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PUBLISHED MONTHLY
EXAMPLES OF MODERN FRENCH HARDWARE.

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Art Department
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Concessionnaires pour Maison Fontaine.

Made by Maison Fontaine, Paris.
Villas All Concrete.

He that has a house to put's head in, has a good headpiece, remarks King Lear. That cottage you are going to build by the seashore or in the hills, that home for the summer months which must not cost more than seven thousand and surely comes to thirteen, what will you have it made of—wood or brick? half timber and brick or stone? or perhaps concrete and a self roof? Whichever you choose, there will be mistakes and regrets. Certain mournful recapitations will be in order concerning some things forgot, and other things duly considered but dropped through motives of economy. Let us reason a bit on these alternatives as to material.

The house of wood is the popular house in a country so favored with forest growth as ours. Especially the simple Colonial structure of the seaboard, with its clapboard or shingle sides, its severe line of shingled roof, sharply cut off at the eaves, harsh in the triangle of the gable, often heavy enough in its proportions, even when the point of the gable is hipped and snipped, and the slope of the roof is broken by a curb or gambrel; especially has this derivative from the less pretentious homes of the colonists been rising like the mushroom along the Atlantic coast. Its merits have been hitherto obvious—unpretentiousness, cheapness to build, cheapness to maintain. The shingles are left unpainted and unstained to take their natural weather tone, which occurs in two or three seasons.

Now true it is that untouched surfaces of shingle on roof and walls, of a bright day, have in shadow certain lovely tones for eyes that note such things with loving care, tones of mauve, of violet, of amethyst. And in direct light, seen nearby, they are finely silvery. But in the long run they have the defect of gloominess in color; the general impression is more than dull. A settlement largely composed of these cottages and small villas and old houses is somewhat mournful; all the creepers and flowers on and near them can do but little to cheer that gentle gloom. Localities where they abound stand much in need of other styles of wall and roof, other materials to give variety and color to the scene. It is true that as Bacon says, houses are to live in, not to look at. But Bacon was so fortunate as to have a wealth of charming old houses to consider and familiarity bred in him contempt; besides, he adds "therefore let use be preferred before uniformity except where both may be had." The fragile materials used by our village forefathers, their lack of wealth and numbers, have prevented in most parts of the United States the formation of old burgs and manors, which time has ripened into things of beauty. The present generation, having won to ideas of art beyond those of former days, is asking for houses that shall be good to look at as well as comfortable to live in.

That people are beginning to feel the dulness and gloom of the unpainted shingle cottage may be seen on Long
Island in such summer camps as East Hampton, Wainscott, Watermill and South Hampton. At East and South Hampton and on Shinnecock Hills are cottages and villages of larger size, embodying the plaster or stucco wall and the painted-shingie, the baked-clay or the cast-metal tile for the roof. Plastered and wire-lathed, and metal-tiled as to roof, is the Italian villa on Lake Georgica belonging to the painter Albert Herter. The villa on the hill to the east of East Hampton, belonging to Dr. Clarence C. Rice, like the former, from designs by Grosvenor Atterbury, has its fine big shingle roof painted red. The smaller dwellings, of Benjamin Richards in the village of East Hampton, and "Pink House," the home of Mr. Wiechmann at Wainscott, are plastered frame houses, which offer a happy variant from the mass of unpainted or dully painted dwellings. Yet the result is obtained simply enough by a cement or stucco skin applied to plaster-board or metallic lath.

So far as looks are concerned, the stucco—gray or pink or pale green in tone and grainy as to surface—is a distinct advantage. It presents a contrast less violent than wood to the surroundings. The house is less new-looking, less raw-looking, to begin with; compared with wood, it is less a box dropped somewhere which might be jacked up and rolled elsewhere as one often sees the old timber houses stalking along the roads. It seems rooted like a true growth to the earth. Owing to the old-world originals from which they have been studied, the architect has left reasonable wall spaces on which the eyes rest with an undefined but no less real sense of pleasure. As the ampelopsis, honeysuckle and climbing roses invest the lower parts, the house takes stronger root and seems to grow from the lawn or the sandy dune.

On the other hand, even when attempts are made in wooden houses to provide some resting places for the eyes, the material itself cannot fail to suggest that it is a surface of parts assembled, a combination of beams and boards and separate shingles. Unless there is some special beauty in such combination, as in furniture made artfully of different sorts of wood, and
HOUSE OF DR. RICE.

East Hampton, L. I.

Grosvenor Atterbury, Architect.
therefore interesting; the effect is chilling. Stucco or concrete differs from wood or brick or stone in that it brings unity into the wall, suggests restfulness and strength, massiveness and immovableness, as if the building of which it is the support were part of the landscape itself. Even in their abject ruins, deprived of their coverings of marbles and mosaics, the great walls of concrete of the imperial baths at Rome have a majestic that neither brick nor stone possesses. But if we add to these qualities the colors which the paintless cottages we speak of so conspicuously lack, it is clear that such buildings are very valuable, if it were only to leaven the lump; and, in fact, should be encouraged as a relief to the somberness of the townscape.

Why do we hail with satisfaction in Spain or Mexico, Italy or France, those gray or ivory white, yellowish, pink or pale green walls, so simple and uncostly, as they appear to us with their concomitants of vineyard and olive orchard? Is it not because of a faint suggestion of roofs and long, unrelieved walls of Oriental towns appeal to us through atavism, it may be. Who knows but this may explain our liking for such walls as much as do the more logical and immediate reasons of economy and practical worth?

That there are reasoned grounds for this liking is apparent. Beside a certain quality in the colors on stucco or concrete, a quality which cannot be obtained by unpainted or by stained or painted wood; beside the special claim of the shadows from deep eaves when they fall on broad, united, grainy surfaces, there are impressions of dura-
COURT OF THE VILLA OF MISS ANNE ARCHBOLD.

Bar Harbor, Me.
LIVING-ROOM IN THE VILLA OF MISS ANNE ARCHBOLD.

Bar Harbor, Me.
THE HOUSE OF J. WALLACE MORRELL.

Allenhurst, N. J.

Totten & Rogers, Architects.
bility, of security from fire, of impenet- 

trability by damp and like suggestions of a practical kind which may not be altogether true in the wall that has a plaster skin, but at any rate seems true. I venture to say that brick seems less durable, less serviceable in keeping out the cold of winter and the heat of sum- 

mer. As a matter of fact, a well-built, solid concrete wall, and even a thor- 

roughly finished stucco, should be less permeable to wind and moisture than one of uncovered brick. So that there is good practical reason for covering brick with stucco as a reinforcement and ceiling against the drive of the rain storm, however that fashion may be de- 

cried as lacking full sincerity in the aes- 
thetic sense. The town and country architecture of Europe and Mexico still uses the brick housewall clad in stucco, and molded to simulate great courses of stone—a sham, of course. But then, what is this villa architecture of frame house, metal lath and plaster skin but a sham also? It simulates your stone house, or your brick laced with stucco, or your solid wall of concrete. Is it not better to go frankly over to the last-named and build so that houses will remain, practically unchangeable, only gathering grace with age, gaining a fine patina, but subject to ruin neither by fire nor decay?

There is another reason beside the aethetic advantages for believing that henceforward our cottage and villa architecture will turn this way. Wood is getting dear—to put it mildly. Invincible optimism has “done for” our for- 

ests as it has for the buffalo—optimism or incurable devil-may-care, as you prefer! At the same time, the substitutes for wood are increasing in number and getting cheaper. More factories to fur- 
nish hollow tiles, decorative bricks and plaques, cheaper cement and artificial stone of a durable kind are springing up. Unburnable materials like “lignum,” similar to brick in hardness and wearing capacity, but like to wood in lightness and the power to hold nails without cracking; but superior in its practical indestructibility, are rapidly becoming less costly than wood, nay, are already less costly in the long run, because they need no painting or repairs. They are formed from inexhaustible earth by kiln heat or by mixture with some propor- 
tion of cement, or steam or some chem- 
ical change, or by simple compression, and in any quantity. Wood, on the other hand, takes long to grow, and demands constant watching against fire and thieves before it is ripe and available as timber.

Back of these structures, which are so picturesque and satisfactory to the eyes when we see them in Mexico or Italy, lies the old farm or town-house on the classic or Oriental plan, built round three, if not four, sides of a yard, with its rooms lighted from the inner court. Hence the rare windows outside, hence the broad, untroubled surfaces which comfort the eye, but also hence the un- 

friendly, offish look of village streets in 

France and Italy, where each house seems to be turning its back and bid- 

ding the stranger begone. When, therefore, we seek to obtain these broad, simple spaces in a free-standing villa of moderate size we are met by the neces- 

sity of piercing the walls with many windows, for the light must come from outside, and each room must have one or more windows. The problem grows complicated. We want the fine points of the old liberal villa, with its inner court or patio, but we cannot bear the cost of low, wide, liberal houses, nor spare our many rooms, our fenestration, regular and hygienic, our drawing- 

room and dining-room, the hall, the 
baths, the convenient and airy kitchen —in fine, a dozen things which to our climate and habits are indispensable—
all crowded together, moreover, into comparatively narrow limits. For we are not considering the country house of the wealthy, who can build broad or high, and reproduce, if necessary, the villas of Italy and Spain or the palaces of Europe; we are thinking of the sum- 

mer houses of people of very moderate means. Even if we could have the in- 

ward-looking house, with central court- 

yard, at a low price, we would not want it, because we like to have views in all directions, if possible from all rooms,
and our effort is not, as of old, to concentrate the family life in the central court, but to give the different members of the family as much opportunity as possible to have rooms to themselves for rest, or quiet or study. The modern cottage seeks to decentralize the family so far as it can be done within narrow dimensions and at moderate cost.

The Spanish or Italian villa, on a somewhat costlier scale than mentioned above, may be seen in the design of Miss Anne Archbold for her house at Bar Harbor, a country house planned in part by Miss Janet Scudder, but one in which the owner's personal taste has found an outlet. Here the broad wall-spaces cut sparingly for window and door, the low roof and spreading ground plan, have the charm of the old dwellings that go back to Roman days, those villas that we find at Pompeii, their lower stories preserved for all time by the hot, grainy outpourings from Vesuvius, a black, unmelting hail that tenderly covered up many a choice bit of painted wall, many a work of household art without destroying it. Houses with one or more courts cannot well be raised higher than two stories or three without making the courtyards dark and unfitted for their purpose, which was a well-sheltered, open-air life. Thus the typical Greek house must have been only two stories high, with a cloistered or colonnaded courtyard for men, a dining-room beyond, and back of that a cloistered courtyard for women. Toward the street, or outward, only the upper story had windows, bays or balconies. Naturally the monastery and nunnery of Christian times repeated this arrangement, for it pretty effectually
shuts out the world beyond the four walls. In the turbulent Middle Ages the private dwelling in town and country might well follow the same general plan for the safety of the family; but in modern times the necessity for this seclusion no longer exists. When it is found in America it means that the builder prefers the sense of living secluded, as some enjoy surrounding their property with high stone walls to prevent the intrusion even of a prying eye. The general tendency, however, is outward rather than inward, a multiplication of windows, porches and balconies, and a dispensing with even so much as a fence as boundary, so that the line between lawn and high road is merely marked by a stone coping or a slope of grass.

Moreover, the great variability of climate on the Atlantic seaboard militates against the old-world villa architecture. We have to provide a house that follows the ups and downs of the thermometer, as it were automatically, now raising defences against a torrid heat, now closing itself against sudden cold or the damp from torrential rains. Our fierce winters make us sensitive to cold because they force us to keep our houses very warm; even the summer bungalow must be prepared for a slight fall of the thermometer. We are not so heroic as the English and Italians, who support their few weeks of severe weather with resignation rather than put their houses in condition for short seasons of cold; our agony would last too long. The cloistered courtyard has to be an exotic, save in Florida and Southern California. Our roofs must be much tighter than are the handsome tiled coverings of Italian villas, and our kitchens have to be nearer to hand. We carry comfort to a degree which earns for us the scorn of Europeans, many of
whom regard blue noses and chilblains as part of the necessary rigors of life; but a short residence in the United States cures them of this disdain, and they discover that the climate of the new world exacts compromises which they had not foreseen.

But if the ordinary owners of a country house cannot afford a low Spanish villa, with inner compound green and flowery where a fountain murmurs above a pool full of water-lilies, he can have a picturesque exterior.

The next step away from wood construction is to make the stucco walls of villas really solid masses of concrete, and here and there we see this step taken. Long wooden boxes without bottoms are employed to mold the solid, thick walls, which are built up of concrete formed on the spot of cement and sand, or broken brick or stone, in the ancient way, the concrete hardening to the consistency of soft stone, and offering even better resistance than stone or brick to heat and cold, dampness and wind. In countries where it is common this is not only a cheaper but rapider method of construction than wood or brick or stone, and admits of decoration in many ways, either by incrustations of tiles or shells, by modeling in plaster reliefs, by washing with colors, by geometric designs with colored bricks.

Ruskin says somewhere that ornamentation is the principal part of architecture, considered as a subject of fine art, but in this country we seem to fear ornamentation of buildings, perhaps because the attempts have been made by architects who have no talent in that field, more likely because, according to our means, we aim at size rather than beauty, quantity rather than quality. Some buildings discovered during excavations for the new quays on the Tiber at Rome afford an example of the boldness and cleverness of Roman decorators of house walls. They laid the plaster, and while it was wet fashioned it by
hand in figures and arabesques of low relief, and then applied colors and even gilding with true artistic feeling as well as technical skill. Similar if inferior treatment of the fronts of half-timber houses was common in Northern Europe during the Middle Ages.

In France and to a less degree in Germany there has been of late a sharp return to this early method of building, especially for small town houses and villas. L'art nouveau has seized on the idea very naturally, because in concrete and with the plaster exterior we can shape those fantastic designs and curves which seem so attractive to the very modernest and most progressive of architects, though the results often suggest the carved work on Papuan paddles. There is in this revived style an analogy to certain trees like the birch and the palm, which have generous, smooth, united trunks and liberal roofs of green. And, to spring from the aesthetic to the practical, there is wisdom in this madness, in so far that a villa built throughout of concrete is almost indestructible and insurance against fire is scarcely needed.

