Nov. 11; filed, Nov. 11; cost \$3,200.
- D** street near 5th Ave. Alterations and rebuilding; owner, Louis Metzner; architect, Chas. M. Rousseau; contractor, Louis Oregino; signed, Dec. 6; filed, Dec. 7; cost \$1,000.
- D** street near 6th Ave. To build; owner, Margaret Richardson; architect, Chas. I. Haven; contractor, John W. Wissinger; signed, Dec. 13; filed, Dec. 13; no cost given.
- Douglas** near 17th. To build; owner, F. Rupland; contractor, Casper Zwierlein; signed, Nov. 1; filed, Nov. 20; cost \$2,000.
- Dolores** near 21st. To build; owner, Emily McNab; contractor, C. S. Emmons; signed, Nov. 19; filed, Nov. 20; cost \$3,000.
- Ellis and Mason.** All the steam heating and ventilating pipes and fixtures; owners, The Y. M. C. Assn.; architect, A. Page Brown; sub-contractors, W. W. Montague & Co.; signed, Nov. 1; filed, Nov. 12; cost \$1,230.
- Ellis and Mason.** Marble work; orig-contractors, Mahoney Bros; signed, Nov. 1; filed, Nov. 13; cost \$1,135.
- Ellis and Mason.** Painting and varnishing; owner, The Y. M. C. Assn.; architect, A. Page Brown; contractors, Frazer & Keefe; signed, Nov. 1; filed, Nov. 13; cost \$3,200.
- Golden Gate Park.** Exposition building for the Northern and Central Mid-winter Fair Association; owners, R. M. Green and others; architect, Geo. A. Bordwell; contractor, Silas Carle; signed, Nov. 13; filed, Nov. 15; cost \$8,682.
- Golden Gate Park.** To build Oriental Concession on streets in Cairo; architects, Geo. Bonet & Co.; contractors, Hurlbut & Logan; signed, Nov. 15; filed, Nov. 15; cost \$25,000.
- Golden Gate Park.** To build an Arena; owner, E. D. Boone; architect, Samuel Newsom; contractor, C. P. Moore; signed, Nov. 15; filed, Nov. 18; cost \$5,527.
- Golden Gate Park.** A frame Exhibition building; owner, Cavston & Orr; architects, Percy & Hamilton; contractors, Ingerson & Gore; signed, Nov. 18; filed, Nov. 25; cost \$1,340.
- Golden Gate Park.** Painting Mechanical Arts building; owners, Executive Com. Cal. Midwinter Fair; architect, E. R. Swain; contractors, Frazer & Keefe; signed, Nov. 25; filed, Nov. 28; cost \$3,100.
- Golden Gate Park.** San Joaquin County building; owner, P. A. Buell Commissioner San Jose Co.; architect, Geo. Rushforth; signed, Dec. 1; filed, Dec. 1; cost \$7,483.
- Golden Gate Park.** Los Angeles, Ventura, Riverside, San Bernardino and San Diego counties exhibition building; owner, Chas. Forman; architect, Sumner P. Hunt; contractor, Alex. L. Campbell; signed, Dec. 1; filed, Dec. 2; cost \$10,291.
- Golden Gate Park.** One-story frame; owner, W. E. Von Johannsen; architect, J. Cather Newsom; contractor, D. T. Pierce; signed, Dec. 2; filed, Dec. 4; cost \$3,900.
- Golden Gate Park.** San Mateo Concession; owners, San Mateo County Mid-winter Fair Commissioners; architects, Martens & Coffey; contractor, John Morton; signed, Dec. 9; filed, Dec. 13; cost \$2,407.
- Grove** bet. Lyon and Loft. A two-story dwelling; owner, Rose A. Pritchard; contractor, T. C. Cochran; signed, Dec. 2; filed, Dec. 4; cost \$2,000.
- Greenwich** near Baker. Two-story and basement; owner, Adolph Vitz; contractor, J. Schuler; signed, Nov. 13; filed, Nov. 13; cost \$3,327.
- Harrison** near 25th. Two-story frame; owner, Mrs. E. G. Bond; architect, E. A. Hermann; contractor, John N. McLeod; signed, Dec. 8; cost \$1,449.
- Hubbard** near Howard. Converting a space now used as a door way into a flat, to correspond with adjoining flat; owner, T. H. Burke; architect, W. H. Little; contractor, George Connon; signed, Dec. 2; filed, Dec. 4; cost \$895.
- Masonic** Ave. near Page. All work to build except sidewalks and fences of a frame church; owner, Rev. James Flood; architect, T. J. Welsh; contractor, John J. O'Brien; signed, Dec. 8; filed, Dec. 9; cost \$3,330.
- Mission** near Plymouth Ave. One-story frame; owner, J. Dunne; contractor, Wm. Plant; signed, Nov. 13; filed, Nov. 14; cost \$1,313.
- O'Farrell** near Octavia. Excavating, grading and cutting down lot and complete bulkheads; owner, George Hess; architect, J. H. Littlefield; contractor, F. W. Schallike; signed, Nov. 21; filed, Nov. 22; cost \$525.
- Post and Powell.** Brickwork, stonework, terra cotta and pressed brick; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractor, John McCarthy; signed, Oct. 28; filed, Dec. 15; cost \$18,000.
- Post and Powell.** Wood, metal, lathing and plastering; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractor, D. O. Sullivan; signed, Oct. 28; filed, Dec. 12; cost \$8,775.
- Post and Powell.** Tin roofing, metallic shingle work, etc.; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractors, Forrester Cornice Works; signed, Oct. 28; filed, Dec. 12; cost \$3,382.
- Post and Powell.** Brick fire place, etc.; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractors, L. E. Clawson & Co.; signed, Oct. 28; filed, Dec. 12; cost \$3,229.
- Post and Powell.** Illuminating tiles; owners, Mrs. A. M. Parrott; architects, Pissis & Moore; contractor, P. H. Jackson & Co.; signed, Oct. 28; filed, Dec. 12; cost \$1,750.
- Post and Powell.** Painting and polishing; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractor, J. St. Denis & Co.; signed, Oct. 28; filed, Dec. 12; cost \$2,880.
- Post** near Stockton. Carpenter work on a six-story basement and brick building; owner, V. Menesini; architect, Chas. R. Wilson; contractor, James J. O'Brien; signed, Nov. 13; filed, Nov. 13; cost \$5,900.
- Post** and Leavenworth. Terra cotta work; owners, S. F. Verein Assn.; architects, Salfeld & Kohlberg; contractors, Gladden, McBean & Co.; signed, Nov. 6; filed, Nov. 17; cost \$5,125.
- Post** near Leavenworth. Lathing and plastering; owners, S. F. Verein Assn.; architects, Salfeld & Kohlberg; contractors, Pacific Patent Plaster Co.; signed, Nov. 9; filed, Nov. 17; cost \$4,350.
- Post** near Leavenworth. Gas-fitting and plumbing; owners, S. F. Verein Assn.; architects, Salfeld & Kohlberg; contractors, Samuel Ickelheimer & Bros.; signed, Nov. 8; filed, Nov. 17; cost \$2,600.
- Post** and Leavenworth. Wrought iron and cast iron work; owners, S. F. Verein Assn.; architects, Salfeld & Kohlberg; contractors, Western Iron Works; signed, Nov. 9; filed, Nov. 17; cost \$1,619.
- Post** near Leavenworth. Carpenter and mill work, hardware and stains; owner, S. F. Verein Assn.; architects, Salfeld & Kohlberg; contractor, Thos. H. Day; signed, Nov. 7; filed, Nov. 17; cost \$21,557.
- Post** near Leavenworth. Granite work; owner, S. F. Verein Assn.; architects, Salfeld & Kohlberg; contractor, John Sheedy; signed, Nov. 7; filed, Nov. 17; cost \$2,855.
- Second** Ave. near Clement. To build; owner, Wm. P. Johnson; contractors Lyons & Bazer; signed, Nov. 9; filed, Nov. 14; cost \$2,10.
- Stanyan** near Page. To build; owner, J. R. Holdson; architect, W. H. Hamilton; contractor, Silas Carle; signed, Nov. 16; filed, Nov. 18; cost \$4,500.
- Turk** and Seymour Ave. Alterations and additions; owner, Sarah Hoffer; architect, Oliver Everett; contractor, Ben Wallace; signed, Dec. 1; filed, Dec. 1; cost \$3,050.
- Valencia** near 23d. Raising and moving a one story frame; owner, Martin Fragley; architect, M. J. Welsh; contractor, A. T. Batten; signed, Nov. 28; filed, Dec. 1; cost \$2,467.
- Valencia** near 23d street. Addition to a frame stable; owner, Martin Fragley; architect, M. J. Welsh; contractor, A. S. Batten; signed, Dec. 8; filed, Dec. 9; cost \$1,200.

