

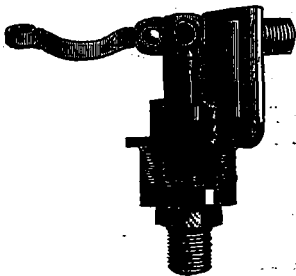
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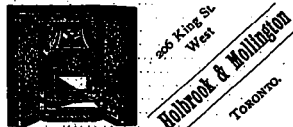
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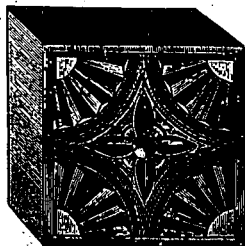
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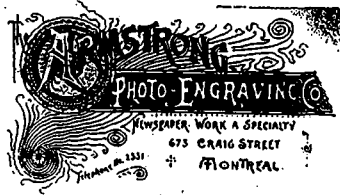
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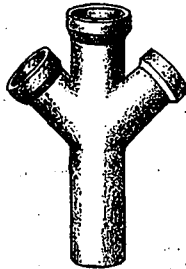
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- ROMAN CEMENTS.
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Fire Brick,
Fire Clay,

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NATIVE CEMENTS

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LUMBER.

1 1/2 and thicker clear picks, Am. ins.	\$30	00	23	00
1 1/2 and thicker, three uppers, Am. ins.				37
1 1/2 and thicker, pickings, Am. ins.				20
1 x 10 and 12 dressing and better	18	00	20	00
1 x 10 and 12 mill run	13	00	14	00
1 x 10 and 12 dressing	14	00	16	00
1 x 10 and 12 common	12	00	13	00
1 x 10 and 12 spruce culls	10	00	11	00
1 x 10 and 12 maple culls				9
1 1/2 inch clear and better	28	00	30	00
1 1/2 inch dressing and better	18	00	20	00
1 1/2 inch siding, mill run	14	00	16	00
1 1/2 inch siding, common	11	00	12	00
1 1/2 inch siding, ship culls	\$10	00	\$11	00
1 1/2 inch siding, mill culls	8	00	9	00
Cull scantling	8	00	9	00
1 1/2 and thicker cutting up pick	22	00	25	00
1 inch strips, 4 in. to 2 in. mill run	14	00	15	00
1 inch strips, common	11	00	12	00
1 1/2 inch flooring	14	00	15	00
1 1/2 inch flooring, pickings	14	00	15	00
XXX shingles, sawn	3	30	3	35
XX shingles, sawn	1	30	1	35
Eastlake galvanized steel shingles, 24 W. G. per square				6
Eastlake galvanized steel shingles, 26 W. G. per square				5
Eastlake painted steel shingles, per sq.				4
Round pointed galvanized steel shingles, per sq.				6
Round pointed painted steel shingles, Round shingles, unpainted				4
Round pointed painted steel shingles, shingles				4
Manitoba galvanized steel siding, per square				5
Manitoba painted steel siding, per sq.				3
Painted sheet steel pressed brick				3
Painted crimped steel shooting				3
Price of Copper shingles according to weight.				

WARE QUOTATIONS.

Mill cull boards and scantling				10
Shipping cull boards, promiscuous widths				13
Shipping cull boards, stocks				14
Heavy cantling and joist up to 18 in.				11
" " " " " 18 " "				12
" " " " " 20 " "				13
" " " " " 24 " "				14
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" " " " " 84 " "				29
" " " " " 88 " "				30
" " " " " 92 " "				31
" " " " " 96 " "				32
" " " " " 100 " "				33
" " " " " 40 to 44 ft.				34
Cutting up planks, 1 1/2 and thicker, dry	25	00	26	00
" " " " " board, 1 1/2 and thicker	25	00	26	00
Cedar for dock paving, per cord	10	00	10	00
Cedar for Kerbing, 4 x 14, per M.				14

1 1/2 inch flooring, dressed, F. M.	28	00	31	00
1 1/2 inch flooring rough, B. M.	25	00	28	00
1 1/2 " " " " " undressed, F. M.	25	00	28	00
" " " " " undressed, B. M.	18	00	19	00
" " " " " dressed	18	00	20	00
" " " " " undressed	18	00	19	00
Beaded sheathing, dressed	22	00	25	00
Clapboarding, dressed				12
XXX sawn shingles, per M, 16 in.	4	65	2	75
Sawn lath, 1 and 2	30	00	30	00
Red oak	30	00	40	00
White	15	00	45	00
Baswood, No. 1 and 2	18	00	20	00
Cherry, No. 1 and 2	25	00	25	00
White ash, No. 1 and 2	25	00	25	00
Black ash, No. 1 and 2	20	00	30	00
Dressing stocks	16	00	22	00
Picks, American inspection				40
Three uppers, American inspection				50

BRICKS—M

Common Walling				\$7
Good Facing				9
Sewer				8

Pressed Brick:

Plain brick, f. o. b. at Milton, per M...	\$17	00
" " " " " and quality, per M...	12	00
" " " " " 3rd " " " " " " " "	10	00
Hard Building		8
Moulded and Ornamental, per 100...	\$3	10
First quality, f.o.b. at Campbellville, per M	18	00
2nd " " " " " " " " " " " "	13	00
3rd " " " " " " " " " " " "	10	00
Hard Building		8
Ornamental, per 100	\$3	10
Tiles		24

Stone:

Common Rubble, Per Ton, delivered	14	00
Large flat Foundation Blocks, " Cubic Foot	18	00

Slate: Roofing (per square).

" red	16	00
" purple	9	00
" sanding green	5	00
" black slate	7	50
Terra Costa Tile, per sq.	25	00
Ornamental Black Slate Roofing	8	00

Paints. (In oil, per lb.)

White lead, Can	6	35	6	50
" " " " " sine, Can				7
Red lead, " "				5
" " " " " venetian	1	60	1	75
" " " " " vermilion				90
" " " " " Indian, Eng.				10

Yellow ochre.....	5	10
Yellow chrome.....	15	20
Green, chrome.....	7	12
" Paris.....	25	25
Black, lamp.....	15	25
Blue, ultramarine.....	11	25
Oil, linseed, raw (8 Imp. gallon).....	68	70
" " boiled.....	78	80
" " resin, ".....	78	80
Putty.....	2 1/2	2 1/2
Whiting, dry.....	75	1 00
White Enge, dry.....	70	1 00
Litharge, Am.....	6 1/2	8
Sienna, burnt.....	15	20
Umber.....	3 1/2	10

CEMENT, LIME, etc.

Lime, Per Barrel of 2 bushels, Grey.....	40
" " " White.....	55
Plaster, Calcined, New Brunswick.....	2 00
" " Nova Scotia.....	2 00
Hair, Plasterers, per bag.....	1 00
Cement, Portland, per bbl.....	2 80
" " Threlkeld, ".....	1 50
" " Queenston, ".....	1 50
" " Napance, ".....	1 50
" " Hull, ".....	1 50

HARDWARE.

Oct Nails:

American Pattern, 1 1/2 inch, per keg.....	4 15
" " 1 3/4 to 1 1/2 inch, per keg.....	3 40
Canadian Pattern, 1 1/2 inch, per keg.....	3 05
" " 1 1/2 to 1 1/4 inch, per keg.....	1 15
" " 1 1/4 to 1 1/2 inch, per keg.....	2 15
" " 1 1/4 to 1 1/2 inch, per keg.....	2 90
" " 1 1/4 and larger.....	2 05
Steel nails 100, per keg extra.....	4 15
Finishing nails, 1 inch, per keg.....	5 75
" " 1 1/2 inch, ".....	1 05
" " 1 1/4 ".....	4 30
" " 1 1/2 " and larger.....	3 15

MONTREAL PRICES.

Lumber, Etc.

Ash, 1 to 4 in, M.....	\$13 00@18 00
Birch, 1 to 4 inch, M.....	15 00 25 00
Basawood.....	12 00 20 00
Walnut, per M.....	50 00 100 00
Butternut, per M.....	22 00 40 00
Cedar, flat.....	00 04 00 06
Cherry, per M.....	15 00 17 00
Elm, Soft, 185.....	60 00 60 00
Elm, Rock.....	25 00 30 00
Maple, hard, M.....	10 00 25 00
Maple, Soft.....	16 00 18 00
Oak, M.....	40 00 95 00
Pine, select, M.....	35 00 40 00
Pine, and quality, M.....	30 00 35 00
Shipping Culls.....	13 00 00 00
Mill Culls.....	8 00 10 00
Lath, M.....	1 30 1 90
Spruce, 1 to 2 inch, M.....	10 00 12 00
Spence Culls.....	4 50 6 00
Shingles, 1st quality.....	2 00 3 00
" " and.....	1 25 1 50

Cement, etc.

Portland Cement, per barrel.....	\$ 2 70@ 3 00
Roman ".....	2 75 3 00
Fire Bricks, per M.....	20 00 30 00

Oct Nails:

Hot-cut Am. or Can. pattern, 3 inch and above.....	4 75 \$3 85
Hot-cut Am. or Can. pattern, 2 1/2 inch and above.....	3 00 3 25
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Am. pattern, 1 1/2 and 1 1/4 inch hot-cut.....	4 25 5 60
" " 1 1/2 inch.....	3 25 4 45
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" " dry.....	3 50 4 00
Venetian Red, English.....	1 50 1 75
Yellow Ochre, French.....	1 25 3 00
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" " Paris.....	1 15 1 25

Oils:

Linseed, raw.....	0 65 0 65
" " boiled.....	0 60 0 68
Olive, pure.....	1 10 1 15
" " machinery.....	95 1 05
" " extra, 95, per case.....	3 00 3 25
" " pis.....	2 50 3 00
" " 1/2 pis.....	2 75 3 10
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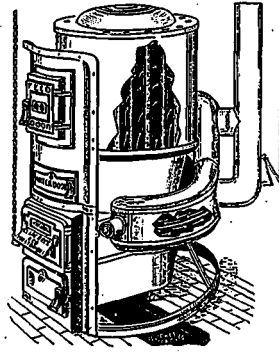
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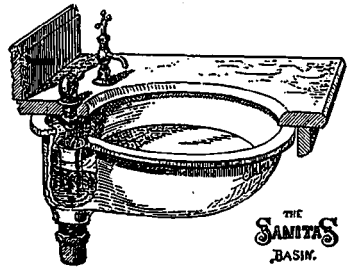
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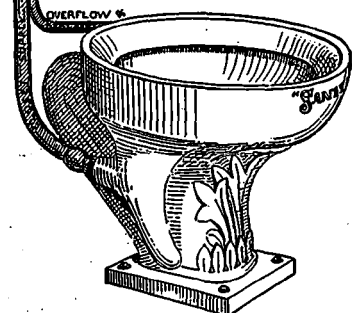
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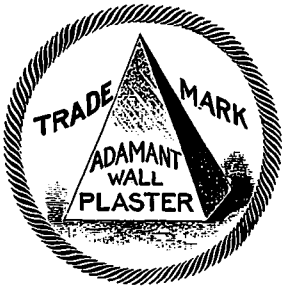
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VOL. III.—No. XI.

