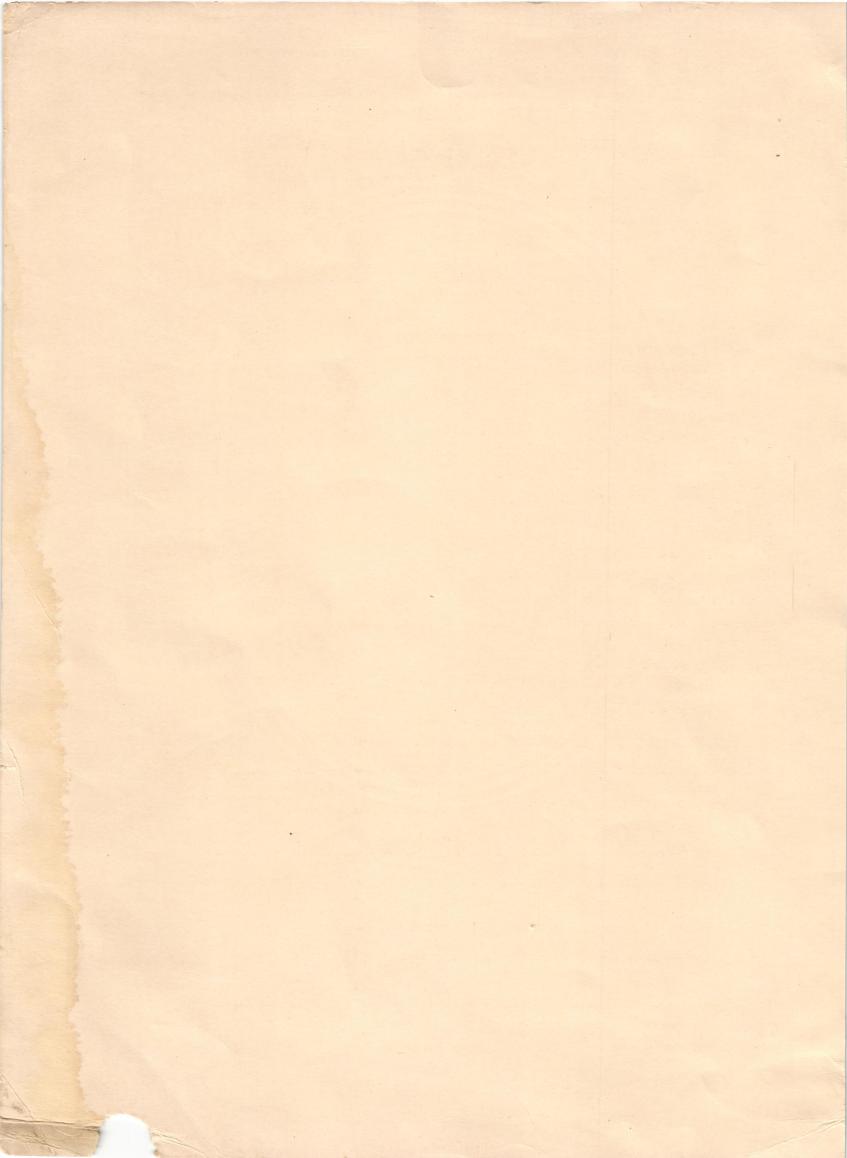
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# Journal of the AMERICAN INSTITUTE OF ARCHITECTS