ALAMEDA COUNTY.

- Ashby** Ave. near Raymond street, Berkeley. To build; owner, Chas. Mansfield; contractor, J. J. Rose; signed, Nov. 15; filed, Nov. 16; cost \$2,157.
- Alameda County** Hall of Records. Wrought and cast iron work; contractors, Fortin Brick Co.; sub-contractor, H. Ralston; signed, Nov. 15; filed, Nov. 16; cost \$5,450.
- Clinton** near 8th Ave., East Oakland. Doors, sash, blinds, etc.; owner, Mary R. Smith; architect, W. J. Mathews; contractors, Burnham & Standeford Co.; signed, Nov. 16; filed, Nov. 18; cost \$1,832.
- Simpson** Ave. near Telegraph, Oakland. To build; owner, Mrs. C. Terney; contractor, Chas. S. Shaver; signed, Oct. 9; filed, Oct. 9; cost \$1,960.
- Sixteenth** street and 6th Ave. Carpenter work, etc.; owner, Emil Nushaumer; architect, W. J. Mathews; contractor, Wm. W. Winnie; signed, Oct. 12; filed, Oct. 13; cost \$2,630.
- Thirty-fourth** near West street, Oakland. To build; owner, C. W. Hunt; contractor John S. Whalin; signed, Nov. 16; filed, Nov. 16; cost \$1,800.
- Webster** near Central Ave., Oakland. To build; owners, Geo. W. & H. H. Perkins; contractors, A. W. Pattiani & Co.; signed, Nov. 16; filed, Nov. 20; cost \$4,100.