What is the Spanish cement or concrete house, what the ancient Pompeiian, other than a style founded on one of the oldest forms of house-making, that of wattled cabins, round or square, which the early dwellers in Europe

![Villas All Concrete](image-url)

**STABLE OF DR. NATHAN B. VAN ETten.**

Borough of the Bronx, New York City.  
Robert W. Gardner, Architect.

daubed with clay, whitened with burnt shells or limestone, and decorated with earthy pigments dissolved in water? It is a practical method of building, so remotely antique that history cannot guess its origin. In France there is M. Hennebique, who has revived it with modern innovations that permit of making floors and walls and stairways much thinner than the ancients used to build, and yet with great stability and strength. Deeply embedded in the mass of concrete, as the wooden forms that mold the
walls, beams under floors, etc., are filled, are rods of iron and wires placed apparently at random, but well calculated to strengthen the material. He has likened them to the nerves that steady and control the animal fabric. Perhaps it would be better to find an analogy in the straw that early nations mixed with sun-dried bricks. The concrete in drying crystallizes round the rods and wires so firmly that the latter become part of the material, and prevent its cracking or parting under strain. In the United States, too, we hear of warehouses and grain elevators constructed throughout of concrete—cellars, stairway of the horses, floors and supporting beams, chimneys, rooms for coachman, even the roof, as the illustrations show. The only wood used is for the frames to windows and doors. The concrete beams, twenty-five feet in the span, that support the carriage floor, have within them iron rods of no great size or thickness, not running from wall to wall, not even touching, but laid separately, flat or tilted, as seems best, for the purpose of making the concrete tougher. They are about eight inches thick, and the floor above them four
thick. They have been loaded with sixteen tons, and showed only a deflection under that weight of one-sixteenth of an inch. Chimneys and stairs are of the same material, and so is the roof. The walls are four inches thick, and if it were thought necessary to have an air-space in such walls, there would be no difficulty in embedding flat, hollow tiles throughout. As it is, Mr. Gardner has used square hollow tiles for the flues of the chimney.

The concrete he uses consists of one part Portland cement, two parts sand and four of broken stone, or in some places four of screened and washed coal ashes. The stable is impervious to water below and above, it cannot take fire, and, owing to the fact that concrete is a bad conductor of heat and cold, it preserves an evener temperature than stone, brick or wooden stables. Moreover, the floors are so modeled that there are no curves or cracks in which dirt can collect. The bins for feed can be part of the wall, and are inaccessible to rats. A hose can be used to wash floors and walls and ceiling; and the damp does not linger.

Though so simple, and one may truly say so primitive, this style of building has still to make its way. A magnificent example of a somewhat similar kind of construction is the Ponce de Leon hotel of Carrère & Hastings, at San Augustine, Florida. Concrete floors are also getting the fashion; witness the Metropolitan Club and the new palace of Sen-
ator W. A. Clark on Fifth Avenue. There is every reason, however, to believe that it will be applied more and more, at first to small villas, stables, etc., especially in places like the Pacific Slope where, indeed, it might be termed native under Spanish precedents; also Long Island, the Jersey coast, Cape Cod and other Atlantic resorts where wood is costly, the air is full of vapor and salt tang, and the chief ingredients of concrete can be found close at hand. One drawback, on the score of economy, will yield to the demand—its newness on the Atlantic coast and the inexperience of ordinary builders and contractors. Workmen are not familiar with it; contractors very naturally hesitate to give an estimate of its cost.

There can be little doubt that a wall of concrete of proper ingredients, well rammed down, will be cooler in summer and warmer in winter than any other kind of construction of the same thickness, and that the time is close when it will be as clean as, if not cheaper than, wood, and of course more economical than plaster on metallic lath or plasterboard. The metallic lath is always in danger from rust unless the greatest care is taken that it is kept from contact with the air, so insidious are the approaches of oxidation. It is safe only when the workmen are watched, and every inch of lathing that goes into such a wall is scrutinized to see that there are no parts which fail to be completely covered by the plaster. With the all-concrete wall a workman can hardly go astray. The openings for doors, windows, flues, and ventilating shafts are fixed, and the walls about them rise swiftly as the wooden forms are shifted upward. The marks of these forms can be smoothed away while the concrete is not yet hard. The composition forms an almost indestructible mass, which supports perfectly the low-eaved roof, and is a capital non-conductor for heat and cold. Where a long-continued driving rain will penetrate brick or wood or thin plaster, the cement wall cannot be pierced by water or wind. Its thickness admits of deep embrasures and window seats; its surface lends itself to modeled and colored decoration without limit, if the owner prefers that to simple lines. Nor is there any reason why the floors and stairways should not be made as solid and indestructible as the walls, using a good quality of concrete, of course, and eliminating thus as far as possible the woodwork that ensures the destruction of a country house as soon as fire gains headway enough to attack it. For libraries, museums and art galleries, that contain valuable books and paintings, the all-concrete building is the one that will be in demand.

Our people seem to have a fear of color; they are very Quakers in the soberness of their homes. They should grasp the opportunity to employ a simple, practical form of building consecrated by the ages—"as old as the hills"—which permits the use of soft, bright colors, and is as well fitted to peep from the bosom of deep woodlands as to smile across the bare, wind-swept moors by the sea, where

the pointed cedar shadows
Drowse on the crisp gray moss.

Even the comfortable red roof is not much used by city folk on their villas, although the country people, following their taste without the fear or, indeed, knowledge of critics, are prone to paint their barns and often their sheds, their houses and covered bridges, red. Yellow for walls is a favorite with city folk because it is supposed to be Colonial, and has precedent in its favor; it has fortunately taken the place of a reddish brown that invaded country villas at one time, and demoralized the landscape with its disgusting tones; but as with red, so with yellow; the trouble is that house-painters, through defective colorsense, are capable of any color-crime.

Charles de Kay.
The Perfect Theatre.

DEDICATED TO THE MEMORY OF E. S. P. & E. P. M.

"That men may rise on stepping stones
Of their dead selves to higher things."

An architectural critic of the 18th century describing a foreigner's arrival at a city remarks his curiosity which led him in the first place to visit the theatre. Here he received his first impressions "of the state of the arts, of the genius and the manners of the people." Centuries earlier, in classic times, Vitruvius tells us that in laying out a new city, the theatre, or place of amusement, was located next after the Forum, or place of business. He says, "A spot as healthy as possible is to be chosen for the theatre."

Two considerations are apparent here. The ideal of the classic architect was material. It concerned the material welfare of the people. After the Renaissance of Art came a wave of Aesthetcism. The "state of the arts" divided attention with the "manners of the people." The theatre of to-day is a reflex of society, just as it was 200 or 2,000 years ago. Ours is an age of both material and aesthetic standards, and the perfect theatre must be judged by both. The exquisitely decorated Auditorium captivates our sense of beauty, but cramped quarters and a headache will distort the most exquisite creation. On the other hand, thorough ventilation, comfortable seating and the sense of security arising from a well-planned and ably managed building have won half the battle for an aesthetic complement. Granting the necessity for both, I think we may at once admit that the sine qua non of the Perfect Theatre is its provision for the safety, health and comfort of its patrons.

On this subject, several well-known writers have established what may be called a standard. I refer especially to Messrs. Foelsch & Sach's in Europe and Mr. W. P. Gerhard in America. These gentlemen consistently tell us that the necessities for Safety in theatres and in their order of importance may be placed like this:

1st. Good Planning,
2d. Watching and Inspection,
3d. Fire resisting construction,

Subordinate considerations also affecting health and comfort are sanitation, heating, lighting, ventilation, and the like.

It is not my present purpose to go into a repetition of details for these necessities which have been so ably covered in Mr. Sach's "Modern Theatres and Opera Houses," and in Mr. Gerhard's "Theatres." I propose to take up the subject in a more general but perhaps quite as pertinent a way. And this by reason of certain new phases, which recent conditions in theatre operation seem to have forced upon us.

If one should attempt to describe the Perfect Theatre it is just as apparent as ever that such must be the result of an ideal society. And in one particular the ancients certainly had an advantage over us. Whereas their buildings were situated and designed for the benefit of the people, to-day it is the box office which must be accommodated. For while in Classic and Mediaeval times the funds were provided by the State, it is impossible under private enterprise to equal the liberal provisions which an undertaking for profit forbids. A well-known financier, approached quite recently to endow a model theatre, replied, "There is only one successful endowment for a theatre, and that is through the box office!" This sentiment is wrong, because the public often errs in its support, and always benefits by education. There is perhaps no more worthy field for the philanthropist than the endowment of splendid theatres. We know that the Greeks set apart their finest site for the theatre, and this practice prevailed for many centuries.
In our day, private enterprise counts a frontage too expensive, so the "single entrance" plan has been adopted.

The theatre proper occupies the interior of a plot of ground, the street frontage being devoted to other purposes, with one or perhaps two passages reserved for entrances. New York boasts several theatres typical of this scheme, as do almost all our larger cities, but the significance of this state-type, and there are a hundred similar instances, all disparaging to our modern practice, in so far that health and safety have been sacrificed for financial reasons. If the box office cannot remedy this, the philanthropist might.

Then again heating, lighting and ventilation which the Greeks obtained from nature, are with us important matters of engineering. Sight lines and acous-

![Image of Roman Amphitheatre at Verona]

ment is that they constitute the newest and most costly of our buildings. A recent contributor to these pages has ably described the decorative schemes of the New Amsterdam, the Empire and other Metropolitan playhouses. But what of the material, the practical side of these theatres? Compare the single entrance—the niggardly street frontage—with the majestic setting—the splendid isolation—of a European Opera House. We will take for example Gotham's New Amsterdam and Copenhagen's Royal Theatre. Each one is a

tics, construction, decoration, planning and last but not least the care and management of the house after its completion, were comparatively simple matters in the isolated structure of a single purpose. But with the crowding together of many interests in the same block—yes and under the same roof—the designing of one of these intricate theatre structures has become to-day perhaps the most difficult problem an architect may undertake.

Could we be carried back 2,000 years to the simple lives of the Roman and
the Greek, retaining all we have learned that is good, obliterating all we have acquired that is bad, then indeed might the Ideal Theatre, in its main necessities, be realized. Even now in the most vital principles of design the 20th century architect can find no happier inspiration than the works of those Classic Master Builders, which still mutely testify on the shores of Italy and her sister States, to an art whose simple beauty stands unequalled and alone.

One must needs approach the subject of the Ideal Theatre from the standpoint where these ancients were supreme. The impression one gets above all at Pompeii or at Fiesole, at Toarmina or at Rome, is the same; here was the simple, the natural, the perfect plan. Vitruvius tells us that proportion in architecture was inspired by the divine symmetry of the human body and that its members—hand, foot, etc.—were the origin of the measures used in building. The architect of the Classic Theatre drew first a circle—symbolic always—like the Buddhist’s wheel of Destiny. The Greek inscribed within it squares, the Roman drew triangles, but both with a well-studied system by which the points of either figure indicated width and depth of stage and pointed direction of aisles and exits. Vitruvius has left an account of this system of planning, and I can imagine nothing more superbly fitting in the Greek architects work than this, his flawless nature plan, inspired by the 12-pointed star with which the astrologers had traced their sphere. The signs of the Zodiac stood to portray every human characteristic; they were a record of all the seasons of time and life. So upon this eternal frame, encircled by the endless line which stood for immortality, the Greek architect built his theatre, where was to be depicted the whole gamut of life’s changing play.

On the heights above Florence the little “mother city” of Fiesole boasts one of the best preserved classic theatres, and at Toarmina, in Sicily, is an example similar to Fiesole, but still more picturesque. In both instances the site has been chosen in a gentle hollow in the mountain side, the chiselled stairings following the natural contour of the land. Here for a back ground majestic Aetna towers, 14,000 feet above the sea. Such a setting was the Ancient Greeks’ delight. It only remains to add that their roof was the canopy of Heaven, their border lights the sun; and we can never equal the perspective of their stage setting—the distant view of mountain, vale and sea.

To-day we are hampered by the demands of a civilization thoroughly artificial, which with every decade becomes more complicated.

The Greek found no necessity to guard against fire and panic where was nothing combustible and every seat an aisle. No fear that light or ventilation might fail with nature as the source. No restriction necessary for the jerry-builder where the quarry side formed the wall. But more than all, as conducive to the safety of the audience, was his scientifically radiating plan which not only stood for ease of movement, i.e., in straight lines, but better still, a continually increasing ease.

This is a vital necessity of theatre planning, which present practice quite ignores: that as the audience is dismissed, each succeeding stage shall be easier than the last.

To illustrate: The building ordinances of most cities require a width of 1½ ft. for every 100 persons, as the capacity of aisles, stairs and exits. This is a very scanty measure and should be increased, but on a graduated scale as follows:

Aisles between seatings, capacity of 1½ ft. for every 100 persons.
Corridors in rear seatings, capacity of 2 ft. for every 100 persons.
Stairways behind corridors, capacity of 2½ ft. for every 100 persons.
Final exit doors, capacity of 3 ft. for every 100 persons.

The congestion which usually occurs in the rear of seatings and out as far as the exits while an audience is being dismissed would in this way be avoided and many deadly panics averted.

The subject of plan naturally suggests a word on the much advertised “emergency exit.” In the sum of all things
puerile, I know of no more cruel invention. This country alone of all civilized nations, allows and even sanctions it. I state this after a critical inspection of a large percentage of European theatres. Anything which savors of the unusual to the same extent makes possible danger in a theatre plan. The most successful theatre manager is he who takes his audience completely into his confidence as regards all arrangements for seating and exits, and inculcates these by force of habit. The audience must be dismissed with ease, and be conscious of that ease.

On all programmes of London playhouses will be found the following notice: "The public at the end of the performance may leave the theatre by all exit and entrance doors." A law to compel the daily use of every exit will avoid the rusting of locks, accumulation of debris, and blocking of passages, which the manager trusts to luck may never be required.

To illustrate: The only exits on the right hand or north of Chicago's Iroquois Theatre, seating 1,900 people, were three emergency fire escapes. The manager had told his employees never to open them except on his personal orders. Consequently when needed to save life they were not ready for the emergency, and when forced open, were found, but too late, to be utterly inadequate. Just one day's trial would have condemned these ill-planned, flimsy escapes as unfit for use under the most ordinary circumstances. But they were for emergencies only, and their first test cost the lives of 600 persons.

Such is the emergency exit.

The "single entrance" plan was the scheme of the Iroquois Theatre. The editor of a leading architectural journal writes that the possibility of the late disaster "may be found in the plans of the building." After centuries of noble example in safe planning, the American dollar has decreed that nearly two thousand people shall congregate in a playhouse with but one regular entrance.

\[\text{Diagram of Iroquois Theatre, Chicago.}\]
THE GREEK THEATRE AT TAORMINA.
and exit, and that not even located on the main axis of auditorium and stage. For the rear imposed a cruel barrier, 100 feet wide and almost as high, with not a solitary opening to break the dread prison wall. And yet money had been lavished on this fated building; the construction was thorough, and we may even say fireproof in the sense that a stove is fireproof. But a stove is designed to facilitate combustion within it, and the shape of the conventional auditorium with its up-draft ventilation is built upon exactly the same principle.

It is not fireproof theatres we need so much as Panic-proof; the proof born of the simple and the natural plan. The free and unrestricted area with open spaces on all sides is the first imperative requirement. We legislate this, but we evade it. If under present circumstances theatres cannot be made profitable upon such expensive sites, does not the advent of quick and cheap transportation offer a less expensive substitute? Or if we must have some centrally located playhouses then admission prices must be advanced, or better still, the profit-taking spirit may be eliminated by the advent of the philanthropist into the field of endowed theatres.