TORONTO AND MONTREAL, CANADA, NOVEMBER, 1890.

(PRICE 20 CENTS
\$2.00 PER YEAR.)

—THE— CANADIAN ARCHITECT AND BUILDER,

A Monthly Journal of Modern Constructive Methods,

(With a Weekly Intermediate Edition—The CANADIAN CONTRACT RECORD),

PUBLISHED ON THE THIRD SATURDAY IN EACH MONTH IN THE INTEREST OF ARCHITECTS, CIVIL AND SANITARY ENGINEERS, PLUMBERS, DECORATORS, BUILDERS, CONTRACTORS, AND MANUFACTURERS OF AND DEALERS IN BUILDING MATERIALS AND APPLIANCES.

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SUBSCRIPTIONS.

The CANADIAN ARCHITECT AND BUILDER will be mailed to any address in Canada or the United States for \$2.00 per year. The price to subscribers in foreign countries is \$2.50. Subscriptions are payable in advance. The paper will be discontinued at expiration of term paid for, if so stipulated by the subscriber; but where no such understanding exists, it will be continued until instructions to discontinue are received and all arrears paid.

ADVERTISEMENTS.

Prices for advertising sent promptly on application. Orders for advertising should reach the office of publication not later than the 15th day of the month, and changes of advertisements not later than the 5th day of the month.

EDITORS' ANNOUCEMENTS.

Contributions of technical value to the persons in whose interests this journal is published, are cordially invited. Subscribers are also requested to forward newspaper clippings or written items of interest from their respective localities.

The "Canadian Architect and Builder" is the official paper of the Architectural Associations of Ontario and Quebec.

The publisher desires to ensure the regular and prompt delivery of this Journal to every subscriber, and requests that any cause of complaint in this particular be reported at once to the office of publication. Subscribers who may change their address should also give prompt notice of same, and in doing so, should give both the old and new address.

MUCH has been done of late in the direction of improving the roadways and sidewalks of Toronto, much more still remains to be done. Nowhere does improvement seem to be more conspicuously necessary than in Queen's Avenue. For many years an old cement walk, full of great cracks and holes, the result of the action of frost, has been allowed to remain on this prominent thoroughfare, as a mark of discredit to the city. It is to be hoped another summer will not be allowed to pass without seeing the roadway asphalted and the old walk in question replaced by something durable in quality and respectable in appearance.

WE have more than once heard the complaint from Canadian manufacturers that some Canadian architects systematically specify American in preference to Canadian and English goods, and that this is done even in instances where it would be impossible to show that the article produced at home was in any degree inferior to that imported from the United States. If the facts are correctly stated, we think the complaint of manufacturers with large interests at stake in the country, is well founded. It is absurdly inconsistent for any Canadian architect to complain of the injustice of the conduct of those who, passing by home talent, entrust their architectural work to foreigners, so long as he pursues the same unpatriotic policy with regard to the purchase of the materials entering into his buildings. It is a pleasure to be told that there are architects in Canada who

invariably give the preference to home productions. Let us hope that their example will be copied by those who in the past may have pursued a less commendable policy.

ABOUT 140 architects have registered under the Ontario Architects' Act, largely exceeding the expectations of the Council. As usual, Mr. Townsend, the Registrar, was kept busy during the last hours of the final day (Nov 5). Human nature is the same all the world over, and procrastination is the bane of architects as well as other people. While three months were allowed in which to observe this simple act, the majority did not register till within the last week or two of the limit. One man was so careless, that his more business-like partner had to rush down at the eleventh hour and do the deed for him. And now will come the examination of candidates who were caught without oil in their lamps. We presume the standard will be gradually raised so that in the course of a few years it will be impossible for any but competent and thoroughly trained men to enter the ranks of the profession—a "consummation devoutly to be wished." It is to be hoped that long before that time the Legislature will have so amended the statute, that no man may assume the simple title "architect" who has not entered the ranks of the profession in the accredited manner.

SEVERAL architects in giving expression to their views at the inaugural meeting of the Quebec Association, touched upon the important subject of the proper training of architectural students. It is an admitted fact that the amount of time which an architect in active practice can give to the instruction of young men employed as students in his office, is altogether inadequate to their requirements. Some means must therefore be found to supplement to a very considerable extent the knowledge which is at present obtainable from a term spent in an architect's office. Let us hope that in the near future an opportunity will be afforded the young men of the Province of Quebec to study architecture at McGill University. In the meantime, the interests of the students might be materially helped by the organization in the cities of Montreal and Quebec of Architectural Sketch Clubs, on the basis of the one existing in Toronto. Such an organization would open the way for architects to impart instruction to the students collectively, and at a slight expenditure of time. The meeting of the students from the various offices once or twice a month to compare notes and measure skill, would soon have its effect in a deepened interest in their work, as well as in another and no less important direction, the formation of friendships which would last throughout future years, and tend to dissipate the spirit of estrangement and unfriendly criticism which has marked to too great an extent the dealings of architects one with the other in the past.

THE need of improved building regulations and of proper and intelligent inspection is being constantly brought to the notice of architects. A case in point has occurred not more than a mile from the City Hall in Toronto. The work is being done under the supervision of "a practical man," so-called. A wall about 35 feet high supporting three floors and a roof was

carried on iron girders which in turn derived their support from iron columns resting on stone piers about 2½ feet square. The face of these piers coincided with the face of the wall above, bringing the whole weight on their outer edge. To make matters worse, the columns were about ten inches too short, the deficiency being made up by cubes of stone no larger than the base of the columns, about ten to twelve inches. The weight had depressed the cap-stones covering the piers till they were quite 1½" out of level, and the lapse of a few hours would probably have seen the sliding off or tilting of the small base-stones, the collapse of the wall and possible loss of life, a large number of workmen being employed on the building at the time. Immediate measures were taken to prevent a catastrophe. A continuation of the same wall was carried upon an old one-storey erection, the wall of which was cut by a doorway about nine feet wide and three windows of ordinary width. The door was at one end of the building, having but a 14 inch pier at the outer end and an 18 inch pier at the other side. The piers between the windows were about 2½ feet wide, the thickness being a brick and a half. One of the smaller piers had begun to shatter, and only prompt measures prevented a probable disaster.

HAS it ever occurred to an architect to contrast his and his clients' relations with the relations that subsist between the lawyer and his client, or with those of the physician and his patient? A lawyer's client, as a rule, submits implicitly to the judgment of his professional adviser, while a sick man will not think of hiding the merest symptom when he asks the advice of his physician, knowing full well that he cannot be intelligently prescribed for unless he gives the doctor his fullest confidence. Frequently the man or woman about to build seems to have the impression that their architect is possessed of the spirit of divination, an impression that is liable to be rudely knocked on the head about the time the stairs are in a sufficiently forward condition for the man and his wife to prowl around, and pick and tear limb from limb (so to speak) the unfortunate and absent architect. The architect will probably have the scene depicted to him on his next visit by a grinning foreman who, if inclined to be spiteful, will add little variations of his own concocting. But seriously, architects are inclined to take too many things for granted. The only safe rule is to discuss the minutest matters of requirement, and to put all decisions in writing for future reference or confirmation—then such remarks of the client as "I understood I was to have such and such a thing," can be met by confronting him with the record. It would also be a wise precaution to have the matter of the ownership of the plans understood from the outset, as well as the percentage to be charged. If the architect has a delicacy about mentioning such matters, it is an easy matter to have a condensed tariff printed, containing also the accepted professional practice, and which could be either handed to the client or sent to him in the course of the earlier correspondence. Many a law suit, lost time and temper, would be avoided by careful observance of these points.

WE have little faith in the result of the efforts which are being made in Toronto and Montreal to substitute day labor for the contract system in the construction of public works. The experience of leading American cities, as set forth under the heading, "Contract vs. Day Labor" in the present number, is on the whole strongly in favor of the time honored system of inviting competition amongst contractors for the performance of such work. It is contrary to reason to assume that it can be done cheaper by day labor than by contract. The contractor whose capital is at stake in his undertakings is acting under an incentive to see the work expeditiously performed, which is entirely lacking in the case of civic employees, who know that their remuneration will be the same whether they exert themselves much or little. As to the quality of the work, the city has the power by means of properly drawn specifications, competent and honest inspection, and a sufficient forfeit to be required from the contractor for non-fulfilment of contract, to secure for the ratepayers under the contract system the best as well as the cheapest service. The unsatisfactory results of the day labor system appear to be already making themselves felt in the city of Montreal,

where a deputation of property owners recently waited on the Council and asked that the assessment made upon them for a certain drain built by day's work be reduced to the same figure as if it had all been done by contract. They alleged that the day's work had been more expensive than necessary in consequence of the work not being properly done. It is not difficult to understand the favor which is accorded to the day labor system by many of the aldermen who are naturally desirous of making themselves "solid" with the "labor vote" in view of the near approach of election day. It is a significant fact, however, that the gentleman who for many years was chairman of the Board of Works, of Toronto, and was himself formerly a contractor, recognizes that the interests of the citizens would be better served by the contract system. Such an opinion, coming as the result of long practical experience from a gentleman whose integrity is beyond question, and supported by the experience of the Engineers of the leading cities across the line, leaves little room to doubt the wisdom of a return to the system of executing public works by contract. Concerning the purchase of materials and supplies, we believe every argument is in favor of doing so by public tender as opposed to placing such an immense patronage in the hands of heads of departments.