Volume XVI

JULY, 1928

Number 7

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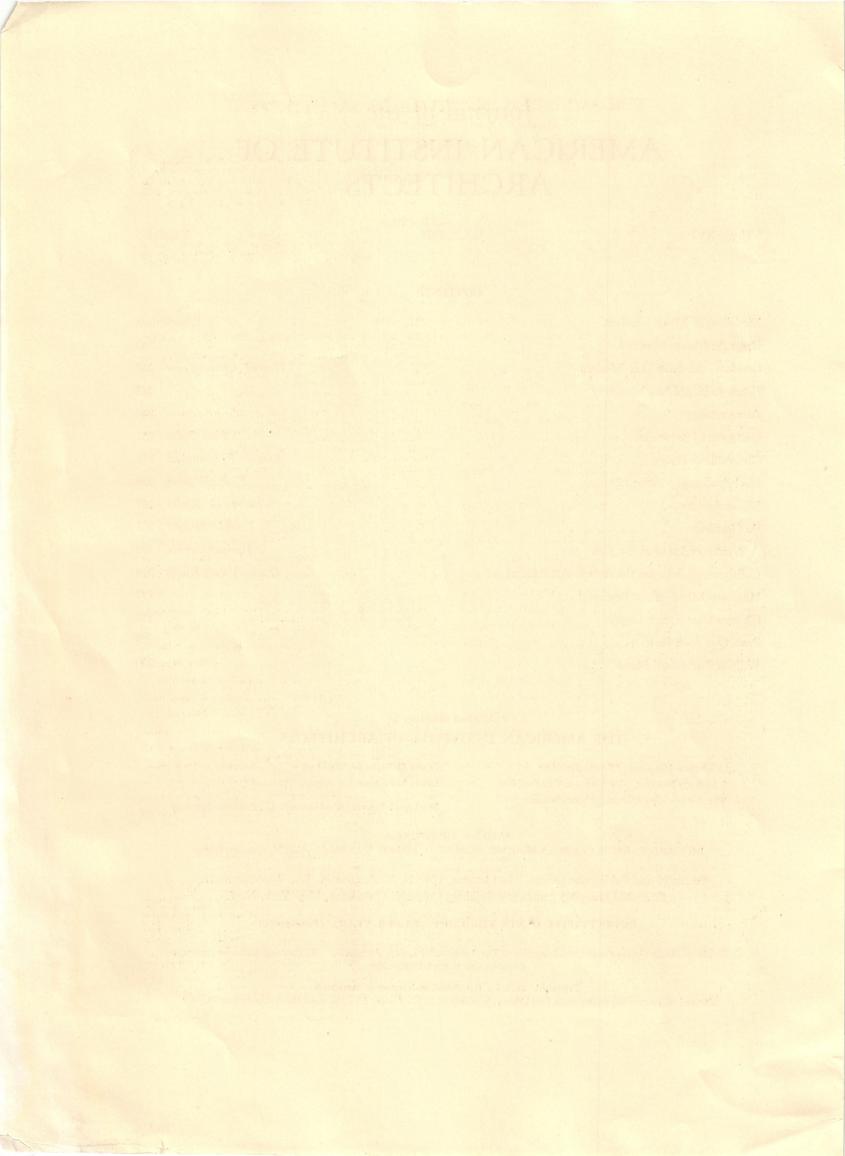
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<sup>‡</sup> Copies of the "Model Form of Law for the Registration of Architects" will be sent complimentary, on request, by the Executive Secretary, The Octagon, Washington, D. C.



Medallion of Major L'Enfant Recently Placed on the Chevy Chase Savings Bank, Washington, D. C. See page 249

# **JOURNAL**

OF

## THE AMERICAN INSTITUTE OF ARCHITECTS

Volume XVI

JULY, 1928

Number 7

# Great Architects Honored

THE tributes which follow, to the Frenchman L'Enfant and the Englishman William Thornton, leaders in the architectural development of the National Capital, were paid at the graves of the two architects, at Washington, on Decoration Day, May 30, 1928, as part of memorial services inaugurated by the Washington Chapter of the American Institute of Architects. The National Capital Park and Planning Commission, the Fine Arts Commission, and the Architect of the Capitol participated in the simple ceremonies.

"This is just a beginning," Horace W. Peaslee, chairman of the Institute's Committee on Plan of Washington and Environs, said in comment. "Next year we will make the services more comprehensive, and will also honor Hadfield, the designer of the Court House, who lies just a few feet from Thornton.

"The first fruits are that the Thornton grave is to be properly cared for with adequate planting. The stone carries no record of his great work, though across the way another stone tells of the 'croup' that killed an Indian chief.

"There are larger objectives than just this placing of wreaths and honoring the dead. The first might be the honoring of the work which lives on after them; the next, teaching laymen to appreciate and to associate the man with the work; a wider objective is to enlist other chapters throughout the country in similar recognition of the men who have brought honor to the profession.

"I wonder if wreaths were laid yesterday on the graves of Bulfinch, of McIntire, of Latrobe, of Hoban, and a score of others. I wonder where they are buried. Who knows? I believe that L'Enfant and Thornton mean more than names and buildings to the architects who stood by their graves and heard the tributes paid."

# Tribute to L'Enfant By Glenn Brown

'HE Washington architects offer their tribute at the tomb of Peter Charles L'Enfant in remembrance of his public service. Education in France, and quick promotion on Washington's staff proved his efficiency. His plans for a Federal City larger than London or Paris. when our country had only three million inhabitants, and designs for the home of Robert Morris to compete with Versailles, indicated his idealism and broad vision. His zeal in the organization of the Order of the Cincinnati and in the designing of their insignia showed his patriotic feeling. His razing the Carroll Mansion when it interfered with the extension of New Jersey Avenue proved his daring and bravery. Son of a Royal Painter under Louis XVI, born in the shadow of the Gobelins, surrounded by art, he absorbed artistic feeling. He died in 1825, a heartbroken man whose services had not been appreciated by the United States.