The Perfect Theatre necessitates first the Perfect Site, so that the architect may give it a fitting and proportionate plan. The ancients understood this. Their semicircular plan radiated exits, and more—each continued on its individual axis to the street. Perhaps the most noteworthy example is that mighty fabric, the Roman Theatre of Marcellus which seated 14,000 persons, and is the largest theatre recorded in the world’s history. (See page 110.)

If its noble buildings could have seen it as I did some time since, its ancient glory given place to the needs of housing the very poor of modern Rome, they had still seen it harboring tragedy, and perhaps more realistic than of old. The ruin mentioned is typical of hundreds of others in Italy and Greece. And later, in the days of the Renaissance the great Palladio still adhered to the radical principle. The noted architect whose fame is written in the façades of many of the greatest palaces on the Grand Canal, although little known in this connection deserved equal fame for his theatre of Vicenza. (See page 110.) For in that noteworthy plan he first used the ellipse instead of the circle, a premonition of the modern instinct which would draw the audience closer to, and more nearly in front of the actors.

The twentieth century has emphasized this desire for width and shallowness, combined with the Greek radial plan. Its logical conclusion may be seen in a new Chicago theatre where the elliptic plan has been completed. (See page 110.) These three types, viz.: the circle, the ellipse and the oval, show a reasonable sequence of endeavor, from which the Ideal Theatre must eventually be evolved. The Gallic and Italian horseshoe plan and the oblong square of England and America, which have predominated for several centuries, lack many advantages, and in the best practice they are now virtually discarded.

Again concave surfaces are recognized as an aid to sound; they concentrate the sound waves and increase the volume. In the Chicago Theatre just mentioned, a thin resilient partition forms the entire enclosure of the oval and also extends up into ceiling and dome. It was accidentally demonstrated that the sound waves cause vibration of this shell, which becomes, in fact, a huge sounding board.

One of our difficult problems, which the old Greeks escaped, consists in the projecting balconies of the modern theatre. Cantilever construction has made an enormous overhang possible without the use of obstructing columns, and here ensues a subtle danger, that of bringing the occupants too close to the dread inflammability of stage equipment. This extreme projection should be prohibited unless, as I believe, we are upon the eve of a new use for, and benefit from mechanical ventilation. As practised in some of Vienna’s later buildings, the system becomes a safeguard by its constant current from auditorium through stage opening and up through stage roof. I do not hesitate to say that, in the light of present knowl-
THE PERFECT THEATRE.

Plate 2

-Ancient Grecian Theatre-

-Ancient Roman Theatre-
PLATE 6.

Theatre of Marcellus, Rome.
Classic Period.

Theatre at Vicenza, Italy.
Renaissance Period.

Bush Temple Theatre, Chicago.
20th Century.
San Carlo Theatre, Naples.
Typical of the horseshoe plan of Italy & France.
edge the up-draft method principally used in this country, the intake of fresh air under seats and the exhaust through ventilators in ceiling over the auditorium (page 113), is a criminal practice fraught with the gravest danger.

The downward system invented by the French engineer, Morin, and used with much success in several continental and American houses, escapes that responsibility, because in forcing the air in at the ceiling and drawing it out beneath seats the downward pressure extends also laterally, i. e., in a limited degree through stage opening. It is well to note that a Commission of Theatre Experts employed by the Chicago Tribune, reported: "Any system of ventilation which could draw smoke or flame there- in from the stage should be suitably safeguarded." But how? I repeat that the ventilating system must itself form the safeguard.

Prof. Brouardel has shown that the majority of theatre fires start upon the stage and that the loss of life usually occurs from the flames and smoke which immediately penetrate into the auditorium. Late efforts to guard against this source of danger have only temporized with the real need. What reliance can be placed in hand grenades or standpipes when contingent upon human watchfulness or resource. How can we depend upon sprinklers whose advocates claim that the plugs are "almost sure" to fuse. What certainty in a steel curtain which in the critical moment often fails to work.

Where is the safety in fireproof scenery whose virtue at most can last only three months? Who is to guarantee the opening of stage vent in time of peril? These things are all good as far as they go, but they are all uncertain. Sprinklers certainly should be required over every stage with scenery. I am not de- croying the use of any other reasonable safeguards.

But I believe the greatest measure of safety lies in a ventilation system specially designed to that end, and I look to see the experts take up and solve this problem which I can here only outline. The ideal system would be one in which the fresh air is forced in through perforations in the ceiling and at the rear of the auditorium. The current would be drawn through the stage opening and out through ventilators—always open—in the stage roof. It would be sure because constant, its operation being denoted by tiny streamers placed in the proscenium arch. And this apparent protection would make for confidence in the audience and therefore dollars to the management. Once more imagine, if you will, the advantage of a system of protection which on account of its publicity cannot be allowed to lapse! In contrast all our present measures are left absolutely in the hands of an undisciplined and ever changing stage crew, and we expect safety! It has been stated that air currents through the stage opening would interfere with the operation of scenery. But this is obviated by perforations over and at sides of the proscenium, connected by a special duct to the roof, thus continuing air currents when the stage opening is closed. The interference with acoustics is insignificant in comparison with the security gained.

This security lies in the fact of a constant initial current; an ever open stage vent; a combination ensuring the right direction of any conflagration which might occur.

In addition fusible links should be provided, which at the first flame would throw open other enormous auxiliary roof vents, making the aggregate size of these not less than one-eighth the area of stage.

I have dealt with ventilation in what I believe is its most urgent phase—as a safeguard. Its importance as a measure for health is well understood. But in many theatres it is ignored, so that experiments have proved the air more foul than that in a street sewer.

Elaborate systems have been abandoned or mutilated because of the trifling cost of operation. Some of the most important theatres come in this class. I know of one whose splendid equipment became entirely forgotten through disuse. In another the manager inserted by-passes in the ducts to
save the operation of a fan, and ruined its efficiency. I can name a celebrated American theatre whose manager acknowledged he did not know which his house had, the up or the down draft system.

There are so many ways in which the ignorance or cupidity of a manager may destroy the merit of an intelligent architect's plan.

Lighting, which with ventilation was so easily disposed of by the Classics, becomes a special problem in these days of restricted and enclosed areas. Because of its safety, cleanliness, and smaller heating property, electricity is becoming the standard method. I suppose all building laws the world over require an auxiliary system to avoid the possibility of sudden darkness. I believe a further regulation is necessary. The auxiliary system must be of a different character (gas or sperm oil), so as to proclaim itself as such to the audience or to anyone interested.

This is a system, again, which, by its very publicity could not be allowed to lapse. Taking the audience into his confidence may not be agreeable to the manager who would shirk regulations, but it is a pretty certain check on their evasion. Two systems of electric lighting means, on the other hand, that one will shortly be discontinued, and who is to discover this until too late. The writer used electricity and gas in a theater which he lately designed, the gas serving for the auxiliary system. As an instance of careless management, it took fully a month of almost daily inspection by the architect before he could enforce its use. There was always some excuse for evasion; but the absence of gaslight, as against the main system of electricity, made detection immediate and sure.

Although placed by competent authorities last (and rightly so) in the list of primary necessities, fireproof construction is still of distinct advantage in the modern theatre. Practice in the best lately constructed buildings has been uniformly excellent, with perhaps one exception. I refer to the use of wooden framing and flooring built upon the iron beams for the steppings of balconies and galleries. Building regulations within the four-mile limit of London prohibit this, and so in perhaps a half-score of the newest metropolitan theatres the iron structure has been reinforced with a system of concrete steppings and risers which for thorough fireproofing and solidity are superb. I have in other pages described this system as used in Wyndham's two theatres, the Apollo and His Majesty's. The advantage of such construction is apparent when contrasted with its counterpart in some of our most celebrated American theatres. Dust, refuse and shavings-filled receptacles their gallery voids usually become; for the building debris invariably finds its way into them. In our day no wood should be tolerated in construction, nor yet in finish nor furnishings. For we know that other buildings are now being constructed without an ounce of inflammable material—then why not the theatre? It is two centuries since Count Algarotti, an Italian theatre critic, in an essay on the opera, wrote that "the best lining for the interior of a theatre is wood."

In some matters we have progressed. That was the view of the artist and musician,—in brief, of the Italian. But a few years later, Saunders, the London
architect, mind you, the experienced practitioner, wrote: "Wood being of all materials the most favorable to sound, should be adopted in a theatre, in preference to every other, not only in the divisions, but in the walls; and even the ceiling should be lined with it." These critics all cited the theatre at Parma, lined entirely with wood, as the most perfect example of acoustic excellence. And Mr. Saunders, in his admirable treatise, which dwelt on acoustics, lighting by candles, decorations and other appointments, not forgetting the coffee room, has not seen fit to advise any regulations for safety, with one exception,—the outward opening of doors. The Aesthetic outweighed all material considerations in those days. Possibly because, strange to relate, theatre fatalities were of proportionately rare occurrence. We have no records compiled prior to 1841. Since that date about 1,200 theatre fires have cost the lives of 12,000 persons, and the proportion is steadily increasing. Proof enough that the modern theatre, as built and managed, needs urgent and radical reform.

Let me emphasize as built and managed, for while the architect's responsibility ceases with the properly constructed building, the manager at once assumes that responsibility and must never relax his vigilance.

Yet who ever heard of a theatre manager losing sleep for any other than a question of receipts?

I am not going out of my province when I say that very few managers in this country know what they stand for. And here I want to make a comparison which will make clear some duties. A metropolitan theatre in its relation to its patrons closely resembles a modern ocean liner. The same frail humanity trusts itself within the confines of one as the other, each unit in a sense relinquishing its identity and becoming a part of an unwieldy whole, of which nothing is certain except that it is incapable of any concerted action, and that its safety is utterly in the hands of its keepers. Now compare the discipline, the régime obtaining on a liner with the article which passes for that sort of thing in our theatres. Would you not rather trust your life in the hands of the commander of the meanest tramp that crosses the Atlantic than to the tender mercies of the most exalted theatre manager in this country? For the commander understands his first care to be the safety of his patrons. After that comes his duty to the company. Not only that, but he undergoes years of special training fitting him for the post. The theatre manager is chosen solely for his capacity to "make it pay." No other standard of fitness is required in the man upon whose watchfulness and resource each day depend the lives of thousands. Such a fact seems incredible in this age of civic reform. The direst need of the modern theatre is a State-regulated management, employees trained and tested for their efficiency, from manager down.

Then perhaps when danger looms, instead of a stampede of boy ushers and a stage manager "wanted," we may find resource and fidelity equal to the late heroism of a Norwegian ship captain and his engineer. I believe it was the "Norge," whose commander was still on the bridge as the ship foundered, and whose chief engineer had just gone down to the engines, and to certain death. So much for the employees. The owners of our theatres come in for criticism by a leading dramatic critic, who says that not commercialism but illiteracy is the curse of the American stage. With that statement I cannot altogether agree.

Theatre managers he characterizes with few exceptions (and there are notable exceptions) as grossly illiterate. Of such a type was the magnate controlling many theatres, who, after seeing a comedy, founded on the "Pickwick Papers," inquired eagerly: "Ain't that piece made from some book?" They told him yes, and that the author was a young man named Charles Dickens, living in Yonkers. "Send him a telegram to come and see me," said he, "I may make a deal with him for another libretto." These are the men who control in a majority of cases all matters theatrical. They build theatres, but the absorbing
question of dollars and cents renders them deaf to all considerations of public safety. Inspection of a recently constructed theatre, disclosed such glaring faults of planning that I questioned the architect, who replied, "My friend, I know the faults and I fought hard to avoid them. But you know my client and that the architect must plan to suit him." In these days of the Trust and the dictator we need architects of the

side of stage, within the stage, is extremely dangerous. The rooms should be entirely separated by fire walls from the stage proper and have independent stairs and exits. One or two openings with fire doors at stage level would make the necessary connection.

Let us now define in more concise form the present necessities of the Ideal Theatre.

Chief of all are the isolated site and

Brunelleschi type, the gifted Florentine who, rather than be brow-beaten by the all-powerful Medici tore up the plans in his client's presence and refused to replace them at any price.

One thing I want to emphasize; the Ideal conditions we would have must exist on both sides of the footlights. The actors and stage employees whose duty keeps them in the danger zone must be considered equally with the patrons. This means well-ventilated and sanitary dressing rooms, and with sufficient exits.

The modern method of constructing tier upon tier of rooms on one or both

the simple and generous plan—always recognized as the most vital necessities—these have never been as utterly forgotten as they are to-day. Other points not heretofore covered in the text books, but still imperative, and which modern conditions have imposed, are:

1st. The compulsory use of all exits after every performance.

2d. An increase in the ratio of exit areas to seating capacity, the ratio continually increasing to the final exit.

3d. A safety ventilation system, which of itself shall constitute the patrons' chief protection from stage conflagrations.
4th. A regulation compelling the auxiliary lighting by a different method than the main system, so as to insure detection of its omission.

5th. Education of the management and the public in the truth that “fireproof construction” is only one short step in the direction of safety, and alone is worthless; yes, and even dangerous in the sense of security which the term seems to, but does not, imply.

6th. The necessity of a check on remiss management by the adoption of safety measures that may be apparent to all and which, therefore, could not easily lapse.

Last and most important as governing all of the above: Legislation—to bring theatre enterprises under the control of special State Boards, who should pass on all plans of buildings and should also institute an examination for all employees, the same being subject to license after proving qualified for their special duties as in other professions where equal responsibility exists.

Such are the material and urgent needs. In many of our popular theatres nothing but the mercy of Providence is saving new disaster. This is not the cry of the alarmist—rather the sober judgment of men who have given time and pains to reach the facts and who see in the utterly inadequate exits, the lack of proper fire protection and the negligent and inefficient management, a standing invitation to a great catastrophe. After each accident comes the wave of indignation and reform. Such reform as the Alderman can administer. No disrespect to the Alderman, mind you, all honor to him in his proper sphere, which, however, is not the scientific regulation of the theatre. The technical requirements are usually beyond him. It may be with the best intentions, but in less than six months he is bartering again with the theatre managers, and a mammoth new inscriptions: “Vaudeville Theatre”—marks the same danger spot where but yesterday man’s reckless cupidity cost 600 lives. With plan revamped, of course, but still with the single entrance and with the same rear wall towering unbroken—a palisade of death. After all that has passed our ordinances are not improved, conditions in our theatres are hardly better than they were. The ear-marks remain. I can cite one case where the insistence of the dread emergency exit (and the Building Commissioner must obey the letter of the law—he has no other alternative) has materially increased the element of danger.

In Chicago it is a fact that the building ordinance as revised since the late disaster is in important points distinctly inferior to its predecessor.

Take, for instance, two items:

The old ordinance prescribed a theatre building should front on three public places.