THE Twenty-Fourth Convention of the American Institute of Architects held its sessions in Washington, D. C., Oct. 22 to 24, inclusive. The discussions were interesting and animated, while the utmost good-fellowship prevailed. Between 90 and 100 members were present. According to the roll call, it appears as though four or five of the visitors included their wives as members, though there is no record of the ladies having spoken or voted. The President, Mr. R. M. Hunt, was unfortunately absent through illness, and his address was read by proxy. It was a carefully prepared paper, and ought to be read by all members of the profession. Mr. L. C. Sullivan made a peculiar report for the committee on a code of ethics in which he declined to submit a definite code, alleging as a reason that the elements of the Institute were of rather a mixed character at present, partly owing to the absorption of the Western Association, urging, however, that the topic be kept constantly in mind. Perhaps the most important report was that of a committee on Clerk of Works. The three points enunciated deserve to be put strongly before the public, and the legal profession particularly, viz.: First, that an architect offers and is paid for only a certain limited kind of superintendence; second, that it is to the interest of the employer in many cases to pay for constant detailed superintendence; third, that the architect is in no sense a contractor, nor is he responsible for the contractor's misdoings, and that the commissions usually paid would be utterly insufficient for any such services or responsibilities even if they were desirable. The committee further recommends that in order to keep this matter constantly before the attention of clients, a clause be inserted in the schedule of fees giving the rates at which clerks of works would be supplied. In the matter of uniform contracts, the feeling of the convention seemed to be in favor of a further trial of the present form, which had proved on the whole satisfactory. A committee was appointed to confer with the Builders' Association, the Board of Underwriters and the Association of Building Inspectors, in reference to the method to be pursued in draughting a model building ordinance. We hope our own Association will take hold of the same problem and deal with it vigorously, as we are much behind the times in our regulations as to safe building. The President's address referred to the incorporation of the Institute of Architects of New South Wales, but strange to say, he loses sight of the fact that an organization nearer home, the Ontario Association has likewise been incorporated this year, and we believe is the first Association of the kind to be thus legalized.

The gentlemen appointed to judge the plans in the above competition, Messrs. E. E. Tacie and H. Staveley, Quebec, and Victor Roy, of Montreal, have reported in favor of the following awards: 1st prize, \$1,500, to Mr. Charest, Quebec; 2nd, \$1,000, to C. K. Porter & Son, Buffalo; 3rd, \$500, J. F. Peachy, Quebec.

OUR ILLUSTRATIONS.

PERSPECTIVE VIEW, NORTH ELEVATION AND PLANS OF HOUSE IN QUEEN'S PARK, TORONTO, FOR D. E. THOMSON, ESQ., Q.C.—LANGLEY & BURKE, ARCHITECTS.

THIS house is situated in what might be called "Architects' Row," the five or six residences in the locality being designed by as many different men. It is finished in hardwood throughout. The upper portion of the front is carried out in solid timber-work, filled in with brick.

ARCHITECTURAL OFFICES.

The accompanying cut is a drawing of the new offices of Messrs. Langley & Burke in the new Canada Life Association Building, recently erected on King Street west, Toronto. The offices occupy the west wing on the 5th or upper floor. The central portion of the public office is lighted by a large skylight. The drawing and references indicate the general arrangements. The dark-room is utilized, in addition to the blue-printing arrangements, for the storage of old building journals, which are referred to but seldom.

The vault is fitted up with the usual compartments for documents and papers, and with a press for drawings, which are kept flat in portfolios, labelled and catalogued for ready reference. Drawings and specifications in daily use are kept in drawers beneath the counters, where they are classified and obtainable at a moment's notice. A catalogue case is provided for the storage of the various trade catalogues, classified and of ready reference. No. 6 is a press for detail drawings which may be required for future reference, while the copies of those required in current work are kept in drawers in counter 16. The screen enclosing the lavatory and contractors' room is about 6 feet high. A

portion of the contractors' room is occupied by Mr. M. Lough, who attends to the surveying of sites, etc., in connection with the location of new buildings, as well as his own practice of valuator and P.L.S. The private offices are arranged for ready communication between the principals, and Mr. Burke's room has direct access to and overlooks the draughting office.

VILLA FOR MR. J. B. LALIME, ST. HYACINTHE, QUE.; MATERIALS, STONE, BRICK AND TERRA COTTA.—DAoust & GENDRON, ARCHITECTS, MONTREAL.

COLLINGWOOD MARKET—DESTROYED BY FIRE AUGUST 13TH, 1890.—GIBSON & SIMPSON, ARCHITECTS, TORONTO.

FIRE PREVENTION.

IN an essay read at a recent meeting of Engineers of Fire Departments at Detroit, a Mr. Goetz asks this pertinent question:

"Which is the best economy, to continue building as now done, and trust to the fire department; or put up better buildings that will not destroy each other, but will burn out individually?"

He then proceeds to give some statistics which are truly startling, and which go to show that it is not for lack of efficient fire departments, but that increased precautions and better buildings are the crying necessities of the day. No human power could control many of the fires of the last few years, fire-which would never have occurred had right methods of building been observed. Here are a few of his figures:

The Insurance Commissioner of Massachusetts estimates that nine go per cent. of all fires in that State were preventible. In New York the ratio of fires to buildings was in 1866 as 1 to 80, while in 1889 it had risen to 1 to 40, and while the number of buildings had increased 80 per cent., and the population 120 per cent., the outbreaks of fire increased 250 per cent.

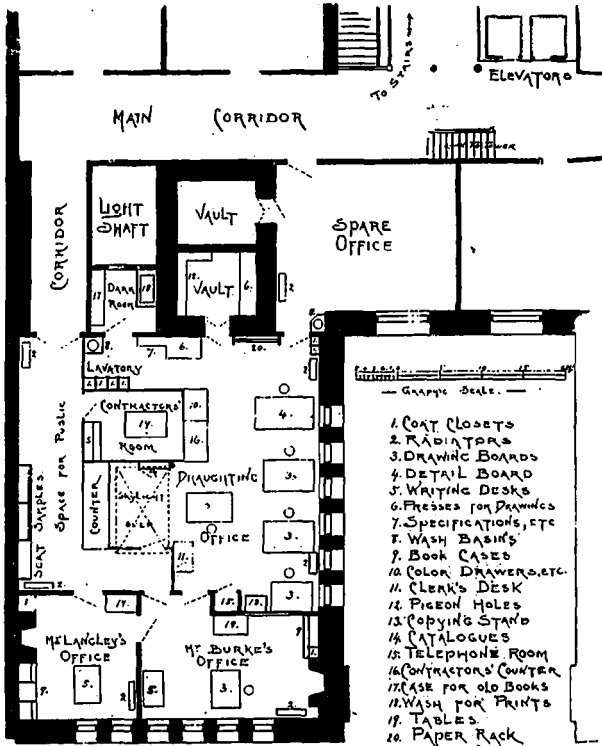
These instances may be taken as fairly representative of the state of things in all large cities on this side of the water, and indicate that the methods of building and the habits of the people are much more careless than those of the nations of the old world. In some cases this carelessness reaches almost to criminality, were it not that it must be put down to sheer ignorance.

It is high time that stringent building laws should be enacted in order to save us from ourselves, for we are in reality our own worst enemies.

What other people in the world could witness month after month, and read day after day in the public prints accounts of awful holocausts, where human beings were roasted by the score and where property valued at tens and hundreds of thousands of dollars was literally wiped out of existence, and take it all as a matter of course, forgetting the occurrence in a day or a week?

It has become a recognized fact, that even in the most thoroughly constructed fire resisting buildings, serious loss may occur in any section of it occupied by the usual office or store fittings, or where goods of an inflammable nature are stored. The chief reliance, where such precautions as automatic sprinklers cannot be used, is to so construct our buildings as to confine the fire to some particular section or building, and to this end should our building laws and methods of building be directed.

It is almost useless for wealthy corporations to lead the way by erecting fire-proof buildings if the municipalities do not follow it up by compelling those erecting buildings in the same neighborhood to do likewise; one fire-proof building in a block of



PUBLICATIONS.

The Canadian Manufacturer, Toronto, announces that its subscription price will hereafter be one dollar per year instead of two dollars as heretofore. The size of the pages and the number of them will remain unchanged, and it will be issued twice a month as it has been ever since its establishment in 1882.

inflammable structures' would be destroyed were a general conflagration to occur, while two or three blocks of fire-proof buildings would be practically indestructible. But even where fire-proof building is out of the question, a large measure of fire prevention may be secured by more careful and substantial methods of construction. The main features to be observed to secure this end are: 1st, walls so substantial and of such materials that the whole interior may be destroyed and yet leave them intact; and, 2nd, such a method of constructing posts, beams and joists and of anchoring the same to the walls, that the whole or portions may be destroyed or detached without affecting the stability of the rest of the structure. A large proportion of the extensive conflagrations now only too common would have been confined to one building had such precautions been observed.

Now is the time for our cities and large towns to make wise provisions for protection from disasters which will surely follow in the wake of faulty and poor construction. We can never do it better or to greater advantage than at present. The bulk of our business streets are yet in a formative condition, and occupied by buildings that are, comparatively speaking, only temporary erections which must within a decade or two give place to edifices in keeping with the march of progress.

Montreal and Toronto should lead the way in the preparation of proper building laws. The Architectural Associations of the two provinces would lay the country under lasting obligations could they be instrumental in bringing about this much needed reform.

There was a spasmodic and feeble attempt made by a Committee of the City Council of Toronto about a year ago to re-model the existing by-laws. The Committee were apparently paralyzed by the magnitude of their task. We think the matter should be placed in the hands of experts, else nothing creditable will result. The time has arrived in the history of large cities like Toronto when the duties of the aldermen should be simply legislative, leaving the execution of all practical matters to practical men.

A paid Commission should be appointed to do this work, and having ample time allowed to do it thoroughly. This Commission should be composed of experienced architects as being the class of men best posted in matters of safe building and advanced methods of construction. The Commission should have authority to secure legal advice on legal points. The advice and experience of the City Engineer and any other officials versed in local requirements should be placed at their disposal, and they should be empowered to obtain in the way they deem best the latest data and legislation extant on this all important subject.

QUERIES AND ANSWERS.

CHARLOTTETOWN, P. E. I., Nov. 5, 1890.

Editor CANADIAN ARCHITECT AND BUILDER.

DEAR SIR,—Would you kindly give me the addresses of firms in Toronto dealing in architects' supplies—that is, if there are any such. It is a wonder to me such persons don't advertise in the CANADIAN ARCHITECT AND BUILDER.

Yours truly,

C. B. CHAPPEL.

[Messrs. James Bain & Son, King St. East, Toronto, are dealers in architects' supplies. Doubtless there are others also of whom we have no knowledge.—EDITOR C. A. & B.]