Nearly a hundred years after his death his remains were removed, through the auspices of the American Institute of Architects, from the Diggs Farm to Arlington. His monument was given a dignified site over-

looking the city he designed, with his plan carved on the commemorating marble slab. Upon this occasion none were too great to honor him. In the presence of General Leonard Wood, the Army gave him a military funeral. His services were acclaimed by William H. Taft, President of the United States; by the statesman, Elihu Root; by Jusserand, French Ambassador; and others of distinction.

It is well to call attention to the valuable heritage he left us in the Washington plan, and to remember how poorly it has been guarded in the past. He did not borrow the important elements of his plan, as they did not exist in other cities of the time. The radial streets designed for reciprocity of sight between points of interest were laid out after the Capitol and White House were located. The open Mall parkway which gave reciprocal views between the Capitol and the Washington Monument was flanked by noble avenues of trees and enclosed by formal Government buildings on B Streets north and south.

How has this heritage been guarded? Instead of the effective groups he suggested, buildings were erected haphazard about the city. Reciprocity of sight, so important for artistic expression, has been thoughtlessly ignored. Andrew Jackson placed the Treasury to intercept the view between the Capitol and the White House. Downing planted around the White House, cutting off views from New York and Pennsylvania Avenues. He did further damage in planting the Smithsonian Grounds, destroying the open parkway and obliterating reciprocity of sight between the Capitol and the Washington Monument. The Congressional Library has destroyed the view of the Capitol from Pennsylvania Avenue east. One reason for locating the White House on its present site was a charming view down the Potomac. This view has been destroyed by the steel Highway and Railway bridges and the planting along the railway embankment.

An open parkway from the Capitol to the Washington Monument would be the highest tribute we could pay to the memory of L'Enfant. As Washington participated in the plan, nothing would better show our appreciation of his two hundredth anniversary than to develop the open vista bordered by formal avenues of

trees from the Capitol to the Washington Monument in time for the two hundredth anniversary celebration of George Washington's birth.

#### William Thornton By Waddy B. Wood

WE ARE here this Decoration Day to put flowers on the grave of a great architect; made great because he loved his work beyond himself and proved this by giving up his profession as a doctor and reeducating himself as an architect; made great because his ideals were based on truth which is the foundation of good architecture, and made great because he always worked towards elevating the taste of the people and in his architecture constantly carried in mind the future of the country.

Dr. Thornton, born in 1761 in the West Indies, of English parentage, was educated at the University of Edinburgh, Scotland, where he graduated in 1784. One hundred and twenty-six years ago, at the age of thirty-one, he designed the Capitol of the United States. He was one of the Board of Commissioners of the Federal City appointed by President Washington in 1793, and was particularly interested in the city plan with which the Commission had much to do. He, an Englishman, and L'Enfant, a Frenchman, both wonderful citizens of a new country, worked together in the making of our beautiful Capitol with a zeal and a love that many of us, born in this land, have not shown in the same unselfish way.

In 1828, just one hundred years ago this spring, Dr. Thornton was followed to his grave by the President of the United States, the Cabinet, and members of Congress. A great scholar in many fields, an architect, patriot and gentleman, was called back to earth, the great mother and the great executioner, where his mortal remains will sleep to eternity; but he lives this spring day as he did one hundred years ago; lives in our memory, and will live in our history many more hundred years to come, because he devoted his genius to the land of his adoption, and his sense of duty was stronger than his desire for temporal power or for riches.

# Goodhue, the First True Modern

By HARRY F. CUNNINGHAM

HESE personal notes of Goodhue's <sup>1</sup> are, almost without exception, things that he did not have to do—they are things that he wanted to do. They are therefore particularly accurate, records of a heart that

<sup>1</sup> Mr. Cunningham's address, of which this is an extract, opened the exhibition of informal sketches, studies and drawings of Bertram Grosvenor Goodhue, held at St. Louis, Mo., during the Sixty- first Convention of the American Institute of Architects.

loved supremely, and of a head that was divinely endowed to give to that love its properly beautiful expression. Some of these things go away back to his boyhood days. There is, for example, his design for a Church "somewhere in Texas," to which he referred in one of his letters with the hope that nobody would ever see it.

#### GOODHUE, THE FIRST TRUE MODERN

There are the curious little things that might be called "nothings to be built nowhere"—simple, happy little expressions of that urge that was in him to make with his own hands beautiful things. There are, finally, some of the magnificent finished things of his later, mature years, as, for example, the study for the interior of one of the schemes for the Chicago Chapel.