The revised ordinance prescribes only two.

The old ordinance called for sprinklers above and below stage.

The revised ordinance does away with them.

In this way the revision legalizes an increased element of danger, for the three public frontages and the sprinkler system on stage, have a well-established value. No matter what specious argument may be used against them, there are authentic cases where sprinklers have extinguished fire on the stage. That being so, who will deny it were better to install 100 sprinkler systems and to damage scenery in 99 useless sprayings; if by so doing, lives might be saved in just one theatre fire. However, statistics show that premature fusing is so rare, it need only be expected in a theatre once every 25 years.

It is worthy our attention that in the same manner that man’s greed has violated the first law of humanity it has also played havoc with the artistic ensemble of our theatres.

From the purely aesthetic standpoint their decoration and furnishing may be said to suffer equally by reason of the ultra commercial plan. The box office again has decreed a jammed frontispiece and bulging balcony—an elevation so deformed as to render quite impossible any sound decorative design. More rational planning will evolve structural members amenable to artistic treatment,
and the Ideal interior of course is the one whose detail is subordinate to constructive lines.

In Continental Europe where state aid has eliminated somewhat of the commercial aspect, the circular auditorium, clear of obstructing projections, can be treated from floor to ceiling as a whole. And success has been easier to obtain. With us, the theatre ceiling is a lost art. The funnel-shaped proscenium and the necessity of the gallery god have worked chaos and without a fit ceiling the interior must of necessity fail. Thus abnormal planning has become responsible for meaningless decoration and a weird strife for effect.

It has been truly said that the real courage of the artist lies in his capacity for restraint. May we not add that the greatest use and test of beauty is the measure of its benefit to mankind. The fallacy of art for art's sake is realized again to-day as it was during the lives of the masters of the Renaissance. The "man of four souls" greatest artist of that or any other time, on his deathbed, wrote:

"Here ends love's tender fantasy that made
(I know the error of the thought) great art
My Idol and my monarch; now my heart
Perceives how low is each man's longing laid."

Was ever such pathos? Even the great builder of St. Peter's, the master craftsman of the Sistine frescoes, and of the Pieta must relinquish his idolized art. But do not those matchless works breathe to us of the man's immortal soul. Michael Angelo in the end realized this higher Ideal.

And we who are artisans in that noblest of all the crafts and with us the magnates who control and the public which supports the theatre enterprises, cannot our aims be raised above the petty level of profit taking and the mean necessity of a day? Shall we not rather believe with Carlyle: "In the meanest mortal there lies something nobler. The poor, swearing soldier, hired to be shot, has his 'honor of a soldier' different from drill regulations and the shilling a day. It is not to taste sweet things but to do noble and true things and to vindicate himself under God's Heaven as a god-made man that the poorest son of Adam dimly longs."

The architect must look beyond the gorgeous portal and the shimmering façade; the owner have thought above the dividend.

When we plan with nobler purpose and in method more humane, these loftier Ideals will herald the Renaissance of Theatre Art.

J. E. O. Pridmore.
LIBRARY.

Munich.

Bruno Paul, Architect.
German Arts and Crafts at St. Louis.

The German exhibits in all departments at St. Louis are notable in magnitude and in the manner of their installation. In his introduction to the descriptive catalogue published by the Imperial German Commission, Leo Nachtlicht, architect, Berlin, says that find himself in the great "Hall of Honor" realizes immediately that here is an exposition of more than commercialism, and the vistas into the outer court and into various connected rooms deepen the impression until one is convinced that Germany has started a

"the German exhibit of Arts and Crafts in the Varied Industries Building is the largest and best that Germany has ever made," and the reason he says lies "in the better organization and the keener desire to show America what is newest and best in this latest line of German effort, and in the new life that has sprung up in this especial line of art in the last ten years in Germany."

One who has passed the portal to campaign of education and has installed powerful batteries of art. The clever manner of the installation is to be noted first and then commended.

A visitor coming directly into the German section of the Varied Industries Building from the outer air finds himself depending on the entrance, in either a Great Hall or a wide corridor upon which opened complete rooms, walled and ceiled and furnished in accordance

RECEPTION ROOM.

Berlin.

Leo Nachtlicht, Architect.
with their respective uses and character. Nowhere does the structure of the greater enclosing building appear; the multitudinous columns or posts are deftly incorporated in the walls and partitions of the chambers, and the ceilings mask in the crude, cheap, agglomeration of small sticks which, as braced or trussed purlins, support the roof of this above in the roof; green and white below in the walls, with statues of copper bronze and panels of deep-toned lustrous mosaic. Around and about are the smaller halls and chambers, paneled and ceiled in soft, rich and deep-colored woods, with furniture to match or to contrast. The range of color is from silver gray to rich brown; from the pale

as of the other main buildings of the exposition. To enter the German section from out of doors brings charm, to enter it from within brings relief. From the hot sun without or the forest of little white sticks within, one enters the Great Hall under a high pitched roof with dark beams and purlins. The upper panels and the open spaces of the trusses are filled in with effective tracery. Blue and bronze and white appear whiteness of maple to a deep blue. One passes from a State Hall in which the color scheme is as follows: Mahogany inlaid with ebony maple and ivory; bronze capitals and columns, coats of arms in colored woods; through a room done in poplar, gray-green stained in walls and blue stained in ceiling—to a room of gray stained oak inlaid with colored maple, mahogany and ebony. Each of these rooms is complete in
itself and many are completely furnished. Everywhere the scheme of the design is broad and simple, and everywhere, except now and then in an isolated instance, the rich soft colors and simple forms lure the eye and mind to repose; not to a dull indolent repose but to an inspiring rest. As illustrations in black and white give merely a presentation of the forms and nothing of the charm and spirit of the work, a verbal lights at proper points in the form of inserts in colored inlay of faience or metals or woods. This idea is very fully and beautifully developed. The softness and richness of the color which has been noted, comes from that innate desire for perfection which is in the artists and artisans. In many instances the wood is not superficially treated, but is impregnated with the dye so that each piece is made uniform in color throughout before

Munich. Brothers Rank, Architects.

RECEPTION ROOM.

description of the general tendency of design and colors may be attempted.

First of all, perfection is the ideal sought, perfection of craftsmanship in make and finish; perfection of line and proportion in design. The ideal is very nearly approached in not a few instances. Simplicity of form, not crudity, but classic simplicity, is made the basis of the design, and on simplicity of form follows breadth of color treatment. Interest is maintained and the effect heightened by the introduction of high-

it is worked, and the soft, dull finish is the product of simple rubbing. Perfection of line has been mentioned as an element of the ideal. The treatment of line in this display gives a deep sense of satisfaction to one who has watched with feelings of mingled sorrow and dismay the inroads on good taste which the "new art" has been making on the Continent and especially in Germany. But this at St. Louis is not in any sense the "new art." It is, as the catalogue says, the "German Exhibit of Arts and
Crafts,” and represents that period of calmness and self-containment which always follows the seemingly, though unfortunately, necessary seasons of strenuousness or of anarchy which themselves follow upon periods of decadence in art and letters. In this, art and letters, but reflect the national ideal. So while some vestiges of the “new art” appear here and there, they but enhance the beauty of the newer art in craftsmanship. The work is suggestive of the best of the mediaeval art in domestic design. One wonders if the modern work, especially in its color effects, will hold its own with the ages. The mediaeval wood has mellowed and deepened with time. A superficial stain will lose its luster, but it may be that the wood chemically dyed and uniformly colored in all its fibres will stand the deteriorating effects of atmosphere and the hours.

It is impossible here to speak specifically of all the exhibits. That certain rooms are singled out for illustration does not mean that certain others are not as interesting and as effective. The color scheme of the Main Exhibition Hall or Hall of Honor has already been noted—the illustration will serve to suggest its form, but in nowise its at-

A COURT.

Darmstadt.

J. M. Olbrich, Architect.

mosphere. The overlapping feathers of the great hammered bronze eagle on the central pedestal are conventionalized in the great window and echoed in the panels of the roof. The stately pylons each surmounted by a bronze figure of Fame are in the best spirit of modern German monumental design. These pylons in connection with the broad arch of the great window forms an impressive introduction to the richness of the exhibition rooms beyond, leading first into the Hall of State, the color scheme
DETAIL OF RECEPTION HALL.

Darmstadt.

J. M. Olbrich, Architect.
of which has also been noted. Beyond the Hall of State and in the axis of the Hall of Honor lie a sunlit court, the main feature of which is the succession of dreamy pools which rise in slightly varying levels to the fountain head whence the water flows from higher to lower levels with musical ripple. The introduction of running water was a distinct and charming feature of the ex-
hibit and numerous chambers contain wall fountains of quaint, pleasing design. The marble wall fountain by Dietsche, sculptor, the basin for running water, a beautiful design in tiling with glass mosaic by Lacuger, architect, the wall fountain of wrought copper gilded by Hoffacker, architect, give evidence of the range of thought and material devoted to this one feature.

About the open court are ranged many attractive rooms, of which Prof. J. M. Olbrich, architect, who designed Court and the walls of which were paneled in white maple boldly and exquisitely carved—no color being introduced into the carving, but gained from tapestries and curtains; and a Music Room with wood work and furniture done in brown stained pear wood polished, and a piano, masterly in design, of blue stained maple inlaid with mahogany, ebony and ivory. The furniture in all these rooms is interesting in the extreme, simple and dignified, yet sufficiently varied in line and form. The
frieze of Prof. Olbrich's Music Room is simple and very effective.

A Living Room with a white lacquered bay window, by Niemeyer and Beitsch; an Office Room gray-green on wall and blue on ceiling by Richard Riemerschmid; a Library in gray stained oak, with ceiling of ash inlaid with mahogany, walnut, ebony, maple and paduk—many woods but simple and beautiful in effect—the room by Bruno Paul; all attract and hold the observer. A Reception Room by the Brothers Rank, arrests the eye and satisfies with its color and furnishings the mind of all beholders; gray stained maple inlaid with maple of different colors forms the decorative scheme while the furniture and the electroliers unite in the general harmony. The electroliers and lamps in these various rooms have received a great amount of thought and study, and some of the forms the illustration will serve to present.

A quaint and attractive Nursery by Arno Koernig and a Gentlemen's Room by Karl Spindler should not be omitted from the list; this latter room with its furniture is in oak all inlaid in natural woods. A first glance would seem to reveal a broadly painted frieze, but closer inspection shows this frieze to be an inlay marvelous in its display of technical skill.

It is not fair to the other exhibitors to shorten the list, but a full description needs a volume, so beautifully, painstakingly and interestingly has the work been done. So to repeat, one sees in this exhibit more than a display of commercialism. On the confines there are booths containing articles of commerce, but at heart the exhibition is educational in its intention and effect. Surrounding even the art wares of Japan, the other notable foreign exhibitors at the Fair, is an atmosphere of commercialism, a mere display of objects "to sell," and the atmosphere follows the observer even to the gateways of the German section. There one comes into the presence of beauty which ought "to sell," which ought to become general not necessarily in its details but in the beneficence of its effect on the standard of taste. This Germany at the Fair has given us, and neither her artists and craftsmen nor others need ask or be asked to give more.

Irving K. Pond.
GARDEN AND PERGOLA OF THE HOUSE OF MR. CHAS. L. HUTCHINSON.

Lake Geneva, Wisconsin.

Shepley, Rutan & Coolidge, Architects.
A Jaunt to Wychwood, Geneva Lake, Wis.

THE SUMMER HOME OF MR. CHARLES L. HUTCHINSON.

I arose with the sun, hastily made my toilet, breakfasted, and darted out of the door to catch the early train for the Lake. The air was chill, and well it was, for I needed something to awaken me to a ramble in the woods.

We arrived at the depot at twelve o'clock.

A short drive brought us to the better buildings along the North Shore of the lake—among them the house of L. Z. Leiter, that of N. K. Fairbank, and the Selridge place—most of them commonplace designs of fifteen to twenty years ago, with their semi-Dutch-Colonial-Renaissance elevations. Across the lake, standing out like a sore thumb, is visible at this point a summer home, a large three-story stone building, Renaissance in design, entirely out of keep-

THE HOUSE OF MR. CHAS. L. HUTCHINSON.

THE HOUSE OF MR. CHAS. L. HUTCHINSON.

drive from the gate to the house is through a thickly wooded land, gradually falling off to the lake two hundred feet below.

As one approaches the house one gets no impression of aggressive architectural prominence; it seems to grow with the trees. Nature and Art have come together, nature always dictating, however. There is no copying of a design from another place; the individual character of the plot has always been kept sight of; the real, homely beauty characteristic of the locality is preserved. The steps from the carriage court to the upper level illustrate what I mean by the preservation of the homely beauty of the surroundings. There is no filling in and grading—steps are necessary to a higher level, and they are placed where they are required—to join the carriage court with the vestibule. From there one enters a large hall 20 by 25 feet; down two steps is the living room, 23 by 33 feet; at one end a large fireplace, simple as can be, of brick with wooden trimmings. Connecting the living room with the dining room is a covered veranda, a beautiful place for an out-of-doors dining room in the pleasant summer months.

The dining room has a beamed ceiling of heavy timbers; at one end is a large
fireplace. The grouping of the several departments for convenience in working is admirable, and for the perfect use and enjoyment of the various parts, as the entertaining rooms, kitchen, offices, laundry, outbuildings, and stable, all of which have the proper relations to one another and to the garden and pleasure grounds. The laundry and kitchen blocks are practically isolated blocks, for they are connected to the dining room only through the butler's room on the first floor, being detached above.

On the second floor are several large retiring apartments, each with its separate bath, commodious closets and dressing rooms. All along the north side of the house extends a corridor connecting the different rooms. Every room in the building has its proper aspect. To the south the sleeping rooms, and the north the stair hall and corridors.

The views from the house across the garden, over the lake and on to the wooded higher ground in the distance,
form settings which are quite enchanting. Every opportunity was taken to make—may I say?—picture windows. Why not? They are windows, and they are, above all, pictures, pictures such as no artist may paint, for he is limited to the effects of an instant; here you have an ever-changing landscape.

All the sills to the windows on the first floor are kept low for window gardens, because on the outside, in front of each window, is a bed of flowers which rise above the sills, forming a beautiful foreground to the distant landscapes. Windows were placed where windows are needed. Bays jut out where they are wanted. In Mrs. Hutchinson's room the Western wall is pierced, as though to catch a last glimpse of the setting sun.

The utmost simplicity throughout in plan and decoration is the secret of its pleasing effect. Chestnut brown woodwork, with greens in some places; in others the natural color of the plaster with the brown wood give a low-tone, quiet effect. Here and there on the walls hand Dutch beaten metal work; some of the pieces are in service in the vestibule as coat-hooks. In the living room grate is a set of beautiful Gothic statuette andirons. The furnishings are simple, and in harmony with the settings. When you go from the first floor to the second you know you are in an entirely different department, for the decorations tell you so. All of the retiring apartments are daintily furnished. The wood-work of these rooms is white, with wall decorations in harmony.