1724 NOTRE DAME STREET,

MONTREAL, Oct. 29, 1890.

Editor CANADIAN ARCHITECT AND BUILDER.

DEAR SIR,—Would you kindly give me a list of the most useful books you would recommend an architectural student to study.

Yours truly,

STUDENT.

[Gwilt's "Encyclopaedia of Architecture"; T. M. Clark's "Building Superintendence"; Ferguson's "History of Architecture"; Viollet de Duc's "Discourses on Architecture"; Stevenson's "House Architecture"; Rickman's "Architectural Styles"; Paley's "Gothic Mouldings." Most of these works may be obtained by corresponding with Mr. Thos. Henry, book agent, McGill St., Toronto.—EDITOR C. A. & B.]

CONTRACT VS. DAY LABOR.

MR. Jennings, the newly installed City Engineer of Toronto, has inaugurated the system of constructing public works by day labor under the supervision of the Department of Works, of which he is the head, instead of by contract, as was the practice formerly. It is claimed on behalf of the new system that better results are obtained at less cost in comparison with the practice of letting the work by public competition to contractors.

With the object of gaining information on this important subject, the editor of the CANADIAN ARCHITECT AND BUILDER recently addressed to the city engineers of a number of the principal American cities, the following letter of enquiry:

DEAR SIR,—I would feel grateful for any information which you may be kind enough to furnish me with on the following points:

1. Is the construction of public works, such as sewers and pavements, in your city, performed by day labor under your direction or by contract?
2. Have you given both methods a fair trial?
3. Which method do you consider to be the most satisfactory in the interests of the citizens, and on what do you base your opinion?
4. In the purchase of supplies, is it customary in your city to advertise for tenders for the same, or are the heads of departments authorized to purchase in whatever way they think best, without tenders being asked? Which system would you consider the best?

The replies to these enquiries are as follows:

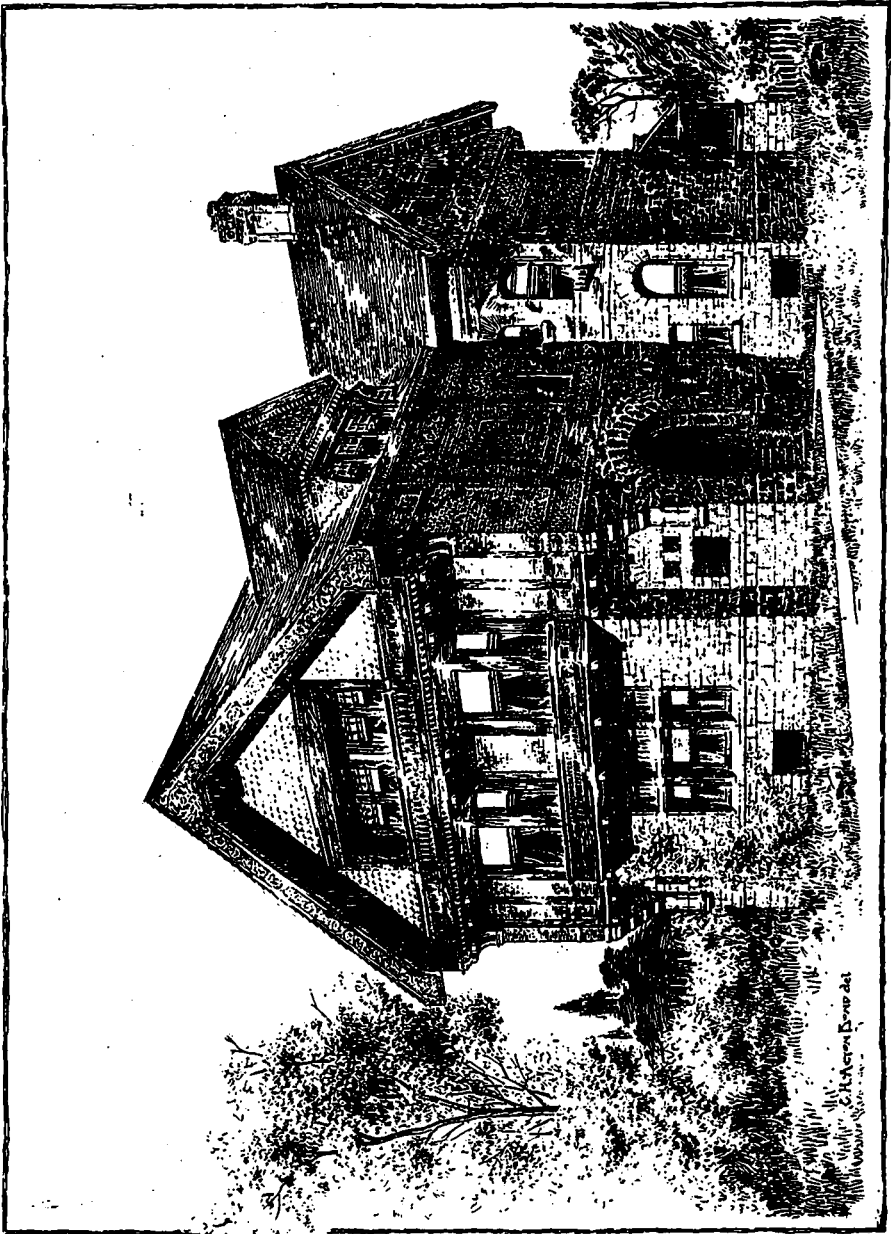
- From Oscar H. Peacock, City Surveyor, Rochester, N. Y. —
1. By contract, under direction of Executive Board and myself.
 2. Yes. 3. By contract; more work can be done for less money.
 4. Heads of departments purchase. There are cases where a purchasing agent could make better terms, especially where large quantities of any article are required. But as changes are constantly being made in all kinds of manufactured articles, the agent is liable to get overstocked with materials that will remain on his hands. Heads of departments know their needs better than any one else, and ordinarily can buy as close as any one else.

From O. H. Cheney, Acting City Engineer, Chicago:—In this city sewers and paving is done by contract. We have tried doing the work by day's work, and have found that it costs at least 10% more. I find by experience that the city pays higher wages and gets less work out of the men than contractors. Some are employed more for their usefulness at the polls on election day than for hard work. Let your work by contract, place competent and trustworthy men in charge as inspectors, and you will save money for the taxpayers. In purchasing supplies, anything that costs more than \$500, we advertise for bids and award to the lowest bidder. We employ a purchasing agent who shops around and makes the best bargain he can for articles costing less than \$500. Get an honest man for purchasing agent, and follow this rule and be happy.

From S. L. Sweedley, Chief Engineer and Surveyor, Philadelphia:—1. By contract. 2. We have never performed the works you mention by day labor. 3. Our method consists in advertising and giving out to the lowest bidder by contract a specified amount of work to be executed with the liability of the city fixed. With very thorough inspection I believe this may be entirely satisfactory. Not having tried both methods mentioned, I cannot express an opinion from practice. 4. Materials and labor are not purchased separately.

From H. D. Sudden, City Engineer, Detroit, Mich.:—1. The construction of all public work is let by contract, except catch basins. 2. The other plan has never been given a trial. 3. I have no doubt that if improvements were made by day labor, better work would be secured, provided political influence did not intervene. I also think that the work would be more expensive than under the contract system. 4. In the matter of supplies, the same system prevails generally, viz., the contract system. The Board of Public Works have power under the charter to do work or purchase supplies up to the amount of \$200 without advertising for bids. I consider the contract system the best under the last head.

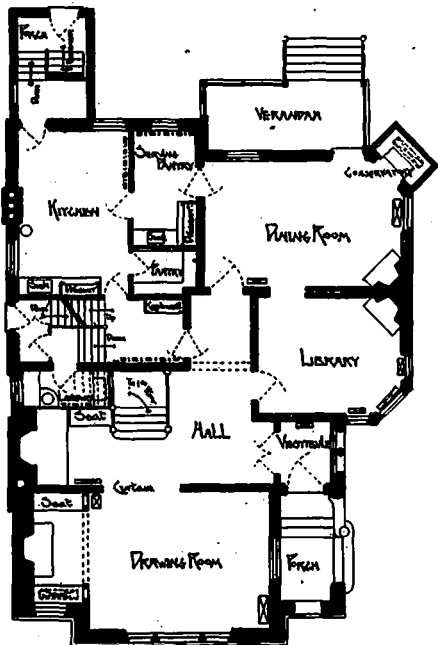
From Mr. G. Mann, City Engineer, Buffalo, N. Y.:—1. By contract. 2. No; everything has been by contract. 3. Through an efficient Board is in my judgment much the best way. 4. We advertise for everything, excepting small purchases for office use.



PERSPECTIVE VIEW.

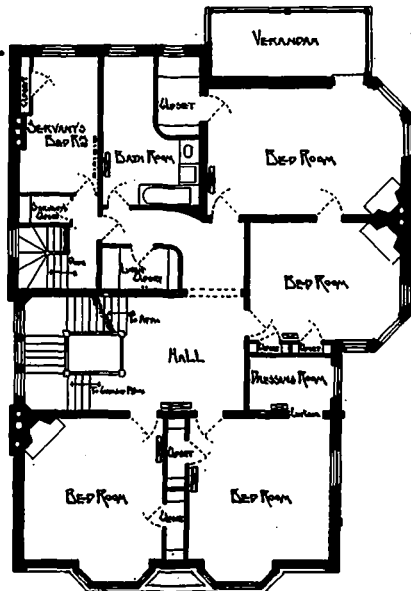


NORTH ELEVATION



GROUND FLOOR

Scale 1" = 8 feet



FIRST FLOOR

TORONTO ARCHITECTURAL SKETCH CLUB.

ON Tuesday evening, Oct. 28th, there was a large gathering at the Club rooms, nearly forty members being present, when a paper on "Stained Glass as a Decorative Art" was given by Mr. Sam. Jones. His remarks proved of much interest to those present, and after some discussion thereon a vote of thanks was tendered the lecturer for the evident trouble he had taken in preparing the paper.

The competitive schemes for the decoration of the Club rooms were on exhibition at this meeting, and attracted much attention from the members. Mr. J. A. Radford was awarded both 1st and 2nd places by Mr. Darling, the critic, who, however, reserved his criticism till a later date. It is the intention of the Committee to carry out the prize scheme if found compatible with the state of finances.