We do not have to remind ourselves—with these records before us—that Goodhue was extremely versatile. One may safely say that there was nothing that he could not do beautifully. He drew-or painted-in any medium. He made some etchings-and they are good ones. He designed some of the most beautiful types that it has ever been the printer's privilege to use and the book-lover's joy to read. He designed type arrangements and initial letters, book-plates, book-covers, printer's marks. He designed estates and towns, buildings and groups of buildings. He could collaborate completely and fully in the Fine Arts—if he chose to do so—and call in no other collaborator than himself. He was in truth, what Charles Whitaker called him-Architect and Master of Many Arts. He played well on the piano-by ear. He wrote—unfortunately too little—with a clear directness and with keen understanding and satisfying completeness, on any subject that came under his notice. He understood—and handled in loving, sympathetic fashion-materials, textures, colours, areas, forms, masses. He was the greatest master of detail that we have ever had—his only possible peer in the invention and delineation of detail was Louis Sullivan. In his earlier years he loved to cover spaces with the most exquisite ornament—living, growing ornament. In his latter years he loved to compose beautiful spaces and beautiful forms—and to leave them blank. He came to realise that detail—ornament—is nearly always a veneer. And he didn't love veneers that hid, or belied, the structure. It is so much harder to "leave off than to put on." Goodhue, Master of the detail that can be "put on," came to learn that control which enabled him to "leave off" the non-essentials. Starting as an intelligent, intellectual draftsman, he grew to be a clairvoyant Artist.

Goodhue was the one Artist of our day—this intriguing "modern" day—who found a suitable and reasonable contemporary expression for the impulse to create beautiful things. He was therefore, I maintain, the first true "modern." He still remains, to my mind, the only true "modern." This "modern" civilisation (if one may call it that which it may not be) is surely builded upon those civilisations that have come and grown and waned and died before this day. Our "modern" Art expression—if it is to have the sound foundation and the adequate background that real Art must have—must be builded upon those Art expressions that have come and grown and faded and passed away simultaneously with the civilisations that bred them. Goodhue learned thoroughly, and loved dearly, the Arts of the Past. And stepping

bravely out from that dear Art of the Past into a reasonable, logical Art of the Present, he pointed out the sure way to the intellectual Art expression of the future. He was versed in the Science of Archeology and he respected and loved that Science. But he recognized it to be—as it is—a proper and sound means to the end called the "Art of Architecture," and not the end itself.

Goodhue learned the principles underlying each of the so-called "styles" and could work sympathetically in the spirit of any one of them. Upon this understanding of principles underlying the Historic Styles, he was able to evolve finally a "style" that was distinctly and distinctively his own—a "style" that will make its own History in due course and take its rightful place along with the other great "styles" that men have invented through which to express their worship of Beauty. The Goodhue "style" is not one that breaks away from that fair progress called "tradition," but a "style" rather that acknowledges and supplements tradition and carries it reasonably and nobly forward. It is a "style" that fulfills those two requirements called Beauty and Utility—a "style" that satisfies the old Sullivan formula that "Form follows Function." It is Art, real, living, contemporary Art, and he who made it was a Master.

To touch but briefly upon one of those stylistic expressions that he knew so well and used so understandingly, he was always acknowledged to be a Master of Gothick. To him Gothick was a system of construction and not a trick of detail. His Gothick is true Gothick in principle—vault, pier, buttress, honest masonry. But never will one be able to point to any one of his compositions in the Gothick manner and say truthfully "this is like so and so." His Gothick detail is true Gothick in spirit, but no bit of it was ever copied out of books nor lifted from the ancient monuments. It has that lively, growing quality that is characteristic of true Gothick Art, and it has an originality and a vitality that no other Gothick detail has shown since that greatest of Centuries, the Thirteenth

The Master's footsteps down the Gothick pathway from Saint Thomas, New York, through Intercession, Saint Vincent Ferrer and Baltimore to their final culmination on the mountain top, in Chicago Chapel, are interesting to trace. Do you remember Saint Thomas? Joyous, rollicking, flamboyant in composition and detail —the youthful lover writing with full heart to his Mistress Art, and singing in a high key as he writes. Intercession and Saint Vincent's, each sturdier, simpler, more direct. Baltimore—finished once with great completeness, and then begun all over to find more wall space and to lose much detail, and thus to gain great strength and majesty. And finally Chicago, conceived by the Master and carried out by his associates-simple, magnificent masses, sturdy piers, plain walls with gorgeous tracery in the few windows. Crockets, gargoyles, pinnacles, excrescences all gone. The Gothick principle developed in the direction just opposite to that which brought

disaster to Beauvais. Beauty and Utility a Form following function—Goodhue Gothick—Living Art, not copied Archeology. This is the mature, cultivated lover writing to his same Mistress Art, but chaunting a Gregorian Chaunt as he writes.