The hall directly in the back of the retiring rooms is more in accord with the entertaining apartments on the first floor, as planned; it is the connecting link between them, and forms a rather pleasing transition. Everywhere you see a perfect adjustment of the several parts, an expression of homely fitness and relation to the life we live—everywhere an endeavor to serve the needs of the occupants.

We have seen a goodly interior; let us go out of doors. The house is well located at a level quite a bit above the lake, thereby increasing the beauty of the prospect.

It is somewhat difficult to assign the design to any special school. However, one feels strongly the influence of English half-timbered work, and in the stairway turret and dormers, with their trefoiled verge boards, of the French. One regrets somewhat that every piece
THE HOUSE OF MR. CHAS. L. HUTCHINSON.

Lake Geneva, Wisconsin.

Shepley, Rutan & Coolidge, Architects.
THE HOUSE OF MR. CHAS. L. HUTCHINSON.

Lake Geneva, Wisconsin.

Shepley, Rutan & Coolidge, Architects.
LIVING-ROOM IN THE HOUSE OF MR. CHAS. L. HUTCHINSON.

Lake Geneva, Wisconsin.

Shepley, Rutan & Coolidge, Architects.
of timber is not truly constructional; however, those which are give the key to the scale, and you do not feel that some are merely decorative. In fact, I think this legitimate, since the methods of construction of the 14th and 15th century half-timbered work are impractical in our extreme temperature where the swell and contraction of the timber make it impossible to keep out the weather. If the timbers are not all constructional, they are at least solid; you see no building up of ¾-inch boards tacked together to get the solid effect. All wood-work is rough-sawed, giving a good surface for the stain, which is a rich chestnut brown, with a silvery grey for the plaster. Here, as in the interior, everything takes on a common character. The materials used are simply wood, plaster and stone. The stone is used sparingly, and for the porch and garden walls is not visible, reducing the palette to two materials—a chestnut brown wood and a silvery grey plaster. The up into small divisions, thereby tying the timbers from one end to the other together, and making a decorative feature of what might otherwise be an ugly gap. It is just such materials as plate-glass which take away the domestic effect which our houses should have. A State Street plate-glass show window in a residence! Never do it—for it takes away from the true character of the house; it destroys the scale.

The windows are an example of what might be done to give ample light to the interior, yet not destroy the exterior effect by punching so many holes in the walls, for in no case, except the lower lights of the windows of the hall, living and dining rooms, was plain plate-glass used. In all other cases they are broken into small divisions, thereby tying the timbers from one end to the other together, and making a decorative feature of what might otherwise be an ugly gap. It is just such materials as plate-glass which take away the domestic effect which our houses should have. A State Street plate-glass show window in a residence! Never do it—for it takes away from the true character of the house; it destroys the scale.

The gardens are treated in the simplest and most direct manner, no attempt being made to imitate the willful-
ness or wildness of the surrounding nature. It looks like a thing never seen except near a house, making a beautiful foreground to the landscape as seen from the house, and a base and setting for the house when viewed from the lake. All along the water’s edge, directly in front of the house and garden, is a bed of wild roses, which fades away into the natural surroundings.

The shore line is very interesting. At the East is a wooded island, reached by a rustic bridge of timbers, felled upon the ground. On the island a rustic water pavilion catches the eye, from which Cedar Point and its charming reflection in the water can be seen.

All of the outbuildings are to the northwest, located in the very woods; further north, in a veritable wilderness, are the greenhouse, wood shed and catch-all.

I have said all I can of this beautiful spot. For the rest, I must let the illustrations speak for themselves. The small views are from photographs taken by Mrs. Hutchinson. Her subjects, “The Fallen Linden,” “Bird Bath,” and many others I think highly interesting;

The “handy wagon” shows the way in which they cart the timbers to build their pergolas and rustic effects of all kinds. Everything seems so close to nature, and to visit such places makes one feel as Richard Hovey felt when he wrote the lines entitled “Spring”:

“I said to my heart, I am sick of four walls
And a ceiling,
I have need of the sky;
I have business with the grass.
I will up and get away where the hawk is
wheeling,
Lone and high;
And the slow clouds go by.
I will get me away to the waters that glass
The clouds as they pass;
I will get me away to the woods.”

John Baptiste Fischer.
The Architect in Recent Fiction

In times past the architect has never apparently been a professional man of sufficiently marked social importance or distinction to figure prominently in the novel. English fiction would be emasculated in case the doctor, the barrister or the clergyman, each clad in the full panoply of his professional position, were omitted. It would even be very much impoverished in case the novelist had been deprived of the wayward and Bohemian artist, as a source of contrast to the respectable business and professional man. But the architect, who is or should be, at once the artist, the professional and the business man, might be cut out of English fiction without the loss of anything of much value. At the moment we cannot recall any character of importance who was described as an architect, except Mr. Pecksniff, and the peculiar qualities for which that gentleman is famous can hardly be attributed to his professional practice or training. The architect appears as the real estate agent might appear—merely as a piece of social or business machinery, which must be lugged in when in the course of imaginary events there is a house to be built. The very combination of artistic, business and professional standards which he represented appeared to rob his personality and his social relations of anything distinctive.

The contemporary English novel is, so far as I know, as little interested in the architect as the classic English novel; but the contemporary American novel has in this respect found new light. There are a number of American novelists to-day who are seeking with varying degrees of success to construct out of their stories a significant comment on American social life. They find more interesting material for fiction in the Boss, the Big Business Man, the Reformer, and the other new Americans than they do in the cleric, the lawyer or the physician; and among the new men which these writers are trying to un-
has placed a copy of the magazine on his table), testifies to the occurrence of the architect in American life, if to nothing else. It should be added that the situation upon which the culmination of the story turns is suggested by an architectural incident. The professional career and the personal happiness of the young architect both seem to turn upon the winning of a certain competition, and he is sorely tempted to ensure his success by using as his own the superior plans of a dead friend, who had passed these plans on to him to use as he pleased. This situation has little professional interest, and is not intended to have. Mrs. Wharton merely needed to put the architect to a test so as to see whether the vicious temper of his father or the moral influence of his mother would predominate; and the fact that the moral influence of his mother finally conquered, suggests that Mrs. Wharton’s imitation of Henry James, of which so much is made, is only superficial. Her longer stories are much more likely to fulfill a moral purpose than are Mr. James’. She shows her fundamental independence by being morally more explicit.

The explicitness of Mrs. Wharton’s moral purpose is, however, nothing to that of Mr. Herrick’s. I recommend all architects to read his story who feel that the world is too much with them. They will find in it an awful example of the demoralizing effect upon a western architect of worldly ambition. The hero of the “Common Lot,” who is also a graduate of the Ecole des Beaux Arts, craves immediate social and pecuniary success, and in order to obtain it, designs anything which will sell. As one of his clients is a dishonest contractor, he finally sells him dishonest drawings, among which are the plans of a hotel which is built in flagrant violation of the law. It is nothing but a fire-trap, and when it burns down in the presence of its designer, the guilty architect is overcome. He sees finally the error of his way, abandons his worldly ambitions, takes a position in a large office, in which his personal work is merged in that of the firm, and so accepts what Mr. Herrick calls the “Common Lot.” The story is conceived and told with sincerity; but I do not find it very interesting or important. It may be considered either as a special instance of moral turpitude, which has little or no bearing upon the conditions under which architects work in this country, or it may be considered as the sort of thing into which a good many architects are tempted and which is in this instance exaggerated for the sake of legitimate effect. In so far as it is merely a special instance, the moral is just the old and respectable one that a man may not with impunity pursue the primrose path, and while I do not dispute that moral, it is a matter for dissertation rather in clerical homilies than in architectural magazines. On the other hand, in so far as his special instance is supposed to represent prevailing conditions, I do not believe that Mr. Herrick has hit off any very significant truth. A popular architect is doubtless obliged to make a good many compromises with the world; but a high standard of technical integrity has not proved to be incompatible with success in American architecture. The American architect has a right to his place in the world of American life, and will lose much more than he gains by remaining content with the common lot of obscurity. Recognition is the breath of an artist’s life. A moral martyr may look for his reward in the approval of the Higher Powers; but the artist who has produced no effect upon his fellow men is a barren artist. And the architect is in this respect a thorough artist. Good American architecture must bring reputation and reward to its makers, or else the American buildings as well as American architects will belong to the “Common Lot.”

The architect in Mr. Robert Grant’s “Unleavened Bread” is a much more modern and interesting instance. He had, indeed, his troubles with the world, as represented by rich, importunate and ignorant clients, but his worst troubles issue from a troublesome wife. He did not marry a moral paragon, as did Mr. Herrick’s hero, but a lady who embodies in a spicy form the old Ameri-
can spirit. Selma believes with all her insistent soul that in a democracy the only qualifications which a specialist needs for his special tasks are untutored enthusiasm, common sense, and a keen eye for the main chance. She stands for the obvious, the practical, the regular and the remunerative thing. The easy critical and personal banter in which her husband’s associates pass their hours of social leisure, strikes her earnest intelligence as frivolous; and when her husband throws up a lucrative job because the wife of a client imposes impossible conditions, she stamps him as a weak and ineffective man. It is the old mid-century American point of view of immediate practical achievement at any cost reappearing at a time, when the conditions which gave it vitality and propriety no longer exist. At the same time the reincarnation of this point of view in the jealous and narrow soul of a mercenary and ambitious woman gives the social lesson an individual rendering which makes it vivid without any loss of general significance. Selma White is a very disagreeable but a very convincing character, and she represents the tradition which is the worst enemy of American architecture in American life—the tradition which resents exclusive technical standards and refuses to trust the men who by their thorough training have earned the right authoritatively to represent such standards. It is this tradition which makes so many Americans consider an architect as merely an agent whose business it is to carry out their ignorant ideas, and it is this tradition which gives virtue to the words of a man like Joe Cannon, when he vitiates against the insolent self-assertion of trained architects. It is very much alive to-day, and it was a touch of rare insight on the part of Mr. Grant to individualize it in a form which betrays its real contemporary significance. At the same time, I have some sympathy with Selma White in her attitude towards her architect of a husband. She felt the lack in him of the impulse derived from a well-domesticated tradition which would free his hands and make him build better than he knew, and the lack, which she felt and for which she condemned him, amounted to a genuine and a serious deficiency. Of course, it was not his fault, poor man. A man can acquire training and experience; but a tradition, like a gift, must be given. At the end of another thirty years, perhaps, the American architects will have a sound and popular local tradition given to them by the generation of practitioners who are now struggling along without it.

Herbert Croly.
FIG 1. THE LOGGIA DEGLI OSII.

Milan, Italy.
The two-story open Loggia in Milan, known to us all as a badly modernized building and as the Loggia degli Osii, has been restored just now and to all appearances appropriated to the business of a mercantile firm. This appropriation of the old building we may regret sincerely, but a letter from an observer and life-long student of such matters, Mr. John Safford Fiske, of Costa Lupara, states that the restoration has been conducted with great care and reserve, and that, in short, no better work could be done in the way of putting an old building into complete repair. The photograph which we publish seems to confirm this opinion.

George Edmund Street, in his book on Italian brick and marble, gives a cut of it as he saw it in 1857, and when I saw it in 1860 it was in that same much altered form. In 1882 it was in even more forlorn condition, for it had been more or less cleaned up and made to look new and fresh, in accordance with the comparative elegance of modern Milan. Street's cut is not very accurate as a drawing of what he saw so long ago—that will be evident if any one considers the curve of the arches, and the bold assertion made in the drawing that they increase in width of archivolt much more than they really do—increase very notably toward the point—as, indeed, is rather customary in thirteenth century Lombard architecture. But he shows rightly how the delicate columns had been replaced by square piers, the upper Loggia built up with brick walls and two rows of windows; and nothing left in place and unaltered except the front of the parapet with the projecting ringhiera. All this is now in a condition so very fair and so completely of the artistic epoch, that he would be a severe and a minutely informed critic who would detect discrepancies in its authenticity. As for the smaller details, one does not readily commit himself, on the authority of the photograph alone.

Street seems to have thought that the hood over the ringhiera was put on gable-wise, and he also seems to have fancied that there was ancient authority for a little scrap of gable at the top of the building and exactly in the middle. No authorities readily accessible seem to help us in the question whether all parts of the restoration were fully justified; but the general result as of an extremely vigorous, consistent design of about 1240 may be accepted without reserve. It appears that this building is all that was left at the beginning of the nineteenth century, of a great group of buildings erected by the City of Milan for its state officers and the business of the state. This double arcade was, of course, the glorification of the ringhiera, the magnificent architectural setting devised for that balcony from which decisions of the council were read to the people, or the popular opinion on certain matters publicly demanded. All this was of the time before the absolute tyranny of the Visconti under Gian Galeazzo, although there had long been a mighty influence of the Visconti family in all the affairs of the citizens of Milan. The ringhiera bears two escutcheons with the crowned vipers of that family, flanking what may be an imperial eagle. Gselfels, who is a most careful student, although writing in simple guide-book form, speaks of the eagle as the arms of a member of this Galeazzo family as late as 1466, and he would seem to assume that those shields were put up in the fifteenth century; but the acceptance of them by the restorer militates against that view of the case; at all events that interesting question is left to us to solve—whether those escutcheons were assumed by the artists now in charge of the building to be of the thirteenth century. The question as to their sculptural treatment could only be answered by very minute examination, for heraldic sculpture has always had a formal indifference of its own, peculiarly hostile to artistic inquiry.

R. S.

**THE REVERSE OF THE BROAD EXCHANGE BUILDING.**

It does not imply any reproach to the designer of the front, seen in our Figure 2, if we insist upon this point, that the rear of that same building is fully as attractive, and that Broadway would be even more interesting if it were built up in that
FIG. 2. NOS. 26-42 BROADWAY—THE FRONT.

New York City.
simple, inexpensive, unpretentious, tranquil fashion. This building up with plain brickwork and with no ornamentation allowed but patches of color, a row of dentils or corbels under a sill-course, a pierced parapet, and such like simple devices to get light and shade as well as color—such a reconstruction of our great streets could have none but a beneficial result. See, now, how the young artist in architectural forms is hampered by the supposed necessity of doing the big and ponderous thing with very costly reveals and soffits of cut granite, all of which, however, form no part at all of a structural building—all of which are mere reminiscences of a time when buildings were really built of stone. Now they are built of steel, and the laws require you to hide that steel—that is, to protect it from heat and therefore from sight. In this the laws act as a direct discouragement to novelty, to freshness, to originality of design. But if we were to say to one another that, indeed, it was not worth while to jacket our steel frame-work with such a pretentious and unmeaning mass of heavy material, and that what we had to do was to make that jacket as light and as slight as might be, we might come back to the thought suggested in the January number, pp. 65, 67, and leave our buildings as plain as might be—as plain as those in our Figure 4—until such time as a definite and reasonable, a logical system of design might suggest itself.