A successful meeting was held on Tuesday, Nov. 11th. Mr. Edmund Burke gave another one of his practical papers. The subject this time was "Slow-burning Construction," and with the experience the lecturer has had in this method of building, he was able to make it very instructive to the members. An animated discussion followed, in which nearly all present took part. Mr. Burke again received a hearty vote of thanks from the Club.

Before the lecture, the President, Mr. S. G. Curry, spoke of the importance of the members coming forward in sufficient numbers to ensure the success of the various classes which have been proposed. Classes for water color, drawing from the antique, mathematics and construction, the committee have under consideration already.

At the next meeting, Tuesday, Nov. 25th, Mr. R. W. Gambier-Bousfield will give a paper on "Mouldings" which he hopes to make not only explicit to the younger members, but instructive to the seniors. The drawings for the postponed "Summer Cottage" competition will be on exhibition at this meeting.

The Club is still increasing its membership, six new names having been added to the list this month. A visit to the Club at its comfortable quarters will repay anyone at all interested in its work and aims.

GOOD PLANNING.*

GOOD planning does not mean simply the disposition of the rooms and approaches on a horizontal plane; their vertical disposition and relative levels are of quite as much moment. Good planning means the utilization of every square yard that your building covers, without waste. And this applies not only to trade buildings in a crowded city, but also to public buildings, when the architect has ample elbow room. A good plan is always distinguished by a certain simplicity and ease. The better the plan, the more obvious it will seem that the architect's arrangements are those that would have commended themselves to any one. In planning, as in other arts, the greatest art is the concealment of it; that is to say, it should be like Nature, that never exhibits conscious effort.

Not only is good planning apparently effortless, it is more; it is the foundation of picturesqueness. There is really very few cases where a symmetrical arrangement is the one best suited to the requirements of a building, but where it is, then adopt it. Buildings deliberately planned for picturesqueness are toys, or constructed paintings, whereas a picturesqueness that flows naturally out of the plan is a never-ending joy. It may be that a plan on the face of it may seem to be devoid of picturesque elements, but the vertical planning may be made to secure a pleasing and broken outline.

Though the plan is the foundation of a design, yet when it is settled in its various features, the plans of the various floors, the sections, and the elevations should grow together as an organic whole.

Architectural design is like a game of chess, the man who sees the greatest number of moves in advance is the better player or planner. After certain preliminary meditations on a blank sheet of drawing-paper and a few crude trials, the idea of the building

begins to take shape, and when that and the main features are grasped, the details grow with astonishing rapidity.

The conception of the building then takes concrete form, and for those who have not time to work out all the parts in detail, it is quite possible to convey the ideas to others who have. To be able to perform this very important function of conveying to other minds the ideas in one's own, it is necessary, I need hardly say, to have sufficient knowledge to be able to do all the work without aid, if necessary. I find myself that it is possible to settle every important point of a plan, even to very accurate dimensions, with a comparatively few leading lines; and to know what work it is essential for the principal to do himself and what to depute to others is a very important acquirement in these times of railroad speed. As, I suppose, every one has found out for himself who has practiced design that there are times when a plan obstinately refuses to yield to any analytical power mind may be able to bring to bear upon it at the time. Some problems seem absolutely insoluble. The only remedy in such cases, I find, is to sleep upon it, and then the solution often presents itself voluntarily and without effort, but I have known a bad case to last as long as a week.

It has been said that "to him who can wait, all things are possible." And this seems partly applicable to planning; the misfortune of it is, that often we cannot wait, and in such cases something inferior has to be put up with for the time being.

Planning is a creation, and governed by geometrical possibilities. The man who has the most invention and can carry out combinations of form with mental readiness, who, when met with difficulties can, by ingenious arrangements, overcome them, who has that grasp of the conditions of the problem and can fit all the parts together in such a way that administration can be carried on with the greatest economy of labor, who gets the best possible light for each apartment and from the right direction according to its use, who so arranges his building that full advantage is taken of the aspect, and who, considering throughout that the object of a building is use, has full thought for the health and comfort of the occupants, that man is the ideal planner. But to carry out such an ideal demands an immense amount of varied knowledge, architectural and physical. He must in the first place have studied and be familiar with the methods of ancient practice and the best methods of contemporary architects.

He must understand the physical principles upon which modern systems of drainage and ventilation are founded, be familiar with mechanical ideas and ready in the application thereof, and when all these attainments are embodied in one mind, the foundation of a good architect is made. But why the foundation only? Does it not seem that in these multitudinous acquirements we have the whole architect, body and soul? Body certainly, but not exactly soul. In fact it would be impossible to make a good plan, architecturally speaking, without possessing something not included in this list of qualities. I doubt indeed if a well-balanced plan could be produced by any one not possessed of considerable artistic susceptibility. The artistic, the poetic must be added, the planner must have a ready conception of the possibilities of his construction from an architectural point of view, if he is to work out a satisfactory *ensemble* which will prove a lasting joy to future generations.

The death is announced near Kingston, Ont., of Mr. R. Sellers, at the extremely advanced age of 99 years. Mr. Sellers was a Canadian, having been born at Kingston in 1797. He filled for some time the position of superintendent of public works in that city, and late superintendent of the building of the Quebec Cathedral and Fort Henry.

Mr. St. George, the efficient City Surveyor of Montreal, is taking out patents for a socket joint designed to bind together a new sectional vitrified clay pipe which is intended to take the place of brick for sewers of large diameter. The flow of sewage is said to be very much accelerated by the use of this pipe, while the leakage is reduced to the minimum.

It is a pleasure to be informed that the St. Johns Drain Pipe Company of St. Johns, Que., have had a very promising correspondence and many requests for agencies from all parts of the Dominion in response to their advertisement calling the attention of architects and builders to the Hansen patent chimney toppings of which they are the manufacturers for Canada. The article is a good one, and therefore deserving of the success which it seems destined to achieve.

*Address by President T. Millard Reade before the Liverpool Architectural Society.

SOME OF THE OBJECTS OF AN ARCHITECTURAL SKETCH CLUB.*

By JOHN SPENCER.

IT is not our intention to name all the objects of such a club; we do not even claim that all those respecting which some remarks will be made, are principal ones.

The objects of a club are many; those of an architectural sketch club are as many sided as are the study and practice of architecture. It may be proper to state that the term "club" denotes a gathering together of individuals for mutual profit and social intercourse. Let us look at the latter for a moment or two:

Architectural draughtsmen and designers, from the nature of their calling, have few opportunities for meeting together and forming friendships, except in the case of those who are working together in the same office, unless it be through the agency of a club. There they ought to be able to meet together, discuss among themselves such objects as may interest them in their daily work; talk over some of the difficulties they have to contend with in design, in construction, in business affairs, and seek advice and counsel from each other.

It is unnecessary to designate the means that may be taken to further social intercourse, as the tendency of all clubs is, perhaps, too much in that direction, further than to advise that it is good sometimes to gather together and relieve the routine of business by indulging in music, in all its branches, and to relax the mind by games of skill in which "mind will sharpen mind."

One great object at which this and other kindred clubs should aim, is to teach its members the value of architecture as a study. In this respect it is as wide and as deep as law or medicine; as many sided as divinity; as entertaining as the productions of the best writers of fiction, and as comprehensive as the history of the world, because the history of architecture is also the history of the world, from a social and religious standpoint.

The progress of architecture has been co-equal with the progress of the nations of the world; as they have advanced, architectural skill has advanced; as they have declined, the monuments of architecture have also declined; because these statements are truisms, we are able in some measure to understand and to value the skill and energy of the natives who inhabited the banks of the Euphrates, the Nile, and the countries of Southern Europe.

It may be considered by some unnecessary for a practical architect to be acquainted with the history of his profession, but we venture to say that no man can excel as a designer who is not a master of the various styles of ancient and mediæval architecture. We do not say that he must design in one style, and in that only; or that he must copy the masterpieces of ancient art and skill; but if he intends for instance, to design a gothic church, and to design it in the style prevailing in one period, he ought to know the difference between the detail of the twelfth century and that of the fourteenth; how can he do this unless he has made a study of the history of architecture? In a new country like this it is impossible to pursue this study from existing examples. What is good, among its works, is the production of men who have made a study of architecture, and of some who have studied it from the monumental buildings of the old world; from these buildings (their age being known) the detail of one period can be distinguished from that of another period. To such an extent is the history of nations bound up with the history of architecture, that it is now difficult to distinguish between the direct influence of the one upon the other, and the reflex influence of architecture upon nations.

In such a club as this, means should be taken to make amends for the want of ancient examples from which to study.

First—Books on architecture should be obtained; books dealing with Egyptian, Grecian and Roman architecture; books full of information and details taken from the best of existing examples; books dealing with gothic architecture in its many and diverse forms and styles; books such as were produced by

Welby Pugin, Billings, Brandon, Collins and many others. We urge this as an important part of an architectural education, because in too many cases it is neglected; one result of this neglect is seen in the low estimation that is placed, in this country, on gothic architecture, because much of what is called "gothic" is incongruous in style, bad in detail, and lacks the symmetry and beauty of European gothic.

Second—Modern architecture should be studied from the buildings around and accessible to us, with a view of determining, by comparison, what is desirable, useful and pleasing. The eye ought to be trained to take in proportion, and instinctively what is noble and ignoble. We venture to suggest that, from time to time, some portion of a finished building be selected, a competition entered into by the members of the club, for the best measured drawing of such a building, together with a free-hand sketch of same and a small prize awarded to the author of that which is considered to be the best; by such means as are now suggested, something will be done towards promoting the welfare of the club, and the mutual benefit of its members; something done in the way of stimulus.

Third—Attention ought to be paid, not only to form and beauty, but also to construction and the proper use of materials. In regard to materials, designs should be made to suit the materials that are obtainable. In a church, which professes to gothic, wood should never be used for tracery and mullions; if you want to design in the gothic style, and can not afford to use stone for tracery in your windows, rather choose an earlier and simpler style, and by grouping your windows, avoid the use of wood in places where it is contrary to the spirit of the style. Without a knowledge of construction, an architect is like a ship without a rudder; how can we promote this knowledge? Let us have friendly competitions, but not competitions in which we will be asked to produce for nothing buildings such as we are engaged in designing during office hours, and for which we expect to be paid; rather let them be of such a nature that they will incite us to activity because of the difference between the work in them and that of the office. It would not be amiss to have a competition for the best truss roof for a church, or for a building with a span of 50, 80 or 100 feet.