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I N D E X

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The California Architect and Building News.

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OFFICE, 408 CALIFORNIA STREET,

SAN FRANCISCO, CAL., U. S. A.

VOL. XV.

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1894.

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VOLUME XV.

JANUARY 20th, 1894.

NUMBER I.

A MONTHLY JOURNAL DEVOTED TO THE ARCHITECTURAL INTERESTS OF THE PACIFIC COAST.

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ESTABLISHED 1879. NOW IN THE FIFTEENTH YEAR. INCORPORATED 1880.

W. J. CUTHBERTSON, President. OLIVER EVERETT, Secretary.

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THE year just passed has not been as prosperous a one as could have been wished. But in entering upon the year 1894 we do so with brighter hopes for the revival of business and better prospects for the successful prosecution of new enterprises. The uncertainty of the passage of legislation proposed by Congress and now under consideration, has had the effect of making manufacturers, producers and importers extremely cautious and conservative in their operations. This uncertainty will be ended in a few weeks, and a long spell of quiet can safely be anticipated, when plans for the future can be made with the certainty of calculation born of a thoroughly understood condition of the market.

Manufacturers that have temporarily suspended or run on half time, in the hope of obtaining cheaper raw material, will be started up on full time, to replenish exhausted stocks, and this revival will furnish the employment so much needed at present for the unemployed.

New enterprises will be started and business generally be conducted on a firmer basis. While on this subject we cannot refrain from again calling attention to the great desirability of patronizing home industries. Why should we import building materials from abroad when they can be better produced at home. The quarries of slate, of marble, of building stone in this state cannot be surpassed; what more profitable industry could be desired than the opening up of these quarries on a more extensive scale. Why should we go east for iron and steel when they can as well be produced here. Why import hundreds and thousands of tons

of cement, when the materials for its manufacture are at our door. The paints manufactured on this coast are equal to the best.

Let the capital now idle, be employed in extending these enterprises. Let the citizens co-operate by giving the preference to these home products. Let saving in freight be retained, and the money so saved used to prosecute new and as yet undeveloped fields, and riches and prosperity will be the rewards that will come.

IN our article last month, we made the assertion that in a well regulated social state there should be no valid excuse for idleness and destitution among its citizens. The fact that enforced idleness and underserved destitution exist to-day, in this and other countries, proves that the present industrial system could be improved on. As long as a bountiful nature yields ample returns for man's labor, so long will there be means for sustaining prosperous communities, which constitute the bases of all great and contented nations.

If the present state of society does not distribute justly and evenly the rewards of man's toils, if the private interests of any particular class produce results detrimental to the well being of the whole people, it should be the duty of the government to intervene.

Mr. Bierce, in a recent article, has the following to say on this subject:—

It is ridiculous to recognize an obligation to support the

helpless indigent, and deny the duty of doing what can be done to prevent helpless indigence! What nearly all the citizens of the Union are now doing hastily, wastefully and imperfectly by private effort under semi-official supervision, the State should do always.

So unfortunate and dangerous a creature as a man willing to work, yet having no work to do, should be unknown outside of the literature of satire. Doubtless there would be enormous difficulties in devising a practicable and beneficial system, and doubtless the reform, like all permanent and salutary reforms, will have to grow. That it is already in course of evolution the private and semi-official movements referred to may be taken as evidence.

As Mr. Bierce says, the difficulties in the road of improvement are many and serious, yet who doubts they will have to be met and overcome—the continued existence of our government depends on the prosperity of its people.

In considering the different methods proposed to relieve the temporary distress of the unemployed, several points must be taken into consideration—first, the action proposed should be such as not to compete with already established industries in such a manner as to injuriously affect their prosperity, else the benefit done to one party would be counterbalanced by the injury to the other—second, the employment must, at the inception of the scheme at least, be of necessity confined to such as requires mainly unskilled labor for the present purpose should be to simply secure temporary employment for the idle, till such time as they can secure steady and remunerative employment elsewhere.

In view of the above requirements, the work provided should be of public benefit, and not for the profit of an individual.

Following out this course of reasoning, we would advocate what has already been suggested on numerous occasions by the press all over the country, viz.: Set the unemployed at work building and maintaining public highways from city to city, county to county, and state to state.

The need of better accommodations in this respect than what are now available, is very evident even to a superficial observer, and the benefit that would result from any improvements, would be enjoyed by the community at large; consequently it is only right that the community at large should bear the burden in the shape of the taxes necessary.