Now it happens that we have in the southern aspect of the "Broad Exchange Building," that immense skyscraper from the fourteenth story of which the photographs mentioned in the next note were made, an aspect which is wonderfully attractive. It is shown in Figure 3, as it appears from just above the level of the sidewalk at the corner of Broad street and Beaver street. Here are sides and ends of a building which could never be "façades" in the architectural sense, as they front on no street or public place; but, as they tower high above the five-story buildings of forty years ago, and as it is well down town for the building in that particular location where skyscrapers are less certain to rise within a year or two than they would be a little further west, so it has been thought worth while to adorn these surfaces which we are loath to call fronts, in a more decided way. Or, indeed, if no such pecuniary consideration would have weighed with the owners, all the more credit to them, for indeed the treatment of these towering masses rising high above the older buildings about, offers an opportunity for good architectural effect; and they would be terribly disfiguring to the city if left in raw, bare piles without "treatment" of any kind. It was not thought practicable to diminish by one degree the amount of daylight for the windows on the central courtyard; for who can say when that courtyard will be enclosed on this, its southern side. This practical consideration has prevented the making of a design consistent throughout.

Here in this building the pierced parapets are in their glory. There never were better examples of that interesting feature. The letting of the light sky into the dark of the walls, the invading of the light sky by the dark of the parapet, are motives of never-failing charm. And that which has been done so well at the top is echoed below by a decent treatment of brick in two colors, yellow and red—in which treatment, indeed, there are solecisms, as one might say, for there are three very different programmes put up side by side and with less than a perfect harmony between them. The reference is, of course, to the broad masses of yellow brick above separated only by pilasters, as it were, of red; a story of narrow bands in alternating color below; and below this again a system of panels between windows taken vertically in which each panel has its separate frame of light brick echoing the sill above and the lintel below. The three schemes are not wholly pleasing when seen this way in sharp contrast; and one turns with some relief to the narrow front seen on the left where the return is from the Broad street façade.

But, indeed, it is hypercritical to find any fault with this interesting mass. Its disposition follows from its plan, and its plan comes from the accidents of ownership and the need to occupy every inch of this precious plot of ground. But is it not an entertaining piece of work? And would it not be a good thing if a number of the young architects would turn their attention to such methods of design as these and try them on Broadway?

R. S.

THE REAR VIEW OF BROADWAY SKY-SCRAPERS.

It is an old story that the plainest designs are the best, among our presumptuous and over-weening street fronts. One claims no credit for reasserting that almost self-evident truth. But sometimes a new demonstration of it may be useful; and certainly it is sometimes irresistible. I was in the "Broad Exchange Building" and looking out of its westerly windows, and I saw the extraordinary group
FIG. 4. NOS. 26-42 BROADWAY—THE REAR.

New York City.
FIG. 3. THE REAR OF THE BROAD-EXCHANGE BUILDING.
Broad Street and Exchange Place, New York City. Clinton & Russell, Architects.
THE ARCHITECTURAL RECORD.

which is shown in Figure 4. The building on the right, which is the nearest, with its two great pavilions separated by an open court as wide as each of them, is a little faulty in that very fact that the horizontal dimensions are too nearly equal. But it is more interesting as a pair of fronts than it would be as a single flat façade, and the grouping gives to the monotonous street of lower New York a really delightful bit of picturesque effect with interesting shadows and shaded sides illumined by reflected light. Moreover, it is most pleasantly striped and banded with yellow bricks with a general background of red, the yellow bricks, indeed, making the quoins as well as the horizontal bands and coming very near in color to the sills and lintels. The building next door is more commonplace in its very decorative-ness, for the designer has tried to put in some street architecture in the way of a sills-course of terra-cotta rather elaborately adorned with relief patterns, and, as this sill-course forms the top of the basement or ground story, he has repeated it in a way by a very simple entablature above what we may call the entre-sol. This is very good and simple decoration, and there is certainly no fault to be found with the repetition of that entablature at the sixth and the tenth floors, and the culmination of the conservative treatment by the heavier entablature above, which includes a whole story of windows in its frieze. Undoubtedly we shall like the double building on the right better. It is in that way that we must hope to see designing done in our city streets; but the little bits of convention seen in the narrow building are interesting, too. The broad sky-scaper farthest on the left of the three high buildings is so very plain in its treatment that one becomes a little impatient at the appearance of that broad, blank course six stories below the top. It may have some reason for being, connected with its Broadway front, and as this brings up the question of the Broadway front, let us look at it. Here it is in Figure 2. The building on the left is No. 42 Broadway, and the two interesting pavilions that we saw in Figure 4 form the rear of that building—that is to say, they form its front on New street which is, indeed, the rear of that building of which the Broadway façade forms the front. Then the narrow front is No. 36 Broadway, called the Hudson Building; and the great mass on the right is so much of the Standard Oil Building, No. 26 Broadway. To the reader who is not familiar with New York numbering of houses, it may be well to state that these numbers were fixed when lower Broadway was built up with small dwelling houses and that the numbers from 26 to 42, inclusive, were really utilized in that epoch of the middle ages, each number for its own house. It is not the fault of our slow-moving City Fathers that business has caught up with the numbers and absorbed many in one.

But as to the New Street front—I do mean in all seriousness that if that one which belongs to No. 42 Broadway had a pierced parapet at top—something to make it a little less ponderous at the level of the roof—it would be a really typical front for a sky-scaper. In that way, and not otherwise, should we proceed.

R. S.

From the January number, p. 70, we shall have to return to the 8-inch reveal! No one who loves to build in bricks can refuse himself that satisfaction. Fig. 10 shows how we provide for an 8-inch reveal even in a 12-inch wall; we simply let the window-box stick out a little from the inner face of the wall, trusting to the 4-inch rebate to hold it strongly, and to the furring to cover its 2-inch projection. And this, I suppose, is a common device. In practice it has proved sufficient, even with the old hollow box-frame, as shown in Fig. 10, and of course with a solid frame and swinging or rotating casement windows the difficulty disappears. This 8-inch reveal, then, can be treated by the methods shown in Fig. 1, in Fig. 2 (January number), or another of those simple little plans.

But the builder of a contemporary business building will say that he needs the extra space within—that every inch counts, and that because of this he must be satisfied with his 4-inch reveal on this account. Non sequitur. There are two ways out of every difficulty—two ways at least—two ways to be tried even if neither one of them proves satisfactory. In the present case there is a way which will be satisfactory in nine cases out of ten. Fig. 11 shows how a projecting window-casing may be built with a 4-inch offset from the face of the wall, and how in this way an 8-inch reveal may be had with any width of upright. If now, we build this 8-inch reveal with the mouldings shown in Fig. 2 and shown at work in Fig. 5 (January number), the resulting window-casing will be good; but then there is, of course, the added expense of facing a 4-inch projection of the stone lintel along the top and at the two ends. Fig. 12 shows a perhaps unreasonably elaborate form; the lintel might equally well be cut as long as the width
across the window from out to out of the brick casing and no more. It may or may not be worth while to make that 4-inch projection, to incur that added expense, for the sake of the slight additional space gained within. As to that, each separate case will be decided by itself, but assuredly the flush lintel and the smooth wall shown in Fig. 5 is an arrangement fully as effective as the more expensive treatment shown in Figs. 11 and 12.

There is, however, one course open which will often prove irresistibly attractive. I mean the treating of the window-cases with long-and-short quoins of brick-work made to contrast with the wall-surface. If you will use the thinner bricks, those which run about eight courses to five of the common size, you may make the quoins of either sort, and the wall-facing of either sort, so they contrast aright; or you may use color only and contrast yellow quoins and flat-arch with dark-red facing, see Fig. 13. Or, again, you may employ a device which is more familiar nowadays than it has ever
been before, that of building the deep arch with flat intrados and long voussoirs of bricks, not necessarily gauged; see Fig. 15, where the moulded jamb and lintel correspond, are of the same section at the corner, and not as in Figs. 13 and 14, where the jamb only is moulded and this moulding is stopped at the uppermost quoin. This style of work has been used by Henry Rutgers Marshall, in the interesting Bryn Mawr School building, and in that admirable hospital in Livingston place, New York, not long ago destroyed. It occurs in the work of McKim, Mead & White, as in the club-house on Park avenue—the Deutscher Verein—and in great perfection in the house-front, No. 25 West 36th Street.

![Fig. 15.](image)

The people of New York, or, at any rate, a small but influential fraction thereof, have of late been very much excited on the subject of the advertisements displayed in the stations of the new Subway. A vehement protest was raised at the way in which the small still voice of the station architecture was drowned in the din of the noisy signs. Just what the outcome of the protest will be does not appear at this writing; but it looks as if in the end the Interborough Company would be compelled to moderate somewhat the loud advertising display originally proposed; and some such moderation is desirable in the interest of architectural propriety. At the same time, New York cannot altogether be congratulated on the disposition shown by her aesthetic enthusiasts. That advertising signs placed in a subway station should be subordinated to a carefully prepared architectural design is not to be questioned; but I am ready to question with complete effrontery the assertion that the instalment of any advertisements at all in this or other subway stations is a species of aesthetic and civic defilement. It is nothing of the sort. The use of display advertisements in public places properly regulated, as it is in Paris, adds enormously to the lively, the picturesque and the racy quality which is appropriate to the squares and thoroughfares upon which people congregate. People are interested in such advertisements just as they are interested in the shop windows. They are part of the natural and desirable scenery of a public place; and the notion of banishing them entirely either from the streets or from the city subway stations issues from a false ideal of aesthetic purism. The trouble with the existing subway stations is that the architect was not asked to design them with a view to the display of a certain number of advertising signs. The consequence is that the architecture contains no definite place for them, just as the architecture of a "swell" room might contain a panel especially prepared to receive tapestry. But even though there are no panels designed for advertising in the subway stations, those stations may be made distinctly more interesting when the waste of white tiles is watered with a certain number of signs regulated to a certain size.

I have said that a false ideal of aesthetic purism lies behind the notion that display advertising defiles places of popular assembly. Many civic art reformers have an extraordinary and baleful idea that in order to make something beautiful you must divorce from every trace of vulgar popular association, and as long as this artistic asceticism prevails the so-called civic art movement will absolutely fall to awaken lively popular interest or to correct the popular taste. Of course I do not mean that advertising signs should be plastered on the sides of public buildings, or that any compromises should be made in the design and decoration of public buildings with the highest prevailing technical standards. It is all a matter of propriety. In streets and subway stations where people crowd and jostle, and where the surroundings are familiar and utilitarian, it is as appropriate to place advertisements as it is to use slang in newspapers. The man in the street is not interested in white tiles, even with colored frames; but he is interested in "Sunny Jim" and the "Smile that won't come off." Of the most effective, the most insidious way to improve public taste is to improve the character and setting of these heroes of display advertising, and in view of the fact that certain improvements have been taking
place in recent years, and that "posters" and the like are frequently designed by good illustrators, the level of public advertising might be very much raised by an insistent attempt to make display signs conform to certain architectural conditions. At any rate it should be kept in mind that popular tastes and instincts cannot be wholly ignored in a democracy even by municipal art reformers. The popular taste runs in the direction of lively illustrations of humorous types—in the direction of "Buster Brownes" and "Sunny Jims." That is the real popular art of to-day, and any formative art criticism must recognize this fact and give it its due weight. Municipal art reformers should aim to make art interesting and useful, and they can accomplish this result only by bringing their aesthetic standards into some constructive relation with the sort of art display which the ordinary American really enjoys. Americans make a show of enjoying many things which they believe they ought to enjoy; but it is not hard to distinguish the difference between the sort of thing which they are told to like and the sort of thing which they like without being told.

H. D. C.

NEW METHODS AT COLUMBIA.

Various notices in the daily press have attracted attention to the action of the Columbia University Trustees with relation to the School of Architecture. This action which was of a somewhat radical character, embodied the results of the consideration of a long and minute report made to the trustees last spring by the staff of the school in response to a budget of letters which the trustees had invited from leading architects of the city, and had referred to the staff of the school for consideration and report. The substance of this action is as follows:

1. The requirements for admission to the courses of the school for a degree are greatly raised, by the insistence upon two years of collegiate or scientific school study as a requisite for admission, besides a certain proficiency in the orders of architecture, elementary projections, shades and shadows, drawing from cast and the like.

2. A new provision whereby "special students" of exceptional architectural ability, not candidates for a degree, may be admitted to such candidacy without being obliged to make up the entrance requirements. In other words, special artistic and architectural proficiency and superior performance of the work of the school may, by special action of the faculty, be accepted as a substitute for certain deficiencies in the requirements exacted of other students. This opens the door of opportunity to a class of students whose early training has been deficient but who, nevertheless, are capable of reaching high distinction in the profession.

3. The establishment by the school of official draughting rooms or ateliers in the neighborhood of the offices of a few distinguished architects, in which ateliers students of advanced design may pursue their work under the supervision and guidance of these distinguished men. The privilege of electing the atelier and instructor is also extended to include several private ateliers not maintained by the university itself, so that students in advanced design will have the opportunity of studying in any one of at least six different ateliers, including the one at the school itself. This introduces a new element of flexibility in the instruction and of emulation in the students' work, which should benefit very greatly the work in design. Furthermore, the policy which has for two or three years been gradually shaping itself in the administration of the school with regard to the duration of the course, has now been definitely formulated in the announcement that "the length of the school course for the degree is indeterminate," so that while some students may cover it in three or three and a half years and others in four years, there is nothing to prevent a student from devoting five or six years to the work. This will remove the stigma which has hitherto attached to the failure to graduate in four years, and will permit the student who works more slowly than the rest or whose time is not fully his own to do his work thoroughly and well rather than hastily.

In addition to these measures the trustees recognized the importance of the graphical side of architectural training by promoting Adjunct Professor Sherman to a professorship of graphics, while Adjunct Professor Hamlin was promoted to the professorship of architectural history, and formally appointed head of the school. These measures place the school upon a new and sure foundation. They destroy the old-fashioned tradition of a course of so many years instead of a course of a definite amount of work. They open the door of opportunity for university honors to men who hitherto have found it closed by lack of early opportunities; they greatly broaden the scope of the
instruction in advanced design; they enlist the services of a number of distinguished architects in the active work of the school, thus bringing the school into closer relations with the profession; and this last purpose has been furthered by officially endorsing the principle already recognized experimentally during the past year, of engaging professional juries to make the awards and pass judgment upon the work in design. These are steps distinctly in advance, designed to place the school upon a new and higher plane, exacting higher standards both of admission and performance and relating its instruction more closely to the actual professional life in many ways. They ought to result not only in a large increase in the number of students attending the school and a material advance in the quality of the work they produce, but also in a keener interest in the school on the part of the profession and of the general public. The trustees have shown that they are warmly interested in the school, that they do not propose to rest satisfied with past achievements, and that they welcome the co-operation, interest and even criticism of the profession.