Perhaps you will have seen Saint Bartholemew's Church on Park Avenue in New York. Perhaps you will remember that the porch of that Church is the same beautiful porch that Stanford White added to the old Saint Bartholemew's. See how generously the new Artist has given over the first plane in his picture to the exquisite bit of Archeology left by the older Artist. See how intellectually the new Master has handled his difficult problem of making a building that would not, could not, be Archeology, harmoniously complement the older Artist's work. The germ of the principle that burst into its fine full flower in Nebraska's Capitol is in that little Church of Saint Bartholemew in New York. Strange as it may sound to those who have not sought out and found the Master's footsteps, Nebraska's stone Capitol was born in the walls and piers of the brick Church on Park Avenue in New York. The sculptures are integral parts of the walls and piers that they decorate and terminate. The colour is in—not on—the surfaces and members that it glorifies. There are no excrescences, no things "hung on." Every detail is an integral, significant, necessary part of the building.

Although, as I have said, Goodhue could have collaborated in the Fine Arts without calling in any collaborator other than himself, he was nevertheless too good a Captain to be willing to do his Lieutenants' work for them. He realised early-much earlier than our Institute did—the age old fact that a perfect building is best achieved through the intelligent, sympathetic, and wisely directed collaboration between the Architect and the workers in the complementary Arts of Painting, Sculpture and Landscape. His works were always the results of just such collaboration. On Nebraska and the Los Angeles Library he added another collaborator in the person of a Philosopher, to work out with him the details of the symbolism of these buildings and their parts. Goodhue's own ripe Philosophy required not only that all ornament must be an integral part of his building and not an addition or an afterthought-but that all ornament must also have a definite, intelligible and significant story to tell. He would not make column capitals of acanthus leaves and scrolls just because Rome and Greece did that. In Nebraska he made them of corn and wheat and steers' heads, because corn and wheat and steers meant something to Nebraska. These very things, in fact, were paying for the building with which he was endowing the State. It was logical and proper that they have their parts and places in the building they made

Our Past President, Thomas R. Kimball of Omaha, said at the 1924 Convention, in speaking of our Master, Bertram Grosvenor Goodhue, who had just gone:—

"To have been an Architect is to have been a servant of mankind

"To have contributed ably to the world's Architecture is to have been worthy.

"To have been a distinguished designer is to have made a rare contribution to civilisation.

"To have been an Architect and a distinguished designer and to have contributed notably to the great monuments of the world, and to have done so at a time when art, appreciation, human sympathy, and even usual opportunity, have been at almost the lowest ebb in history, is to have found a place among the great of the human race."

May we, respectfully and reverently—loyally and lovingly, cherish the precious memory and endeavour to pass on the rich heritage of Bertram Grosvenor Goodhue, Prophet of Logic, High Priest of Beauty.

#### Honor to H. Siddons Mowbray

H. SIDDONS MOWBRAY, mural painter, was recently honored by the American Institute of Architects, being awarded posthumously its Fine Arts Medal. The medal was presented to Mrs. Mowbray in behalf of the Institute at the Century Club, New York, by Grant LaFarge, retiring chairman of the Fine Arts Committee, who spoke as follows:

"This is not the occasion for a recital of the distinguished accomplishments of the man whom we are met here to honor, nor for an attempt to estimate their importance in the field of art. The American Institute of Architects, by the award of its medal, has testified to his high rank, and that eminent and sensitive critic, Royal Cortissoz, has, in just words of deep feeling, written a tribute before which any poor words of mine would but falter. It is more fitting now to speak of Siddons Mowbray the man, of his significance to his own generation, and, as an example, to that which follows him.

"Today, as never before, the mind of that profession which I have the honor here to speak for is turning to the essential need of fostering and stimulating the growth of collaboration in the arts of design. That is to say, such sympathetic understanding, accompanied by a sufficiency of technical training, amongst the practitioners of the several arts, as will enable them to work harmoniously together, to the end that they may so produce a complete result in which each element shall reinforce all the rest, be inseparable, inevitable. Thus only may the art of architecture, that composite of so many arts, reach its highest expression.

"With its attention fastened upon this task, the architectural profession could hardly have taken more appropriate action than to award this medal to Mowbray, profoundly as we must lament that he is no longer here to listen to our words and to know that we have

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at last recognized the judgment of that other great figure, Charles McKim.

"For McKim knew it long ago, knew that where the mind, the heart and the hand of Mowbray allied themselves with his creations, there was his own architectural vision ennobled. This was collaboration, all that we mean by collaboration, for though we exclude none of the other arts, none is more an integral part of stirring architecture than the art of the painter. And this was the architect knowing how to respect the painter's contribution, how to leave to him that which was his, and the painter imbued with the architectural sense, and making the very structural forms themselves more real, while his poetic fancy gave them so much of exquisite grace.