There is no doubt they would be paid more willingly and cheerfully than if paid for the maintenance of the jails and prisons, and courts and police departments that are now kept up in the hope of suppressing, and for the necessity of punishing crime; a considerable portion, of which, at least, can be traced directly to the degrading effects of abject poverty.

That government can best be called civilized, which by its practical results, shows the highest average standards of intelligence and prosperity among its people.

If only statesmen could be elected to govern, and if politicians could only be relegated to private life, who can doubt that a higher purpose would animate our legislatures, and correspondingly better results be achieved.

THIS journal is prepared to take charge of rendering perspective drawings in pen and ink or color. Charges will depend on size and kind of drawing wanted.

Upon receipt of plan and elevations, with a description of what is wanted, we will submit our estimates for the performance of the work.

REPORT OF THE STRENGTH OF THE DOME OF THE AGRICULTURAL AND HORTICULTURAL BUILDING, CALIFORNIA MID-WINTER FAIR.

By D. E. CONDON, M. E., C. E., A. M. INST. C. E.
MILLS BUILDING, SAN FRANCISCO, NOVEMBER, 1893.

IN making an analysis of the strength of the Dome of the Agricultural and Horticultural Building as designed for the California Mid-Winter Fair by Mr. Samuel Newsom, architect, I have divided the problem into three parts, namely:—

I. A determination of the effects of the *dead loading*, that is to say the entire weight of the material forming the dome, regarded as symmetrically distributed.

II. A determination of the effects of the *wind force* when acting on one side only.

III. A determination of the effects produced on the various dome members by the *combined* action of the dead loading and wind force.

I. DEAD LOADING.

It is evident that the effects of the dead loading, since it is symmetrically distributed, will be uniform on the various dome members.

The dome has 24 circular ribs or principal lines of rafters supporting the dead load, and 24 panels or spherical spaces between the ribs.

The dome proper, or part between AB and GH on accompanying diagram, is divided into three spherical zones by circular rings or 24-sided polygons connecting the ribs at GH, CD and EF.

In the design the ribs are made secondary to the rings; that is to say the rings are made continuous and divide the ribs into three section or series of *rib rafters*.

Of course the idea is to have the ribs practically continuous also by firmly connecting the rib-rafters together and to the rings at their intersections, so that the whole structure will be bound together and act cohesively.

The intersections of the rings and ribs are the *panel points*.

Each rib consequently carries 1-24 of the entire dead load, or that of one panel to the base, and in doing so different compressive strains are produced in the three rib-rafters or sub-divisions of rib between the rings.

There is a compressive strain produced in the upper ring GH, zero strain in the ring EF, a tensile strain in the ring CD, and also a tensile strain at A, B. These strains are marked on diagram.

So that if the dome were to be constructed to carry its own weight only, as designed, on the assumption that the latter is symmetrically distributed as I have supposed, then all that would be necessary would be to proportion its various members and their connections to the strains marked on diagram. We would require simply a compressive ring or polygon GH strong enough for 15,000 lbs. or $7\frac{1}{2}$ tons through 4 ft. distance between ribs or panel points; with a factor of safety 3, $4" \times 4"$ would be sufficient for this purpose. In addition to the ring I would have a series of pieces less than 14' long radiating from a central block to each rib, and strong enough to carry 4000 lbs. or 2 tons, for which $4\frac{1}{2}" \times 4\frac{1}{2}"$ would be ample with the same factor of safety.

The ring EF would be free from strain.