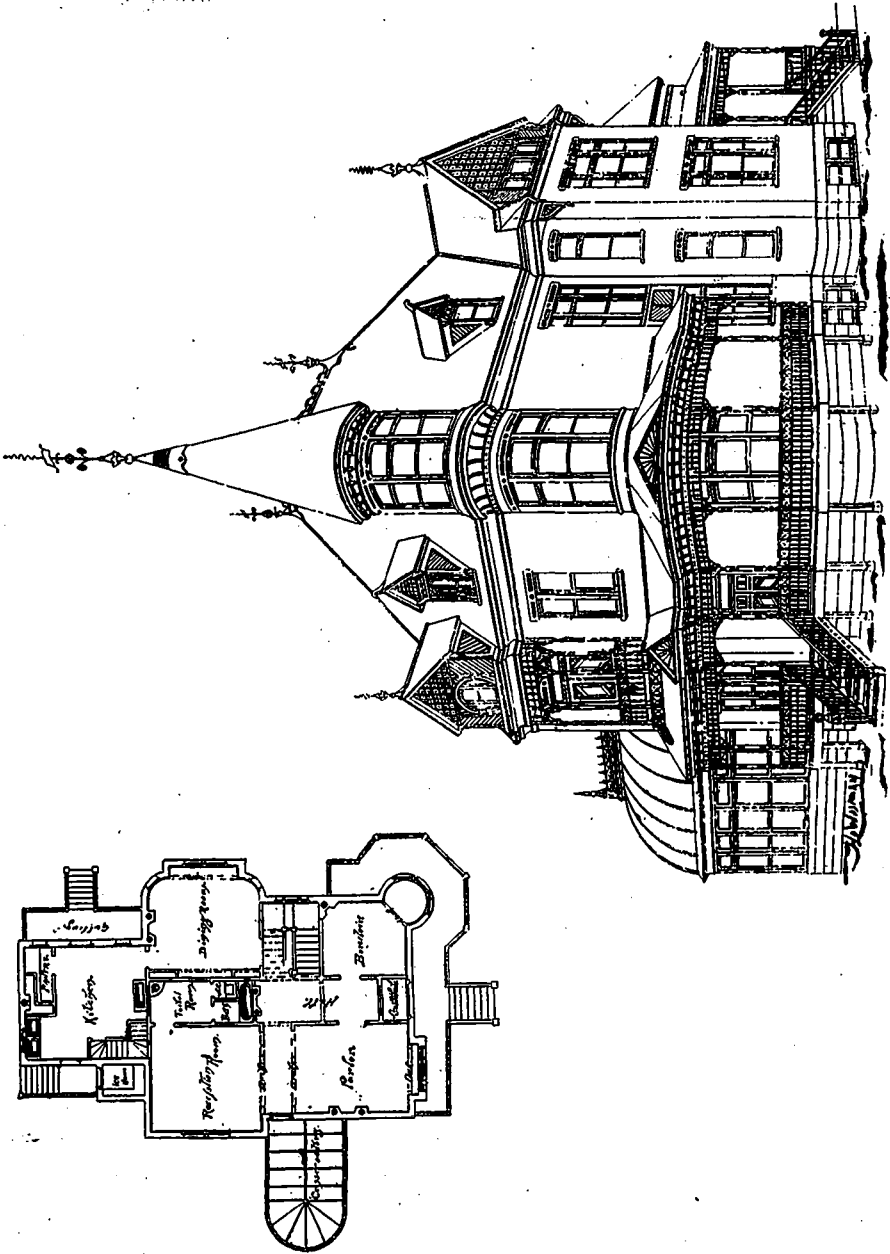
We must not forget that while Art is part of architecture, architecture is not painting or picture making. The man who can paint will find that he has an useful accomplishment, but we are not banded together in a painters' sketch club nor in a sculptors' club; their arts are in many ways useful to an architect, but are not fundamental to him. No man can be an architect who can not draw intelligently and correctly. Our aim should be to see that every member is proficient in this respect. In some towns in England art classes have been established in which architects take a leading part, under the fostering care of the South Kensington Art Department. This is possible in every town in England. We know not what means are within reach in American cities; but where such do not exist, or only partially exist, clubs like this should endeavor to do something to place within the reach of many the means of acquiring instruction in the principles of art, and especially art in its simpler forms.

We must not forget that while the architect desires to progress, he can only progress in the ratio of the taste of those for whom he caters; hence a love of that which is beautiful must be inculcated in the minds of those who are outside the profession. The aim and object of an architectural sketch club should therefore be: *First*, to develop the tastes and ideas of its members. *Second*, to promote outside of its ranks a love of that which is true and noble, by cultivating what Ruskin calls "the seven lamps of Sacrifice, Truth, Power, Beauty, Life, Obedience and Memory." We may not be able to establish a taste for mediæval buildings; not be able to point to old Baronial mansions; not be able to see the stately beauties of feudal castles; may not be able to point with the finger

"Where enthroned in adamantine state,
Proud of her bards, imperial Windsor sits;"

but we can see buildings which have been raised by courage and industry, buildings in which skill and art are embodied, and from these we must draw the inspiration which will lead us to

*Essay read at the annual meeting of the Denver Architectural Sketch Club.



VILLA AT ST. HYACINTHE, P.Q., FOR J. B. LALIME, ESQ.
MESSRS. DAoust & GENDRON, ARCHITECTS, MONTREAL

X

COLLINGWOOD MARKET
Destroyed by Fire Aug 13th 1890
Gibson & Simpson Architects
1890



achieve more than has been in the past. It is sometimes said that architecture has not progressed during the last three hundred years; it ought rather to be said that the opportunities for architectural display have not progressed. This is an utilitarian age: one in which quantity is, too often, placed before quality. Let us aim at working in the line which the age demands, and yet endeavor so to use our opportunities that permanent and lasting results will be seen, results which will make the non-professional man see the advantages of education and training, and hasten the recognition of the fact that none but trained and skilled architects should be allowed to design the homes and public buildings of a country so great as this is.

Let us not aim at that which is new for its own sake, remembering that "there is nothing new under the sun," but rather aim at producing that which we are certain will be pleasing and useful, although it may be something in a beaten and well-trodden path.

MONTREAL.

(Correspondence of the CANADIAN ARCHITECT AND BUILDER.)

THE principal interest amongst the architects of late here has been the proposed formation of the Province of Quebec Association of Architects. That meetings of the architects, if conducted in the proper spirit, will tend to elevate the profession there is not a doubt. It is to be hoped that our architects will not attempt too much, but will be content with the formation of a society resembling that of the Institute of British Architects, of England, and not try to create close corporation of architects for the Province of Quebec. Chairs of architecture in our colleges and schools of art should undoubtedly be encouraged, if we wish to raise the standard of the architectural profession in the Province of Quebec, for it is an admitted fact that no practicing architect has the time even had he the wish, to devote to the education of his pupils and attend to his own business.

BOARD OF TRADE BUILDING.

Rumor has it that the Board of Trade are about to call for competition plans for the erection of their proposed new building. It is said, but I can scarcely believe it, that the Board has decided to invite five American architects to compete, each of whom is to receive \$300 for the plans submitted and that a prize of \$300 is to be offered for the best three sets of plans submitted by Canada. The conditions are not published yet, so it is perhaps a little premature to comment too harshly until the conditions are made public, but surely the Canadian architects can at least hope for better treatment at the hands of a Canadian Board of Trade.

REAL ESTATE.

Real estate during the last month has been fairly active and the prospects of a good fall and winter business are encouraging. There were 151 transfers in the city proper and Cote St. Antoine during October, amounting to \$512,500, which is slightly less than the corresponding month of last year. A Toronto syndicate has purchased the Decarrie farm at Mohrland Junction and propose disposing of it in lots at once. Several solid brick houses have already been started by this syndicate on the adjoining property, and arrangements are in progress for drainage, water and gas. The money market has been rather tight, but lower rates of interest have assisted in making real estate investments popular.

The new "Feller Institute," at Grande Ligne, Que., of which Mr. Eric Mann, of this city is the architect, has just been completed and occupied at a cost of about \$27,000. The new centre wing is 68' front by 47' deep, entirely built of stone. The front is of Scotch coursed ashlar and cut stone dressings of a fine close blue limestone found within two miles of the buildings. The present side wing 85' long has been entirely remodelled, and the college fitted throughout with hot water heating by two of Warden King & Sons' largest boilers. Water has been led to the buildings from a reservoir about eight hundred yards off, through a 4" iron pipe, and has been found a complete success. The water rises by natural gravitation 6' over ground floor, thus supplying the basement and ground floor without pumping. The supply tanks for baths, washing, etc., is on upper flat, contains altogether 8,000 gallons, and is pumped up by a patent hot air self-acting pump in basement. Gas is also laid through the entire buildings, generated by a "gas machine" built in the grounds outside. The hall and class room floors are laid with No. 1 Georgian pitch pine, and the dining room is finished in clear pine battens, slightly stained and varnished. The same architect has also finished the extensive additions to the Methodist Church, Lacolle, Que., and a new Scotch church in Hemmingford.

VISIT FROM MEMBERS OF THE IRON AND STEEL INSTITUTE.

During the past month Montreal has had the pleasure of entertaining the members of the Iron and Steel Association of Great Britain and Germany. The city tendered them a banquet at the St. Lawrence Hall, and our Harbor Commissioners gave them a trip through the Lachine Canal and down the rapids, stopping for about two hours at Cnughnawaga, visiting the Indians and inspecting their handiwork, after which they inspected the improvements to our harbor at the foot of the current. Some people consider the money spent in entertaining our guests as useless extravagance, but it strikes me as one of the best investments the city has made during the year. Undoubtedly visits of such men as compose the Iron and Steel Institute do

immense good to the country at large. Let them see for themselves that our country is a prosperous one, and destined to play an important part in the commerce of the world. It will open their eyes to the fact that there is something else in Canada than snow and ice—scenes which our winter carnival has so largely advertised—that we can build railways, canals, bridges and factories, as well as ice palaces; that Canada is rich in minerals which only require development. It will give confidence to capitalists to invest their money in our enterprises, and promote emigration of the right sort, not the kind known as "assisted."

CANADIAN SOCIETY OF CIVIL ENGINEERS.

The usual fortnightly meeting of the above society was held at its chambers on St. Catherine street last Thursday, when there was a fair attendance, and an interesting paper on the errors or defects in levels was read by Prof. McLeod, of McGill University.

COLLAPSE OF A BUILDING.