"We said Mowbray the man: the work of every artist betrays the man, is eloquent of the man; through all that he possesses of skill, of technique, there comes forth to the beholder the manner of man whose work we see, his quality of mind, that is. We need but to think of those whom we have known, to realize this truth. And how very true of Mowbray. The poetic nature; the love of beauty; the reverence for what was fine; the gentleness that so sweetly clothed his sturdy inflexibility in maintaining his high standards; the patience without which his hand could never have given us such wealth of delicacy. All of us who were privileged to work by his side for the cause to which he rendered so long and devoted service, the American Academy in Rome, founded to promote true collaboration among our young artists, all of us knew these things of him. All of us are thankful that we could so know them. And today we can say to every doubting spirit of the younger generation, confused by the welter of false ideas, distraught by doubt as to the value of tradition, derailed by haste, astray from the priceless love of lasting beauty, 'Look upon the work of Siddons Mowbray.'"

## The Medallion of Pierre L'Enfant

(See Frontispiece)

No portrait of Major Pierre L'Enfant exists. W. W. Corcoran, who knew him, left a brief description of his appearance.

The medallion which appears among others on the new Chevy Chase Savings Bank was designed by a young Frenchman, of Washington, D. C., Leon Chatelain.

"When I showed the photograph to Cass Gilbert," Charles Moore, chairman of the National Commission of Fine Arts, said, in a recent memorandum to The Journal, "he thought it was the work of Houdon. Of course a closer examination of the work would disclose that it was not, but the general impression given by the medallion is excellent. If L'Enfant didn't look like it he ought to have done so. In the same manner Daniel Chester French has designed for Harvard University a statue of John Harvard, which has taken its place as the portrait of the founder of the University."

The services rendered by Peter Charles L'Enfant in preparing a plan for the National Capital were of short duration, Mr. Moore's note continues, "and for twenty-five years or more he lived in Washington, confessedly seeking what he regarded adequate recompense for his services. During these years he was an inmate of the household of Dudley Diggs. He died at Mr. Diggs's home and was buried in the family graveyard, not far from the city of Washington. Later his remains were transferred by order of Congress to Arlington Military Cemetery, where a monument to him has been erected, the design having been secured through the American Institute of Architects."

#### Announcement

When, by instruction of the Convention of 1927, the affairs of The Journal were placed under the direct control of the Octagon, an arrangement was made with Mr. James T. Grady to assume the duties of Acting Editor until such time as a permanent editor might be engaged. Mr. Grady has faithfully met the difficult and trying duties of his ad interim employment and the Institute is greatly indebted to him for the interest and zeal with which he has preserved the continuity of The Journal. A permanent editor has been engaged and Mr. Grady's service as Acting Editor ceases with this, the July issue. He will, however, continue in his capacity as publicist of the Institute under the direction of the Committee on Public Information.

The Institute is further to be congratulated upon having enlisted the interest and services of Mr. Ben J. Lubschez, who assumes the duties of Editor beginning with the August issue. Because of Mr. Lubschez' intimate acquaintance with the problem of making The Journal a worthy expression of the Institute's ideals, coupled with his unusual knowledge of the art of printing, it may confidently be expected that the development and improvement in the magazine will constantly and steadily approach that place of unique distinction in its own field which it is intended that The Journal shall assume.

Frank C. Baldwin, Secretary.



The House of the Inquisition Still Stands on the West Side of the Little Square Cartagena of the Indies

Photographs copyright by Robert Niles, Jr., 1928

# Cartagena of the Indies at the Time of the Inquisition

By BLAIR NILES

Photographic illustrations by Robert Niles, Ir.

THE House of the Inquisition in Cartagena still stands on the west side of the little square where three centuries ago was held the first Auto de Fe. But the square is no longer the Plaza de la Inquisition; it is now the Parque de Bolivar—Bolivar whose revolution not only won independence for Colombia, but at the same time initiated the movement to put an end to the Inquisition and abolish slavery.

About his equestrian statue, so triumphant that his broken heart and his melancholy death at Santa Marta seem incredible, there stands a circle of regal palms whose tall symmetric trunks rise like pale columns to support the green grace of their plumed heads. This park of Bolivar is a tiny place, a place of indolent peace, where gold butterflies drift about like petals from the sun; a place so quiet that emerald lizards run races around the dry basins of vermilion fountains, which do not play because water is a precious thing, to be peddled in carts.

Yet Saldanha has written that here, with solemn pomp throughout one of earth's tragic days, accusations and punishments were proclaimed while victims listened dully.