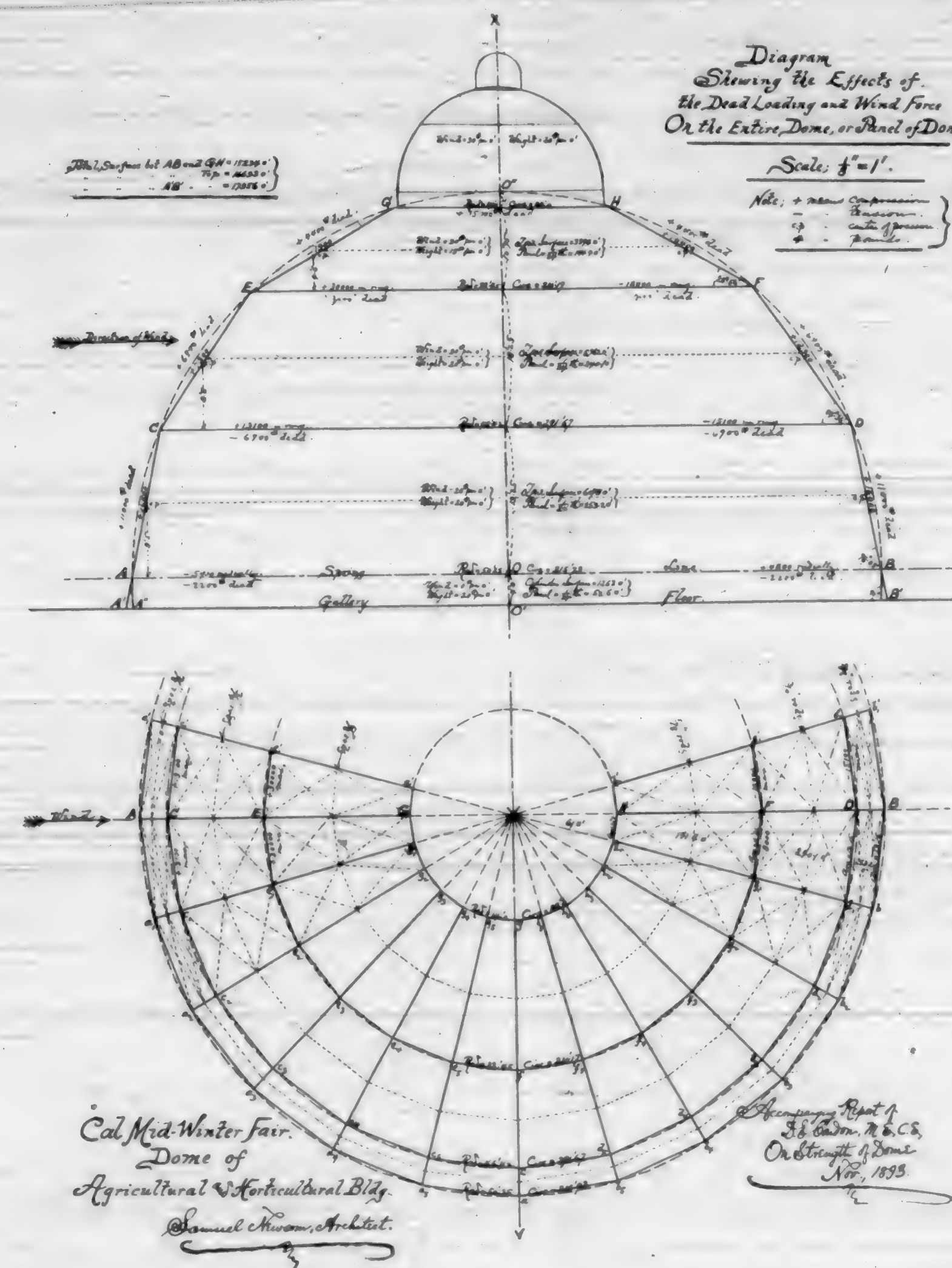
The ring CD would be free from compressive strain; but

as there is a tensile strain of 6900 lbs. it should be provided for by connecting the panel points with $1\frac{1}{8}"$ rods. At A, B we would require in a similar manner a rod polygon strong enough for 8400 lbs., or $1\frac{1}{4}"$ rods.

If the ends A, B are firmly fixed; or if the tangent AA' of the ribs be continued to the gallery floor or base (which is

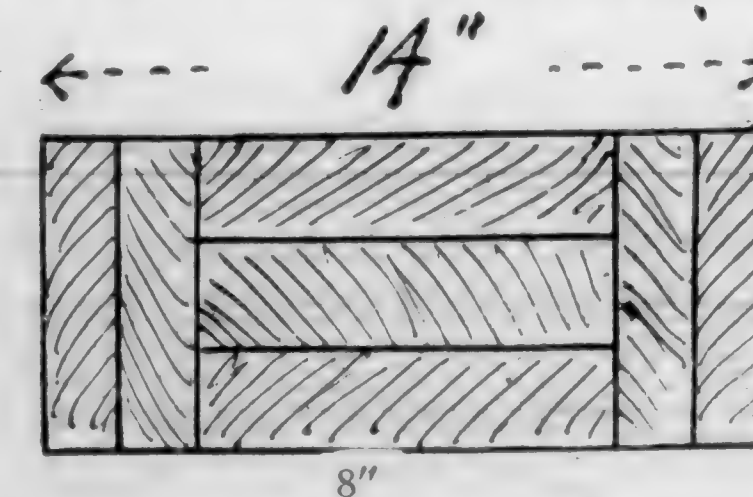
lbs. per sq. inch, which is as much as the present ribs could be expected to bear with safety.

If the various members as thus dimensioned be properly connected at the panel points, we would, so far as the *dead loading* (in accordance with our assumption) is concerned, have a perfect system of balanced strains, and perfect stability.



the design), then the rod polygon can be dispensed with, as the outward tendency of the rib toes at A is taken up by the struts AA', which conveys the rib strains directly to the base.

The maximum compressive strain to be provided for in the ribs would be 11,000 lbs. The ribs are bent to a radius of 30 ft., with a versed sine of about 16 inches, and of the section shown in annexed sketch. So that the maximum compressive fibre strain would be about 1100



II. WIND FORCE ACTING ON ONE SIDE.

There are three kinds of forces brought into action on the dome by the wind force distributed over the panels of its exposed semi-surface, viz:—

I. The vertical components of the resultant wind forces, tending to hold down or preserve the stability of the dome as a whole.

II. The horizontal components of same, tending to bend over the dome from the wind to the lee side, and overturn it or destroy its stability as a whole.