A building on Vitre street in process of erection for D'Ouimet, collapsed on Thursday last and seriously injured two of the workmen. That more were not killed is miraculous. As far as I can learn it was caused by carelessness or ignorance on the part of a workman who commenced to demolish an overhanging chimney. He began his work at the bottom instead of at the top, thereby causing the whole chimney to fall bodily, breaking the beams and joists and throwing down the building.



THE ACCESSORIES OF ARCHITECTURE.

SCULPTURE.

GEORGE H. BLAGROVE.

AMONGST the purely ornamental accessories of architecture, we may surely assign the post of paramount importance to sculpture, including under that term all representations of natural forms, whether in high or low relief, or in detached groups or single figures. Were we to attempt a classification of such forms as may be represented in sculpture, it will readily be conceded that the most complex of natural organisms, being regarded as highest in the scale of development, ought to occupy the foremost rank. Thus we should naturally be led to assign the first place to the human figure, and successive subsidiary places to animal and vegetable organisms in order of priority. There are artificial forms, such as implements and weapons, which may be represented in sculpture, but the consideration of these may be reserved for the present. Starting with the assumption that the human figure is the highest form to be treated in sculpture, and that its application to architecture is therefore one of the first considerations in the art or science of ornamental design, it should strike us as somewhat strange that this subject has received so little attention from architects, not only in the present day, but in times past, or that those who have manifested exquisite taste in the proportions and decorations of buildings should have so frequently failed to appreciate the true relation between architecture and figure sculpture. This is a matter of no little importance to us in the present day, when architecture, discarding effects traditional, and flinging aside the trammels of precedent, is seeking to strike out an independent path of her own. If animated by the new spirit which has been infusing itself into our art, we should set ourselves to formulate new principles for our future guidance in the disposition and treatment of architectural accessories, our first enquiry would be, What can we learn from the past? and, having satisfied ourselves upon this score, we might, after a careful examination of the new conditions under which we have to work, trust to our own sense of architectural propriety not to lead us astray. In regard to sculpture, it may be inferred, on the principle that the greater includes the less, that when an architect has made up his mind as to the treatment and disposition of figure representations, he is not likely to fall into error in regard to subsidiary ornamentation. This may be true, but the converse by no means holds good, as already intimated.

The Greeks, who attained to the highest degree of excellence in the treatment of figure sculpture, committed grave errors in its application to architecture, though it may be said that they never erred in the arrangement of subsidiary ornament. The use of Caryatides has been condemned often enough, and modern architects are happily in no need of a warning against such a misapplication of the human form in sculpture. We may regard it as an accepted principle that no natural object should be represented in sculpture as performing any function which it could not fulfil if real. Thus, if the Caryatides had been living figures they could not have supported the loads placed upon them, and hence the incongruous effect resulting from their employment. The same principle in its application to foliated ornament will be considered further on. Perhaps it is not quite so obvious that the Greeks did wrong when they placed figure sculpture in the tympanum of a pediment. A little consideration, however, should convince us that this is so. Surely, if the place of honor in decoration is to be assigned to the human form, the framework should be adapted to the figure, and not the figure to the framework. This being conceded, it is decidedly wrong to crowd the tympanum of a pediment with figures, as at the Parthenon, so that those near the extremities of the raking cornices have to be reduced in scale, or placed in recumbent positions. Moreover, considering the usual height of

most pediments, it is clear that the best works of art cannot be viewed appreciatively from such distances, and that first-class sculpture ought to be placed nearer to the eye. The employment of any sculpture other than first-class is here assumed to be out of the question. We can better afford to dispense with all decorative accessories than to display the limits of our capabilities; and, perhaps, modern architecture might be improved if it were to be made more suggestive of reserve power. It is certain that multiplicity greatly detracts from the effectiveness of figure sculpture, however good it may be. Architecture gains in grandeur by a multiplicity of parts, within certain limits. This frequently necessitates exact repetitions of the same form, as, for example, in a colonnade. An observer is not wearied or perplexed by the contemplation of a row of columns all alike, because he does not feel called upon to examine each particular one. But in figure sculpture a repetition of the same form would be ridiculous, while a multiplicity of forms, all differing slightly, and each claiming special attention, would be tiresome in the extreme.

Figures in a pediment are generally too high to be properly seen, the same is true of figures which are perched upon the summit of a lofty entablature, as upon the arch of Constantine. The architects of the Renaissance sinned worse than the Romans in this respect when they placed human figures upon the highest parts of their buildings, where the Mediaevalists might have placed pinnacles, and sometimes even perched them upon the apex of a pediment. The figures upon St. Peter's at Rome and St. Paul's in London seem to be balancing themselves with some difficulty upon ridiculously narrow pedestals, as if they were anxiously awaiting the arrival of ladders by which to escape from their perilous positions. The disadvantages of placing figures at such heights should be obvious; yet the practice is often met with in the present day. Not only are the figures foreshortened, but the difficulty of providing them with suitable pedestals is practically insurmountable. If the pedestal be broad enough to convey the impression of safety and stability it will have the effect of cutting off a considerable portion of the figure, while if it be made narrow enough to intercept the view, the figure will appear to be in danger of falling. The disquieting impression of instability is greatly obviated when the figures have an attic storey behind them, instead of being marked off against the sky. Thus, apart from the question of height, the arrangement adopted upon the arch of Constantine is not inappropriate. But surely if the post of honor is to be reserved for figure sculpture, its proper situation is so near the eye that its beauties can be effectively seen without any distortion. It is strange that the Mediaevalists, whose representation of the figure were so inferior to those of the Greeks, should have displayed so much reverence for the human form that they took care to enshrine it within niches supported upon corbelled pedestals and overtopped with richly designed canopies. They rarely placed their sculpture too high to be adequately seen, apparently recognizing that the place of honor is not necessarily the highest part of a building, and that works of art which are intended to command special attention require to be framed and protected. The worst solecism in Gothic art consisted in placing a series of superimposed figures on each side of an arched doorway, as in certain foreign examples, the figures being so arranged as to follow the curves of the pointed arch, so that the upper ones leaned over and appeared in danger of falling. The Renaissance architects never did anything half so bad as this, while their tastefully designed pedimented niches were quite as satisfactory in their way as the crocketed canopies of the Gothic artists.

The architect should surely have a word to say as to the treatment of the figure sculpture which is to adorn his building. In these days of departmental emulsianship, when each artist is striving to excel in his own special branch of activity, there is some danger that the spirit of unity—which should pervade every great architectural work as a whole—may here and there fall into abeyance. If it is important that ornamental sculpture of an architectural character should be subordinated to figure sculpture, it is still more important that the figure sculpture, which is, after all, only a decorative accessory, should be so designed as to harmonize with the proportions of the building, besides assisting to express its purpose. It is evident that figures which are greater than life-size tend to dwarf a building, because an observer naturally supposes the figures to be smaller than they actually are, and gauges the adjacent details accordingly. The question for the architect to decide is, whether he wishes to impart an appearance of size to his building or to the statuary associated with it. If the former, the simplest plan is, if possible, to keep the figures down to life-size. This enables us to make the parts of our building larger than we could otherwise venture to do, supposing the figure sculpture to be sufficiently plentiful and evenly distributed to preserve the scale throughout. On the other hand, if it be desired to give an appearance of size to the figures, we may do so by subduing the sizes of the subsidiary parts of the building, always remembering that when figures are very much larger than life-size, they dwarf a building in a far less degree than when they are only a little larger. In the case of a small

building in connection with a colossal statue, let the doors, windows, and other parts be slightly reduced in scale, and both building and statue will gain immensely by it.

In considering the relation between figure sculpture and architectural ornament, we are naturally led to attempt the definition of some boundary between the two. There are instances of figure sculpture in friezes and in similar situations where it is so closely in connection with foliated ornament that both are only parts of the same design. The case of detached statuary is totally different; and we should guard against any decorative confusion between such figure sculpture and its architectural accessories. Suppose, for example, that we have a statue of a military hero standing upon a pedestal with an enemy's flag lying at his feet, the entire composition being sculptured from one block of marble. Everyone will agree that the pedestal should be so designed as to harmonize with the statue; and it might contain sculptured war trophies, or representations of battle scenes, in relief. But if the folds of the flag were allowed to droop over the surbase of the pedestal, it is here contended that the treatment would be wrong. The object of the sculptor should be, not to represent a man in the act of posing upon a pedestal, but to produce a representation which may be placed upon a pedestal, or which may have a pedestal attached to it. Upon a similar principle, it is maintained that sculptured ornament which is contained in a panel surrounded with a frame of mouldings should never be allowed to stray beyond its boundaries. Neither drapery nor foliage should be permitted to overlap the mouldings lying outside the design. Foliage may overlap mouldings, but only as an enrichment, which is a part of the same design with the mouldings themselves. Modern French architects are continually transgressing this rule, and although they can often do so with pleasing results, yet experience has shown that such licentious practices sooner or later bring about a reaction in favor of a more severe treatment. Some of the most tasteful of modern French designs for monumental sculpture are, in our opinion, spoli by naturalistic representations of climbing plants twined irregularly about the rigidly severe stone or marble courses of which they form an incongruous part. While referring to monumental sculpture, attention may be drawn to the very low standard of art which holds its ground in this country in connection with this branch of design. The art seems to be in the hands of men who, with few exceptions, can only gratify the uncultured taste of the general public, without attempting to elevate or improve it. It is greatly to be wished that architects would turn their attention more frequently to this department of their art.