It was the year 1614 and in the quiet square of palms and lizards, of butterflies floating about an exultant bronze Bolivar, there were then gathered the high dignitaries of the Church, the officers of the Holy Inquisition, and fifty of the principal citizens who in their most gala garments were mounted on spirited horses. In imposing formation this company left the park, marching forward to the sound of trumpets, flageolets and kettle drums. They passed thus through the streets, making everywhere announcement of the Auto de Fe, to be held for "the greater purification of the Faith."

They set up a stand and roofed all the square with the sails of ships. For days before the great occasion, armed men patrolled the streets on foot and on horseback. The guard of the forts was doubled. Artillery was placed at the entrance of all streets leading to the park and there soldiers guarded the Tribunal. Cartagena had never seen such preparations!

At dawn on the day before the Auto de Fe, all was at last ready, and the moment had come to raise the standard of the Faith. There was music. Guns saluted. The ministers of the Holy Office appeared carrying their banner. There was clamor of fifes and of drums and of trumpets. And again there were the guns.

At four o'clock on the afternoon of that same day the procession of the Cross proceeded in solemn splendor through the city. It passed in pomp led by eight noblemen on horses, and it passed along streets gay with the flutter and color of flags, and thronged with the eager curious population.

The procession wound slowly back to the park and the crowd herded after it. There, with impressive ritual, the Cross was placed upon an altar in the stand prepared for the penitents, and throughout the night Dominican monks kept candles burning before it, while soldiers ceaselessly patrolled the streets. And who could have slept in the tense expectancy of that night before the celebration of the first Auto de Fe!

The day broke. Dungeons were opened and penitents taken from their cells to be decked in the strange gear decreed by the Tribunal, and then conducted in ceremonious silent procession through the streets. They marched carrying green candles—and as they marched they seemed from time to time to stumble, as though the mere weight of their feet were too great a burden.

Green candles in the dawn! Shadows of speechless victims—moving with slow effort in wretched procession; moving magnified on the walls of the houses which hem in the narrow streets. Green candles in the dawn. Shadow candles on the walls. Profound silence, heavy with pain. The holy officers passed also in parade; following the same streets along which had dragged that guarded file of "penitents" bearing the green candles which had flickered unsteadily, as though the hands that held them trembled.

Thus they marched, back to the little square where all took the seats prepared for them in the stands; the two Inquisitors under the dais; on the right and left the highest officials of the Church and of the Tribunal; behind them the Priors of the monasteries; and behind them the captains of the garrisons. The Prosecutor occupied a crimson velvet chair opposite the dais, and on his left was the secretary with his writing table.

When all were placed, the Prior of Santo Domingo sang the mass and a priest of the order of San Agustin delivered a sermon. The penitents listened, poor victims growing mercifully numb as the minutes crawled, perhaps slowly indifferent to fate, waiting perhaps less anxiously for the final sentence.



RED TILED ROOFS—RED WITH THE DULL RED OF POMPEII CARTAGENA OF THE INDIES

#### CARTAGENA OF THE INDIES AT THE TIME OF THE INQUISITION

When at last the reading of the accusations began it was after nine o'clock. And so detailed and so lengthy were those accusations that although they were read from two pulpits by four readers, night had come before all were finished.

It was one of the longest days of the world, for a day is a variable matter. There are days which are evanescent moments, shiny moments; and there are days so long and so racked with pain that at sunset may come old age. Among those days was that of the first Auto de Fe in Cartagena.

At that time it is said there was no public clock in the city; the hours being announced by soldiers ringing a bell in the streets. And as the soldiers were irregular, so were the hours.

Upon the occasion of an Auto de Fe, the soldiers must have omitted altogether their uncertain ringing of the hours; so that only anguish could have marked the slow creep of time; while everlastingly the voices of the readers mechanically ground out those interminable accusations of crime; the measured beat of sonorous Spanish syllables falling ponderously, until at last night was descending.

Still they read. They read thus:

"Francisco Rodrigues Cabral, Portuguese; for having declared that in repeating the creed he had been taught to say 'resurrected the dead' instead of 'resurrected from



THE DUNGEONS OF THE BÓVEDAS ARE NOW OCCUPIED BY FAMILIES TOO POOR TO PAY RENT



CANNON MIGHT STILL BE ROLLED UP THE LONG RAMPS

among the dead,' and for praying thus as he had been taught, a punishment of two hundred lashes and perpetual banishment from the Indies.

"Antonio Banon and Juana de Aranda, negro slaves; for blasphemy, one hundred lashes each. . . .

"Blas de Manjarres, mulatto tailor, for exclaiming Blessed be the Devil!" . . . lashes and exile."

And so on—and so on—and so on. They were reading now by the light of torches.

"Luis Andrea, mulatto, for the relating of marvellous

"Maria Ramirez, a sorceress, for the telling of fortunes in the water, with the rosary and by the palms, two hundred lashes and exile."