III. The resultant forces, or the combined action of these components, have at the same time a tendency to distort or destroy the spherical shape of the dome by producing unequal strains in its various corresponding members.

In the first place we will consider the distorting action of the wind force.

The maximum effect of the wind will evidently be pro-

duced on the panels (2 opposite and rib) directly opposed to its line of action, will be less on the adjoining panels and ribs, still less on the next, and so on in proportion as the angle between the panel face and wind direction becomes less, and will be a *minimum* on the panels (2 opposite and rib) at right angles to its direction. I have regarded the wind as distributed above AB (the spring line) as shown on diagram, and the ribs as fixed at A, B, etc.

If we imagine the ribs AX, XB, with a half-panel on each side (including the two small top domes), and the rings GH, EF, CD as standing alone; and resolve the wind pressures on the sub-panels AC, CE, EG, and the two small domes GX, into their components at A, C, E, G, H, we get a series of forces which we compound into a single force at each of the panel points A, C, E, G, H. These will be the *maximum* forces at the panel points, and the corresponding strains in the rib-rafter and rings will be the *maximum* strains—which are marked on the diagram.

The strains in the rib-rafter (AG, GB) and rings due to the panel forces at a-1 c-1 e-1 g-1 will be less than the maximum strains; and as the *minimum* panel forces act at a c e g, the corresponding strains in the rib-rafter (eg and opposite) and rings will be a *minimum or zero*.

In the ring EF for instance the maximum compressive strain will act from E towards e-1, and from E towards e-1. The compressive strain due to the panel forces at a-1 c-1 e-1 g-1 will act from e-1 towards E and from e-1 towards e-2 the former having a tendency to balance the maximum strain from E towards e-1—but being less the result is a tendency to move E and e-1 towards XY; and there will be an actual movement of these points unless the rigidity of the ring and connections with the rib-rafter are sufficient to counteract this tendency—which will be a maximum at e as the minimum or zero radial force is at that point. Consequently if the ring is rigid enough in itself, but the ribs are not capable of (or designed to) taking up the outward and forward tendency of the panel points, the circular form will become distorted into that of an oval having its major axis in the direction XY, and its minor axis in the direction XA; unless we counteract this by connecting the panel points of each ring with horizontal tie rods, and those of the different rings and the base by means of a system of diagonal tie rods. In this manner we convey (without distortion) the maximum strain from E to e and from e to F—where it will be balanced by the same strain coming from the opposite side.

So much for the wind side. On the lee side the tendency will be to produce an exactly opposite effect. The maximum tension at F will tend to draw the panel points inwardly and forward; the rigid ring and diagonal tie rods will prevent this, while the horizontal tie rods will convey the maximum tension from F to e and from e to E, where it will be balanced by the same strain coming from opposite side.

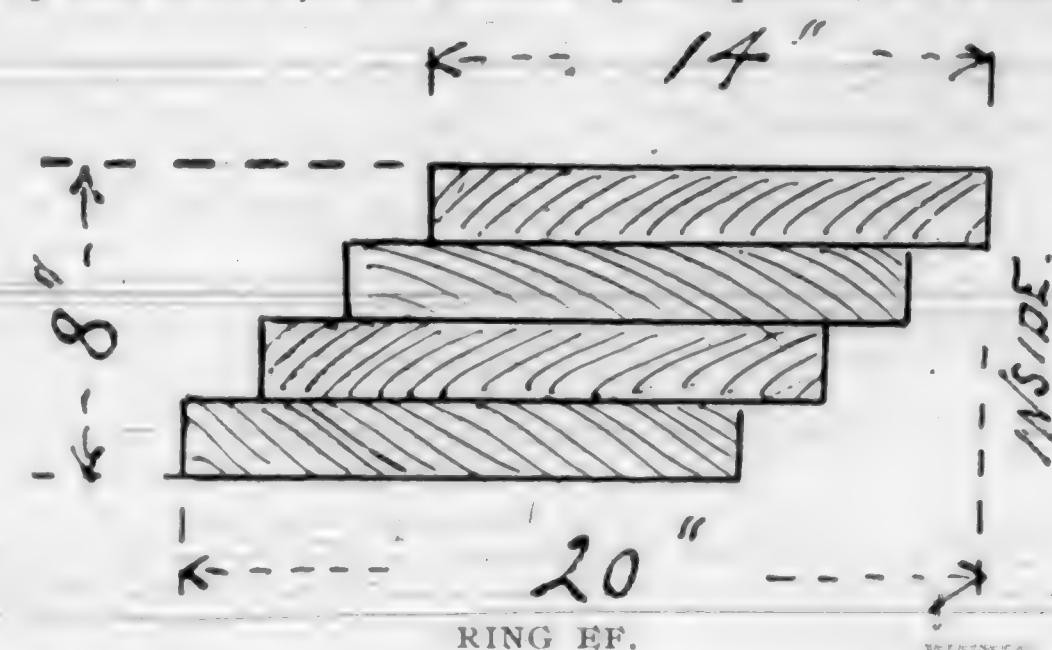
But now we have, at the same time, a resultant radial (horizontal) tendency to move the whole ring bodily forward. There is also a similar tendency to move the other rings GH and CD forward at the same time, but in less and greater degree. Hence in order to make this tendency relative between the rings it becomes still more necessary to connect them by means of a system (analogous to the web in girders) of diagonal bracing or tie rods between the panel points, as indicated on diagram. This system connecting the different rings together and to the base gives (in conjunction with the ribs) the entire structure the nature of a homogeneous shell.