Architectural sculptured ornament must necessarily take a lower rank than detached statuary or figure subjects executed in relief. Yet its design must necessarily be governed by similar principles. The tendency towards realism in foliated sculpture is a prelude either to decay or reaction. Conventionalism, in sculptured foliage, is far more essential than in figure sculpture, especially when, as is usually the case, symmetry has to be studied. The subject of foliated ornament is a large one, and the limits of our space preclude its being exhaustively treated here. There are, however, a few leading principles which may be briefly noticed as apparently gaining recognition amongst modern designers. One rule often observed now, though frequently neglected in the past, is to avoid placing foliated ornament at the external angle of a building, where it is held to detract from the apparent stability. This leads us to an observation regarding supporting members decorated with sculptured foliage. It has been stated, in reference to Caryatides, that no natural object should be represented in sculpture as performing functions which it could not fulfil in real. In applying this principle to sculptured foliage, we need not shrink from the conclusion that a sculptured leaf ought not to be represented as supporting a load which could not be sustained by a natural leaf. In foliated caps, trusses, or other supporting members, it is here maintained that the structural forms should not exist complete in solid stone, whether concealed by the foliage or not. Although the whole be carved from one block, yet the foliage should be, so to speak, applied, in so far as the structural forms beneath are not cut into in carving. This rule has often been infringed, but never, we think, with propriety. Undoubtedly, one of the chief difficulties in the external application of sculptured foliage to architecture consists in a right adjustment of scale in relation to the various parts and their situations. While it is essential to impart a robust character to the lower part of a building, the upper portions being treated with a lighter style of decoration, yet the lower part, being nearer to the eye, demands a greater multiplicity and refinement of details. To satisfy the eye of a close observer in the lower part of an edifice, without breaking up the breadth of effect at a distance; to make the upper portion appear lighter than the lower, while its ornamentation is in reality bolder—this is one of the most difficult problems which an architect is called upon to solve, and its difficulty is enhanced in the exceptionally lofty buildings which the increasing value of town sites makes it incumbent upon us to erect. Fortunately, there is no lack of artistic workmanship at command. We have men around us who seem fully equal to the task imposed upon them by the exacting conditions of modern work; and in spite of all that may be said in disparagement of the English architecture of today, we may look with confidence to a future that promises to make the Victorian age worthy to compare with any architectural epoch since the Reformation.—Specialities.

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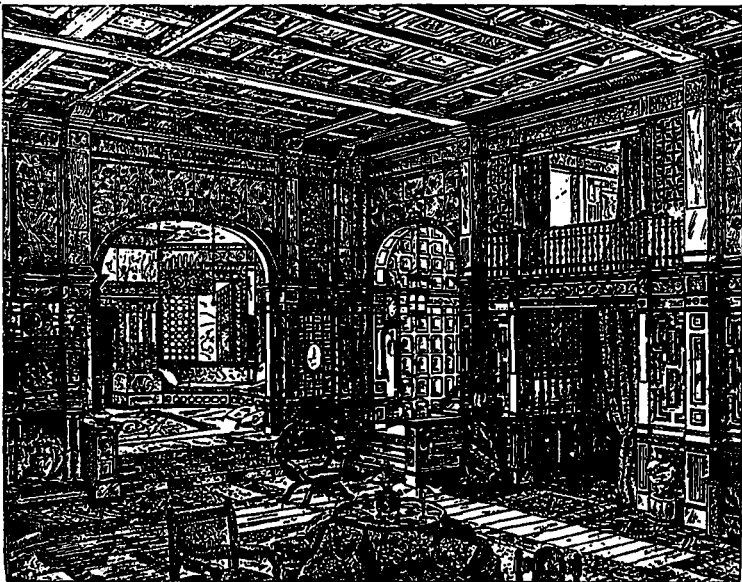
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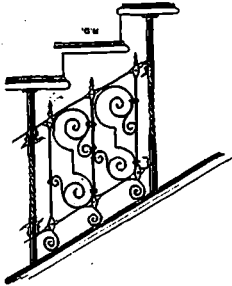
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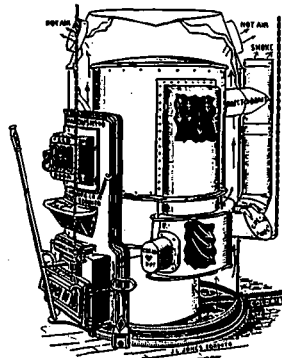
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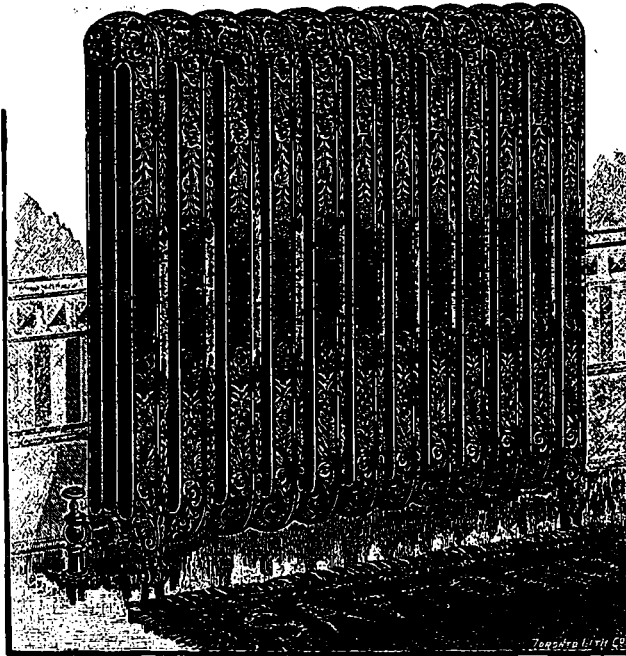
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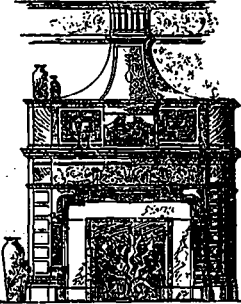
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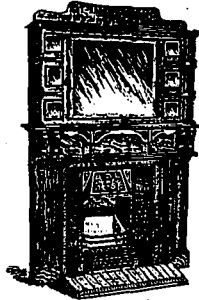
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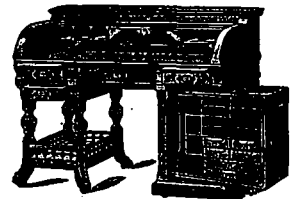
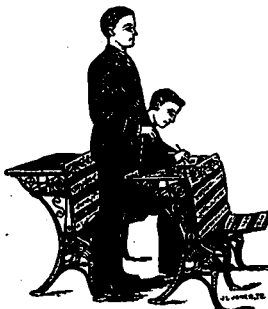
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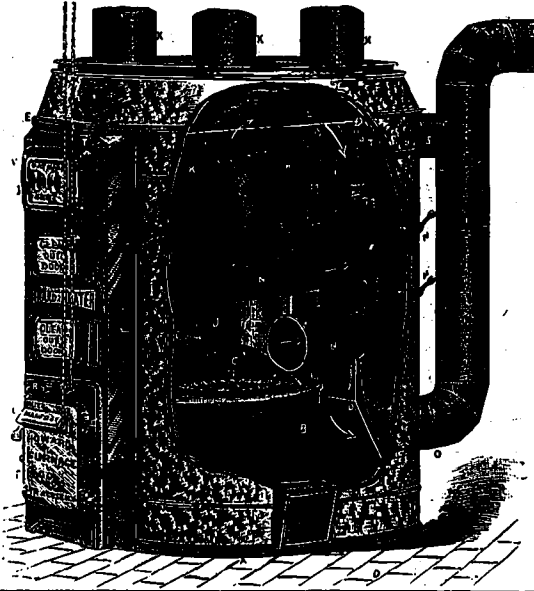
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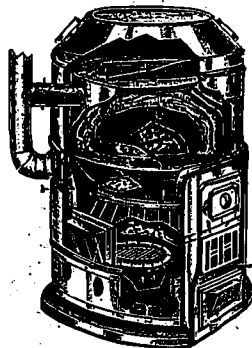
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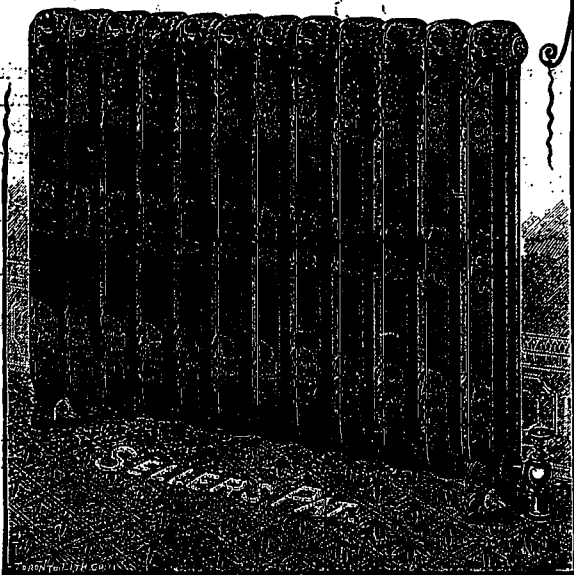
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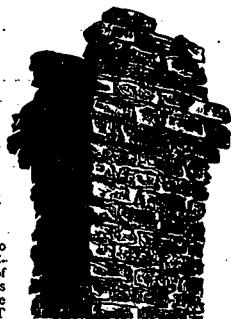
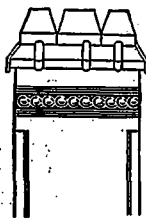
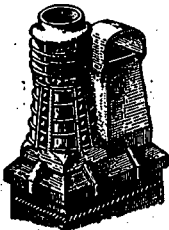
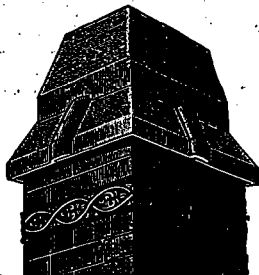
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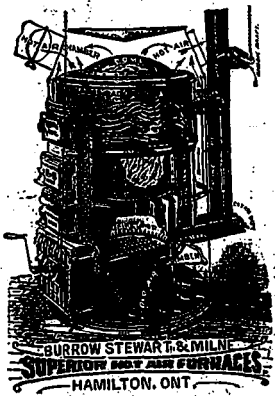
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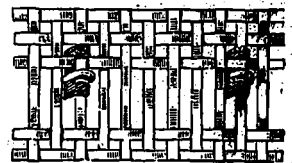
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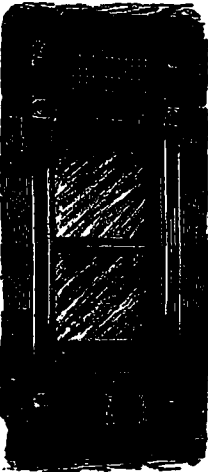
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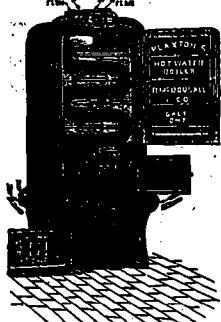
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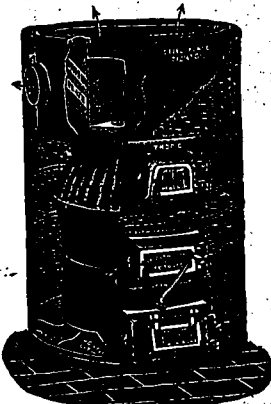
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