THE METROPOLITAN SOCIETY OF BOSTON.

Of the making of new improvement societies there is no end—a fact that is notable in itself—so that as a general rule it is hardly worth while to chronicle the forming of a new one, or to speak of purposes until they have been changed into achievements. But occasionally the circumstances that accompany a small beginning seem so certainly to insure an important issue that the temptation to note the beginning and speak prophetically is not to be resisted. Such an instance is that offered by the Metropolitan Society, recently organized in Boston. As a result of several conferences last spring, and the appointment of a committee to work out details, a meeting was called at the St. Botolph Club early in November. At this the organization was perfected, and the following list of officers was elected: President, Robert A. Bolt; Secretary, George Howard Cox; Executive Committee, Sylvester Baxter, Meyer Bloomfield, Charles E. Fay, John Mason Little, and Frederick Law Olmsted. The work that the society has mapped out for itself is the physical betterment of the Boston metropolitan district by securing effective co-operation and stimulating increased activity among those in Boston and in its surrounding towns and cities who wish to make the district more beautiful, convenient and economical as a place of work and residence. And it will assume as an immediate, specific undertaking the support of the governor's recommendation to the legislature on the subject of metropolitan thoroughfares. Various circumstances lend a special interest to the formation of this society. With notably little extension of the Boston city boundaries, there has been a remarkable development of the metropolitan spirit. To more than twenty surrounding communities, that are entirely distinct from it save in the public works, Boston is truly and in an interesting economic sense the "Hub." Water, sewage, and park systems are planned and developed by metropolitan commissions, and the present suggestion is that a metropolitan highway commission be added to these. The advantages of such planning, not only in the case of Boston but in that of every city, needs no explanation. Of the work of the various commissions, that of the Metropolitan Park Commission is, because of its popular character, most widely appreciated, and to make its establishment possible—while the idea was still novel—no living person did more than Sylvester Baxter who became its first secretary and who is one of the prime movers in the new society. The latter is formed, it is also interesting to note, immediately on the conclusion of a series of articles concerning the possibilities of the Greater Boston that Mr. Baxter had been contributing to the "Herald." His cordial enlistment in the present enterprise, in view of his previous success; the support of the governor and the local popular endorsement of metropolitan commissions, make notable the formation of this society.

AN AMERICAN DEFICIENCY.

There is at least one kind of public beneficence in which the United States is behind the countries across the seas. The fact seems incredible that with all the American lavishness of giving, there should be still any department into which we venture only gingerly, while in Great Britain it has become an accepted means of generously expressing civic spirit. This is the private gift of municipal buildings. Americans give outright nearly every other kind of public structure, but the town hall of the smaller community marks the limit of private beneficence in this direction. We, who are constantly startling the world with our great gifts, can scarcely comprehend such benefi-
THE WELLS BUILDING.

Milwaukee, Wisconsin.

ence as that announced in an inconspicuous note in the London "Times" which says that Lord Ashton has offered "a minimum of £50,000 for new municipal buildings at Lancaster." The town council, officially notified of the gift, voted, on November 9th, gratefully to accept it; and various other gifts, including a promise to maintain the present town hall and municipal buildings "for the benefit of the town," were made by Lord Ashton at the same time. Lancaster is a place of about 50,000 inhabitants so that a municipal building costing not less than a quarter of a million dollars should serve it pretty well. There is many an American city where such a gift would be acceptable; and with all the giving of squares, parks, libraries and town halls, it is a bit strange that city halls have been overlooked.

Detroit papers report that the Board of Commerce of that city, through its municipal committee, has engaged Charles Mulford Robinson to make a report on practicable measures for the improvement and beautifying of the city. Mr. Robinson went to Detroit in November, spending several days as a guest of the committee and visiting every part of the city. He has since prepared a long written report, in which special stress is laid on the improvement of a portion of the waterfront and the development of the Campus Martius as a civic center —although the whole urban district is more or less covered by his recommendations. Detroit is thoroughly aroused to its possibilities and there is likely to be a very interesting development, on the waterfront at least. In thus securing expert outside advice, the city has put itself in line with Harrisburg, Cleveland, Ottawa, San Francisco and Buffalo, in a widespread movement that is very significant. There is great economy in having a definite plan to work toward so that each step, as it is taken, may be in the right direction and count in the final result.

It is remarkable that it should have been necessary to organize a Street Sign Conference of Municipal Organizations in the great City of New York, and that there should have been need of appointing a committee to appear before the city officials to plead, as they did a few weeks ago, the importance of having street signs. But there was, as every New Yorker knows, such urgent need of the action that it is well to have had it taken. The resolutions of the conference asked: (1) for signs on electric light poles; (2) for "reflector signs" on Welshbach lights; (3) for signs on elevated railroad pillars at street intersections; (4) for metal signs showing white letters on blue enamel at street corners where it is necessary to use the walls of buildings; (5) for blue flash glass sign, with white letters, on the gas lamps. The granting of these requests would certainly make it very easy to find one's way about the city; but the sign would not add to the city's beauty. However, in the present lack of this street equipment, one can understand the eagerness to get anything and a willingness to forego for a time those artistic results which were sought, with much of delay, by the last administration. But this is work that will never be completely accomplished until the signs are artistic and are uniform.

Civic improvement chroniclelings include notes of at least three interesting additions in November to the artistic possessions of Massachusetts. One of these was the fountain of Carrara marble presented to the town of Holyoke by Mrs. William F. Draper. The fountain is from the chisel of Waldo Story, and is reported to be an admirable work, well placed on the library grounds. A second is the statue of Robert Treat Paine, in front of the City Hall at Taunton; and the third is the hanging of French's bronze doors in the Public Library at Boston. The Paine memorial is a portrait statue by Richard E. Brooks. The figure is in the picturesque dress of the Revolutionary period, and the plastic acceptability of this is further enhanced by a cloak which hangs from the left shoulder. The material of the pedestal is warm colored granite and the principal inscription is on a bronze panel of "warm, mossy green." The memorial is placed at the junction of several streets converging in an open space before the City Hall, where there is given to it a background of foliage. The sculptor knew his site before he made his model and proportioned his work accordingly. Of Mr. French's doors it is unnecessary to speak here with equal fullness. As is well known, there are six, each containing an allegorical full length figure in low relief, so departing from the much more familiar Ghiberti plan of many
small panels in high relief. The doors are also unusual in the circumstance that they are not outside, but serve to connect the vestibule with the entrance hall. Their added enrichment of the artistic possessions of the famous library makes one only the more impatient to see completed the long-awaited Saint Gaudens groups for the exterior.

AN ARCHITECT WHO WRITES.

It is always refreshing and interesting to find an artist who has certain definite ideas about his work and has the power of expressing them; and inasmuch as the art of this country is, in some measure, a gospel as well as a practice, the American artist with communicable convictions has an important part to play, which is independent of the value of his personal work. Of course the best way to preach the gospel of any art is to practice it in a consummate manner; but in a country like ours which takes hold of ideas better than it does of beautiful things, the man who can translate his purposes into words has a peculiar and special value. Mr. Elmer Grey, of Los Angeles, who contributed an article to the January issue of the “Architectural Record” on “Architecture In Southern California,” is one of the few American architects who has the disposition and the power to write as well as to design. Mr. Grey is not a college man. He entered an architect’s office in Milwaukee in 1887, and attracted attention in 1890 by winning the first prize in a competition for a water tower and pumping station, instituted by the “Engineering and Building Record” of New York. At that time he was working in the office of Ferry & Clas, in Milwaukee, with whom he remained for twelve years, during which time he assisted in the design of two of the largest library buildings in the country, that of Milwaukee and that of the Wisconsin State Historical Library of Wisconsin. Throughout these years he took advantage of his vacations by devoting much time to sketching abroad. Many of his water-color sketches have been reproduced in architectural periodicals, and two of them hang in the permanent collection of the Chicago Art Institute. After Mr. Grey began to practice in his own name, his work consisted, more than anything else, in the design of residences, among which are a group of houses erected at Fox Point, near Milwaukee, have attracted particular attention. In the character of his architectural designs, Mr. Grey must be classed among the group of middle western architects who have succeeded in combining a careful composition of the masses of their buildings with an irregularity of outline which makes the house harmonize with the unkempt western landscape. A short time ago Mr. Grey’s health succumbed to the arduous work which he had been doing, and he went to Southern California to recuperate. He has since resumed the practice of his profession in Los Angeles, where he already considers himself pretty well at home. Associated in the same office with him is Mr. Myron Hunt, who has migrated to California for much the same reason as Mr. Grey, and who left behind him in Chicago such an enviable reputation for idiomatic and original design.

Both Mr. Hunt and Mr. Grey stand for the attempt to naturalize in this country the best traditions of European architecture. Mr. Grey, for instance, believes that a very genuine American style is in the process of making; but that as yet it is only in its infancy. Significant American variations from the European forms can already be clearly distinguished, but these variations remain undeveloped largely because we so rarely build in a thorough-going way—we so rarely treat our local problems and materials honestly. Wood, for instance, has been the popular American building material, but it has
been used chiefly to imitate effects which can be better obtained by the use of other materials. Mr. Grey, in his own work, has treated his material respectfully by using solid wooden beams for ceiling and solid wooden porch posts. Solid beams will show knots and will check, but both of these qualities he considers virtues rather than defects because they are qualities natural to the material and testify to its integrity. The built-

up beam or post will warp in time and show its hollow core. It may be graceful and pretty, but it can repair the ravages of time only by recourse to the rouge-pot and powder-puff, while the solid beam must improve with age. The immediate future of American architecture depends on using its proper materials idiomatically, and, inasmuch as the use of wood is in time bound to be superseded, it depends particularly upon the idiomatic use of tiles, armored concrete and perhaps of certain kinds of manufactured stone. This is the point of view which Mr. Grey represents both in his work and in his writing; and there can be no doubt that it is the wholesome and formative point of view both for American architecture and American architectural criticism.

We have mentioned above the excellence and quality of some of Mr. Myron Hunt's work. The "Architectural Record" of October, 1904, contained a number of interiors of two houses in and near Chicago—the Healy house of Sheridan Road and that of Mr. Pirie, Jr., in Evanston. Par-

Evanston, Ill.

Myron Hunt, Architect.

HOUSE OF I. T. PIRIE, JR.
THE HEALY HOUSE.

Sheridan Road, Chicago, Ill.  
Myron Hunt, Architect.
without being in the least stiff and rigid; and it is simple and unpretentious without being in the least insignificant. The Healy house is similarly appropriate and interesting. In this case the architect had the advantages of a larger site, a more substantial material and ampler dimensions. The placing of the porch on the front of the house has interfered with the complete success of the street façade; but assuming that this arrangement was necessary, it is at any rate well-managed. The solid brick balustrade with a stone coping, the plain brick piers, emphasized by a buttress on the wall and the projecting roof with its strong shadows, all of this harmonizes admirably with the plain surface and the salient lines of the house. Its attractiveness is derived solely from its strong masses and lines and its lively surfaces and shadows; and its bulk is nicely scaled to the size of the surrounding trees. There is nothing arbitrary about it, as if the architect were forcing an idea; yet there is nothing merely conventional. It stands on its own site and speaks its own language. As much cannot be said for the little brick house, also by Mr. Myron Hunt, illustrated on this page. In this little box the scale of the bay window and the shadow it throws makes every other aspect of the façade, except the surfaces, insignificant. The design is not the issue of a very happy idea; yet, nevertheless, how plainly it betrays the hand of the self-respecting and skilled architect! What a contrast it offers the usual machine-made thing!

For many years it was the practice of architects to pretend that the party walls of "skyscrapers" which in certain situations are actually more conspicuous than the street fronts, were really not to be seen. The front was more or less completely designed according to the ability of the architect, but it was assumed that the side and rear walls would eventually be screened by other tall buildings and that in the meantime no one need look. This practice is still followed in many instances; but in New York it has become more and more the custom to pay some attention to the lesser façades of large office buildings. There has rarely been any effort to construct these walls of materials as expensive as those used on the street fronts; and in many cases no openings are possible; but bricks of several colors arranged in appropriate patterns can be used and have been used in a number of New York buildings. Such instances are scarcer in Chicago; but we reproduce here-

RESIDENCE IN OAK PARK. Myron Hunt, Architect.
NOTES AND QUERIES.

Mr. Myron Hunt.

Los Angeles, Cal.

with a photograph of the party wall of the Rector Building at the southeast corner of Clark and Monroe streets. In this building, which is interesting in several respects, and which will receive more extended notice after its completion, the architect, Mr. Jarvis Hunt, has made the party wall very much more interesting than usual at an expense which cannot have amounted to more than a few hundred dollars. The result has been obtained by using face and common brick of varying colors, arranged in appropriate patterns. As the building actually elbows the adjoining building, no projections were possible; but this fact merely brings out the screen-like function and character of the wall. It is to be hoped that this example will find an increasing number of imitators.

We reproduce on the following pages of this issue some illustrations of the house of Louis A. Thebaud, situated at Morristown, N. J. The architects of this house, Messrs. Roos and Booraem, have managed to combine both in the interior and the exterior of the building good architectural design with a pleasant, home-likeness of effect. It shows throughout the marks of careful study by an experienced architect and of an owner who desired comfortable as well as interesting surroundings.

The scale of the house and grounds is not that of a large country estate. It is rather that of a spacious and handsome suburban house, which is surrounded by enough land to enable the architect to obtain his full effect, but which is nevertheless influenced by the fact that it is approached from a street. This condition explains certain of the landscape arrangements.
THE HOUSE OF MR. LOUIS A. THEBAUD.

Morrison, N. J.

Roos & Boorne, Architects.
THE HOUSE OF MR. LOUIS A. THEBAUD.

Morristown, N. J.

Roos & Booraem, Architects.
THE HOUSE OF MR. LOUIS A. THEBAUD.

Morristown, N. J.

Roos & Booraem, Architects.
DINING-ROOM AND BILLIARD-ROOM.

House of Mr. Louis A. Thebaud.

Morristown, N. J.  
Roos & Booraem, Architects.
HALL AND LIVING-ROOM.
House of Mr. Louis A. Thebaud.

Morristown, N. J. Roos & Booraem, Architects.
NOTES AND QUERIES.

THE HOWE HOUSE.

Evanston, Ill.  Pond & Pond, Architects.
New York City.

THE CRITERION CLUB.

S. B. Eisdorath, Architect.
TECHNICAL DEPARTMENT.

INTERIOR FIREPROOFING.

[The following is the fourth of a series of Technical-Industrial Reports upon a certain System of Fireproofing, made to the Manufacturers by the well-known expert on Building Construction, Mr. William J. Fryer.]