III. DEAD LOADING AND WIND FORCE COMBINED.

The combined maximum strains to be provided for are marked on diagram.

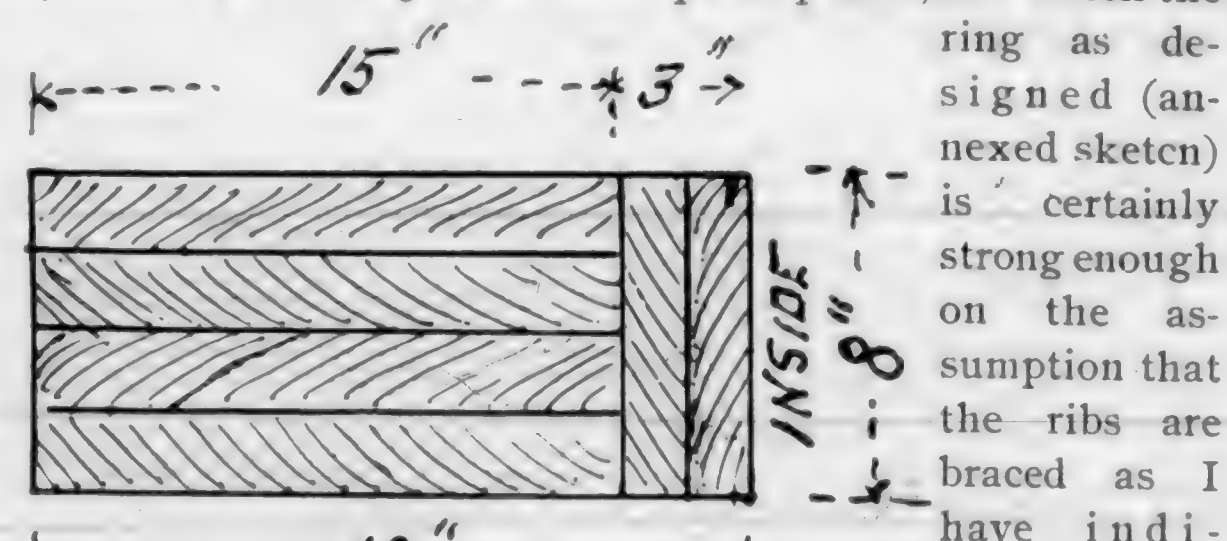
The maximum rib strain is 16,000 lbs. compression. The ribs being bent to a radius of 50 feet, and consequently having a versed sine of about 16 inches, with about 22 feet between panel points, the section as designed would have to bear a maximum fibre strain of about 1600 lbs. per sq. inch, which is too great for a laminated rafter. Hence it would be necessary to introduce three additional polygons of struts and tie rods connecting the ribs midway between the base AB and ring CD, between the rings CD and EF, and between the rings EF and GH, as shown on diagram by broken lines.

It remains to provide for the strains in the rings EF and CD. The maximum compressive strain in EF is 30,000 lbs. or 15 tons with 8.76 feet between panel points, for which the



ring as designed (annexed sketch) is strong enough. The maximum tensile strain in EF is 18,000 lbs., for which a 1 3/8 inch rod would be ample. The design provides for 1 1/4 inch rods.

The maximum compressive strain in CD is 13,100 lbs. or 6 1/2 tons, with 12.15 ft. between panel points, for which the



ring as designed (annexed sketch) is certainly strong enough on the assumption that the ribs are braced as I have indicated, and firmly secured to the rings, and that the panel points are connected by means of a system of diagonal tie rods as also proposed. I fail to see the necessity of the cumbrous truss, 6 ft. deep, designed for this ring—which will destroy the appearance of the inner surface of the dome, unless it can be utilized for some purpose (such as a display of flowers for instance) which will off-set this effect.

The maximum tensile strain in CD is 15,400 lbs., for which a polygon of 1 1/4 inch rods connecting the panel point will be sufficient. The design provides for only 7/8 inch or 1 inch rods.

My suggestions for changes, are marked on diagram by broken lines.

"So you used to be in business for yourself, eh?" asked the business man. "How does it happen you are looking for employment?" "I guess I wasn't up to business ways," answered the applicant. "Every time I failed I made a failure of it."—*Indianapolis Journal*.

CALIFORNIA MARBLE.

STRANGERS visiting San Francisco and other cities of California are at once struck by the absence of the use of marble in the construction of our dwellings and business blocks. This fact is brought more forcibly to their minds when after a short stay here they become convinced that there are a great many men of wealth in this state, also that they reside in beautiful and costly homes; at the same time these houses are constructed almost entirely of wood, thus the impression is forced upon the visitor that marble is not to be had here only at such a price that almost prohibits its use, that we must depend solely on our vast forests of redwood and other timber for our building material.

It is with a view that some of these same visitors may read this article and become convinced that the conditions here are just the reverse that we publish it; at the same time may it serve to call attention to the residents of our state and those intending to build, that we have confined in the hills and mountains of California vast deposits of white, variegated and colored marbles. Material that for strength, durability and appearance will compare with any produced in the world, and above all cheaper than the imported article.

It is my intention in this review of the different marble deposits of the state, to show no favor to any particular material, but as near as in my power make a fair statement of the various kinds and qualities, where they are quarried, and such other information as I may have, when the purchaser can judge for himself after an examination of the different materials. However, I do not hesitate to say that if there is a deposit of poor marble being worked in California to-day I do not know of it. They are all good, will take the place, and in many cases, give better satisfaction than the imported article.

Inyo county marble.—Near the base of the Inyo mountains in Owens valley near the lake of the same name, lies what is perhaps the largest and most wonderful deposits of marble that has been as yet discovered. It is impossible to describe truthfully these vast deposits of beautifully colored stones.

There is white, black, blue and yellow in pure colors, purple veined, black and gold, making a grand variety of colored marbles very beautiful for interior decoration. The white marble is perfectly clear, the grain is fine, very compact and will stand great pressure; it is a pure dolomite, therefore, will take on and retain a very fine polish.

The first two stories of the Mills Building in this city are, as well as a greater part of the interior finish of same, done in this material and is a most creditable piece of work, the main entrance to the building shows what may be done in the way of relief with the white marble.

The black is almost identical in color with the Belgian black marble, it is very difficult to distinguish one from the other when polished. The yellow marble varies from a delicate cream to a dark mottled orange, there are veins of deeper yellow with fern like markings similar to moss agate is particularly adapted for furniture and interior decorations.

Inyo moss agate marble.—The color of this runs from light to dark lively browns with beautiful fern like markings and I understand is the only marble of the kind known; it takes a fine polish.

Much more could be said of the colored marbles of Inyo county but I must retain space for some of the other counties and their marble. Yet before passing from Inyo it is but just that I mention the fact of it being my extreme good

fortune a few days since to be shown a very large collection of fancy colored marbles (in sample) from Italy, and at the time I took pains to obtain from the party the pieces of the different varieties on board the vessel at Genoa, Italy, and also delivered here in San Francisco. I found the prices of these colored marbles were far in excess of the Inyo colored material, and while I must admit that there was some very beautiful specimens of marble in the collection from Italy, I say without fear of contradiction, that the colored marble of Inyo county is fully up to their standard and in my judgment much more beautiful. The question may be asked, are the Inyo deposits being worked? I answer yes, and with a plant of the most improved machinery, capable of turning out as high a grade of work as can be done any place in the world.

AMADOR COUNTY MARBLE.

Situated about six miles from Jackson the County Seat of this County, is vast deposit of True Marble and what is perhaps the truest material (of the marble family) yet discovered in the United States. There are many points about this material which are pleasurable to note.

As yet there are but two varieties developed although the vein is uncovered on the face of the hill for a length of about 275 feet and a height of over 400. This marble is variegated in color, one a gray black vein and the other a pure white with jet black veins. The markings of the variety is similar to some of the Italian marble and is far more beautiful from the fact of the black veins standing out in bold view, while in the case of the Italian marble of this grade the black veins seem to be beneath the surface and are more of a gray than black; a comparison of the two materials leads to a verdict in favor of the Amador Marble. A feature of this material which I have not seen in any marble yet discovered in the United States, is that it is very compact of great strength when put under pressure, yet very easily worked, saws much better than the Italian and for relief work is much preferable to the imported material. I have talked with several marble workers about this and in each case they informed me that the Amador Marble worked up better than the Italian. These quarries were first opened by an Italian of years experience in the quarries at Carrara, Italy, recognizing the excellent features of the material, he came to San Francisco and organized a company composed mostly of his own countrymen who were fully alive to the fact that in the Amador marble they had a material that compared with what they had seen in their own country. The company was named "The Carrara Marble Co. of Amador," after the City of Carrara, Italy, about \$50,000 has been spent in the opening of the quarries by these parties. The most prominent piece of work done in this material was the interior work and grand stairway of the Stanford University Museum and is really a magnificent piece of marble work. I am reliably informed that samples of this material have been shown to Mr. Vecchi one of the largest quarry owners in Italy he pronounced it equal to the best (outside of the statuary) Italian material, and predicted that it would eventually drive the imported article out of the markets of the Pacific Coast. This marble received the highest recommendation from the United States Supervising Architect of all the different varieties of stones presented to the government (in samples) for use in the construction of the proposed new Post Office in San Francisco.