In the preceding chapters the defects and disadvantages of various materials as ordinarily used in fireproof work have been pointed out, and the statement made that there is room for and a necessity for something better. An ideal fireproof material has been produced and placed on the market by the Hecla Iron Works, the largest and best known manufacturers of ornamental iron and bronze work for buildings in the United States. The high standing of this company is a guarantee in advance that their fireproof material bears a reliable stamp of merit.

An Ideal Material—the Hecla

The manufacturers make no secret of the Hecla Fireproof material. It is composed of a mixture of magnesite, a mineral, and chloride of magnesia, a fluid, and in this mixture is used a fibrous material such as excelsior, hemp, straw, sawdust, wood pulp or the like, so that the product itself can expand or contract without warping or cracking. The chloride of magnesia is the setting material when added to the magnesite, and converts the mass into a light, strong, stone-like substance that cannot be rendered flammable by heat at any known temperature. Special-designed machinery is used for the mixing, and when the chloride of magnesium is added to the magnesite and fibrous material, the composition is ready to be used in place or put in any desired form by simply being pressed or tamped. For the exposed surfaces, on the outsides of the coarser body a thin coat of the material, about one-quarter of an inch thick is applied at the same time, but using for the latter wood pulp as the fibre, in order to make a dense, smooth finish. In case the surface is to be plastered, as for a partition or a ceiling, the finer surface is omitted and the plastering done direct on the coarser body which affords a good key for the plaster coat. The material can be sawed or cut almost as readily as wood, although a little hard on tools. It can be polished or stained, oiled, varnished or otherwise treated in a decorative manner.

There is nothing startling about the Hecla material. In a modified way, the merits of magnesia coverings for steam pipes are quite generally known. The principal ingredient entering into the Hecla material is rather expensive, as it is imported, and the first cost in Greece, the sea transportation, the import duty, and the middlemen's profits all added together bring the price per ton rather high for what may be considered a raw material into which no American labor has entered or even is in competition. But in some other respects an advantage in cost is had over that of burnt clay and concrete, so that the Hecla material can meet other systems of fireproofing on fairly equal grounds as regards price when installed in buildings.

What are the evidences of the Hecla material being fireproof? Prof. Ira H. Woolson, E. M., made tests of several specimens of the material in the testing laboratory of Columbia University, to ascertain the effect of the continual application of fire to the specimens for periods of time under temperatures varying from 900° to 2,700°F, with an average of 2,500° during the last fifty minutes in one of the tests. The melting point of cast iron and steel is about 2,500°, and a one-inch
square bar of cast iron used as a support for a specimen tested was half melted away, which was confirmatory evidence of the high heat attained. The transfer of heat through the specimens by conductivity was noted. Upon the top side of a sample block one foot square and 3 ¾ inches thick, laid with the smooth surface down over a 6-inch furnace with strong air blast, a thermometer was placed directly above the furnace fire with the bare mercury bulb resting upon the sample, and suitably protected from the surrounding heat. With the highest temperature a maximum of 60° was recorded, the material being scarcely warm to the hand on the side opposite the surface subjected to the extreme heat. At the end of the heat test the sample was removed from the fire and plunged under a strong stream of cold water. No cracks resulted. The effect of the force of the water was to wash off the soft and spongy charred surface of the material. The elaborate report of Prof. Woolson ends with the following opinion: "Taking all the evidence into consideration, I should unhesitatingly say that the Hecla material is a most excellent non-conductor of heat and its fireproofing qualities of the best. I believe it safe to say that if a fire were to occur in a building where this material was used it would remain intact long after all the ordinary construction material surrounding it had perished."

A Hecla fireproof door, two inches in thickness, was tested in December last in the Underwriters’ Laboratories in Chicago, under the direction of the National Board of Fire Underwriters, and subjected to fire and water as in a real conflagration. The door was in position at the end of the fire test and proved to be an effective fire stop, free from warping or bulging under a high temperature; it proved that the material is a very good non-conductor of heat; that the material does not support nor carry flame, but is slowly calcined on the surface at high temperatures, the calcined surface serving to protect the material back of it; and that the material is not materially affected by the application of a stream of water and consequent rapid cooling.

For inside trim the Hecla material has been used in a number of buildings where cost was a secondary consideration: In the St. Regis Hotel, the latest and most expensively fitted up of hotels, and in the Hanover Bank Building in New York, and in the new addition to the Prudential Life Building in Newark, and in other buildings.

Architects are conservative in adopting new materials, and very properly so. Suppose an architect has a building to erect whose height comes under the provision of a law which forbids the use of wood except for certain purposes, and then only on condition that the wood so used shall be treated by some so-called fireproof process. The architect has doubts of the efficacy of "fireproof" wood, but he knows that the treated floor boards will result in a trebled increase of cost over a non-treated floor. The usual alternative is to use a cement or a tile surface floor. He objects to a cement floor on account of its hardness to the feet and because it grinds up into dust, and is sure to crack. A tile floor is too expensive. The Hecla fireproofing is offered to him, but his own judgment or the liking of his client is for hollow burnt clay blocks or stone concrete as the filling between the steel floor beams, with cinder concrete on top of the arches. Very good. The Hecla fireproofing still offers him a relief and an advantage in getting not only a satisfactory, but the best walking surface for his floor that he can possibly get in the present state of the building arts. On top of the cinder concrete which reaches up level with the top of the floor beams is put two inches in thickness of the coarser or cushioned Hecla material with a quarter of an inch in thickness of the same but finer material for the finished surface. Such a floor will have all the elasticity of wood, be without joints, will not crack or warp, and as it can be treated the same as though it were of wood, will be handsomer than wood and be more durable, besides being fireproof, and will wear better than cement or white marble.

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The Architect's Side of It

AN EXTRAORDINARY STATEMENT

"The complaint is sometimes made," said one of our leading Architects, "that we 'artistic fellows' are impracticable. We are supposed to have some very 'queer ideas' that have got nothing at all to do with the 'real thing.' Perhaps we have, I don't know, but if we have, I don't believe that we can be doing anything worse than is done daily by the men who boast of their practicalness and their hard-headed business sense. For instance there are millions, yes hundreds of millions of dollars spent annually on catalogues. A great many of these millions are poured into the offices of us Architects. In this office, for instance, we receive about 4,000 catalogues a year. What are they sent to us for? I often wonder what the idea was in the head of their originators. Do the makers of these catalogues think that we have leisure to read 'literature,' and are interested in going through pages telling us about the history of 'Calcium Carbide,' the 'Evolution of Hardware,' or the development year by year of the firm of 'John Smith & Co.' Don't laugh! Look at this, and this, and this.

"Here is one of the biggest plumbing firms in the United States that projects into a busy Architect's office a 168-page book, setting forth the history of the firm. I have hardly time to read my newspaper, certainly little time even for professional reading in which I am interested, and my case is the case of nearly all Architects who are at all likely to buy the goods made by that particular high-class firm.

"I wonder what induces a highly practical concern to waste its money in this way. I imagine that they think they are doing something. Why don't they make a few inquiries and find out really where 'they are at?'

"Again, look at this. Here is a ponderous volume or catalogue sent out by a big hardware concern. It is intended, I suppose, for the use of Architects, yet it contains illustrations and information in regard to 'sausage meat choppers.' Let us turn to the book. Look at all these pages devoted to the cheapest kind of door-knobs, japanned locks, simple window catches, etc., etc. Do Architects specify any of these? They are bought at the hardware store, and they are so common that to get them you hardly have to call for them. That volume cost the firm that got it out a great many thousands of dollars, and yet, I venture to say, that so far as we Architects are concerned it could be boiled down to advantage to about 25% of its present size. The man who produced that book had not learned to 'distinguish.' His book performs several functions. It contains information for the Architect, information for the big contractor, information for the local contractor, information for the hardware man of many degrees, from the big
store in New York City to the small corner store at 'Jones' Corners,' but the man who got the book up bunched the entire output, and, therefore, wastes his money, distributing useless information to people who can't use it. The volume is certainly 50% inefficient. Of the cost, also, I should say 50% is thrown away. Why not send to the Architect the information that the Architect really wants and really uses, and not waste money dumping upon him the information about 'meat choppers' and 'Japanned door-knobs?' But don't think that the hardware man is alone in this business. He has good company.

"Here is a monstrous volume produced, as you see, by another of our leading plumbing supply firms. Feel the weight of it. That weight is put there, no doubt, in order to make the book easily handled. I suppose it is made big because nearly all of the publishers in the world are finding out that the people want small, light and flexible books. Single volumes of 'Shakespeare' have long ago given place to a dozen or more little portable books in a case. Moreover, as you will see, this book is so large and expensive that the publisher can get it out only once every four years. That is another advantage of 'size.' The book is only up to date for a short period; then to correct this, the firm keeps on sending us leaflets which, by the very nature of things, 'get lost.' Oh! it's a great practical game, this. Moreover, this big plumbing volume contains a great mass of illustrations and other matter that is not of the slightest consequence to the Architect. It is all right for the local plumber, but what does the Architect want with hundreds of commonplace plumbing articles which he never specifies? All of this is a very stupid waste of money, but it becomes sublimely ridiculous when you join it to the whole 'catalogue game' and see how this is played in its entirety.

"Hardly two catalogues that come to this office are of the same area. Hardly two of them are of the same thickness. I was going to say that hardly two of them opened in the same manner, but there is no need to make this game any funnier than it is. Some catalogues have stiff covers, some are flimsy and thin, some are dainty and delicate in color, as though they were intended for a ladies' boudoir. These butterfly things usually announce inside the merits of some ponderous piece of machinery. Some of these catalogues are made to hang up, but there is no indication of what we are to do with the majority of them. Shall we stack them up on their edges, or lay them down on their backs? If we do this, how can we find anything we are looking for? I want, for instance, at a given moment, the catalogue of 'Jones & Co.' It measures 4x8. There are sixteen pages in it. It is squeezed in somewhere among hundreds of other catalogues, some of them four or eight times the size of it. I might just as well hunt for a postage stamp in the debris of a rag-paper shop. Oh! I know it is supposed that some Architects keep 'a system'; so they do. I do. We spend money in having our office boy file the catalogues away as they come in. He is also instructed to make a card index. That's the theory of it. It seems simple enough until you begin to work it out. The office boy's brains are not equal to it. Ask any librarian whether he finds it an easy thing to make a catalogue of books. He will tell you it isn't. Should this volume of 'Smith's,' for instance, be indexed
under ‘Sociology,’ or ‘Economics,’ or ‘History’? Those are the puzzles.

“I hunted the other day for the ‘Westinghouse’ catalogue, and I found it down under ‘Contractors’—the office boy had put it there. Well, there are electrical contractors, but when I am looking for the ‘Westinghouse Co.’s’ products I do not naturally associate them with the operations of a firm like ‘D. C. Weeks,’ the ‘Fuller Company,’ or the ‘Thompson-Starrett Co.’ Elevators sometimes go among elevator catalogues, sometimes under ‘Machinery.’ Boilers are placed under ‘Steam Fittings,’ sometimes under ‘Heating.’ The result is a mitigated chaos. You see, some office boys do better than others, but all office boys get somehow mixed. Of course, if I could afford to let my Specification Manager look after this work of the filing away of catalogues, it would be all right. That is too costly. Besides, we haven’t time. Again, even if the catalogues were filed right in the beginning, they must be taken out of their files; they must be handed around; they are sure to be left on desks, dropped on the floor, and when they are to be refilled again, the ‘filing difficulty’ again once more comes to the front.

“Of course, most catalogues are thrown away. I suppose our office throws away intentionally 70%, and 20% gets lost ‘somehow,’ but the worst feature of all is this: catalogues are intended for reference. They are not, they never can be ‘reading.’ Any firm that tries its hand at ‘literature’ in a catalogue pays for nothing. The value of catalogues is for reference. By reference I mean that they shall be turned to, so to speak, at a moment’s notice, for the purpose of obtaining a specific piece of information. ‘A dictionary is a book of reference, and anything that is put in the dictionary that contradicts the reference idea may be good matter, but it certainly is in the wrong place. If the catalogue isn’t an article of reference, it isn’t anything. It is not even good waste paper.

“What the Architect would like to do with the catalogues is to have them in a dictionary shape, so that he can get at ‘Laundry Machinery,’ or ‘Wire Glass,’ or ‘Radiators,’ or ‘Bathroom Fixtures,’ or ‘Hot Air Furnaces,’ or ‘Vacuum System of Heating,’ and find with his thumb just what he wants. If his thumb can’t do the work, there is something wrong with the dictionary.

Long ago, the railroad men of this country were forced by common sense to adopt a common gauge for their track. Why don’t the catalogue men do the same thing, standardize their printed matter, and then, if you please, nothing will seem more natural than that they should get all together and have it down in one book, or two books, or ten books with an index. The Architect will then have what he wants, a Dictionary of Building Materials. Don’t tell me, however, that the Architect is the only impracticable pebble on the beach so long as building material firms stick to their present methods of dealing with their catalogues. I suppose they stick to it because they won’t think about the situation. The heads of houses will not go out and make inquiries for themselves. They accept a lot of ‘interested advice’ from existing catalogue printers, etc., as being ‘straight goods.’ Moreover, it pleases, I suppose, the head of a firm to see and handle his own literature. He talks
with the paper man, the cut man, the printer. He worries his head about the color of the cover, paper, the color of the ink, the phraseology of the letter-press, the exact wordings of titles, etc. He talks and compares and advises, and finally the booklet is produced. But into how rude a world is this offspring of his thrust! So long as his catalogue is in his own hands, it is undoubtedly a thing of beauty, but that is not the commercial position from which he ought to look at it. He should regard it rather after it has been dumped in the mail and delivered amid a mass of paper (one of a thousand similar catalogues) in an Architect's office, subjected to the dangers of the waste paper basket and the carelessness of the office boy.

"Most of our manufacturers today are simply distributing printed matter from the press to the waste paper basket. Remember, I am talking so far as we Architects are concerned. I suppose people do 'write in' making inquiries for information, and 'literature' is then in order, but why mix drinks; why confuse ideas? The Architect needs the reference; the applicant needs information, and perhaps the story about the firm doesn't do any harm then if thrown in."

The foregoing is one of about One Thousand interviews held, by person and by correspondence, with the leading Architects of the country in regard to Catalogues. These interviews were undertaken by the Architectural Record in order to appraise with certainty the value of catalogues. The information gathered will gladly be placed at the disposal of any Building Material firm who will drop us a postal card. There is not a single dissenting opinion from the one expressed above among the entire One Thousand. As a result the Architectural Record Co. has undertaken to organize a Modern Catalogue System—a Dictionary of Building Materials on an elaborate scale and Scientific Method. A large number of the biggest firms in the Construction field are adopting it and arrangements have already been made to place the system in the offices of Five Thousand Architects, Engineers, Contractors and others. The names of these five thousand offices will be furnished. Correspondence with firms now issuing catalogues (90% waste) is solicited.

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