On and on, the throbbing syllables falling upon tired, hopeless hearts, until tapers were lit and the night breeze blew from the sea; blew as sweet and cool as though no monotonous voices chanted sentences of lashes and imprisonment, slavery at the galleys and exile . . . lashes and imprisonment . . . .

The scene haunts the Parque de Bolivar, as the slaves who built Cartagena's walls come back like memories from the dead Colonial days, or as the spirits of long departed prisoners hover about the dungeons of the bóvedas, where when the sea was high it entered through the loop-holes until the prisoners inside stood deep in water. The scene lives as the past seems yet to live in the tunnels and drawbridges, the moats and fortresses of this Cartagena, which had once to resist attack by land and sea because it was here that quantities of gold and silver were once assembled for shipment to Spain.

The beautiful city walls still stand. Cannon might even be rolled up the long ramps as in the days when Cartagena was bombarded by pirates, and the old reser-



THE CHURCH OF SANTO DOMINGO CARTAGENA OF THE INDIES

#### CARTAGENA OF THE INDIES AT THE TIME OF THE INQUISITION



OUTSIDE THE CITY WALLS CARTAGENA OF THE INDIES

voir, constructed that the city might withstand the sieges of three hundred years ago, still furnishes part of the town's water supply.

But it is standing in the sentry-box which crowns the summit of San Felipe that the Cartagena of the Inquisition comes most alive. For thus long ago from San Felipe would a Spanish soldier's eye have swept the panorama of City and bay; the harbor with its large mouth filled in to prohibit the passing of ships, and the narrow entrance of the Boca Chica over which the forts of San Fernando and San Jose stood guard. His roving gaze would have

paused complacent on the inner forts, before it passed on to the encircling walls which protected the city; dwelling long upon the bastion of the bovedas where the wall was strongest, because at all costs the reservoir must be defended. If enemies had landed forces farther down the coast the guns of that bastion could have mowed them down as they approached along the beach of Cabrero. His gaze would have lingered there confidently before it passed on to the wall back of the church of San Pedro Claver, where more guns menaced any landing on the beach.

Against foes arriving from the interior, Cartagena relied upon the cannon of San Felipe itself, and it was therefore the slope of the fortress turned away from the city which was the most powerfully fortified; heavy masonry covering the slope, sentry boxes

facing all directions and tunnels perforating the hill.

But in the year 1928 all disintegrates; fortresses are abandoned; trees and shrubs grow from seepage holes in the masonry, while time and weather slowly obliterate from the cannon the crown of Spain.

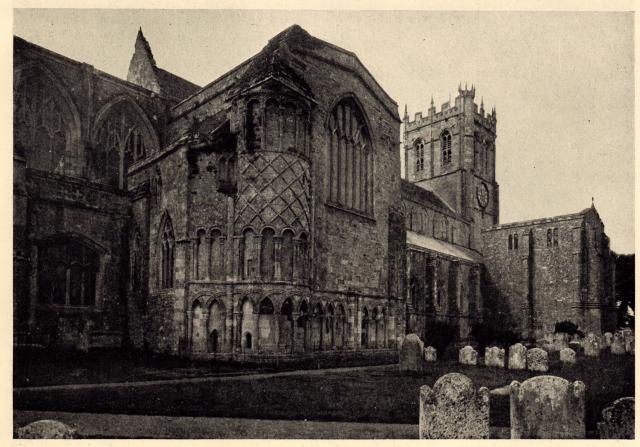
# Christchurch Priory

By STEWART F. CAMPBELL

HERE are some ancient buildings which one visits as a matter of duty. One goes through them in a more or less perfunctory way and accumulates a mass of facts relating to their history and architecture. Then there are others, buildings in which one wants to linger hour after hour so that his mental impressions may become the more indelible, in which there is a delightful feeling of intimacy which promises to ripen later into real affection. Amongst the latter is the Priory at Christchurch, in Hampshire.

In very early times Twynham was used to designate

the little settlement which afterwards became Christchurch and the name stuck to it faithfully until the fourteenth century when its use began to die out, and today the old name is almost obsolete except to antiquarians. For the origin of the name Christchurch we have to turn to some traditions which appeared early in the fourteenth century. From one of these it seems that when the monks were building the choir of their monastic church, some careless brother cut one of the huge beams for the roof support too short. It was discovered as they were leaving their work for the night and there was con-



NORTH TRANSEPT, CHRISTCHURCH PRIORY HAMPSHIRE, ENGLAND

#### CHRISTCHURCH PRIORY



Nave—East, Christchurch Priory Hampshire, England

sternation amongst the monks, as the loss of a beam of such size was no small matter. However, much to their astonishment, when they returned in the morning they found the beam in its proper place and lengthened to exactly the correct dimensions. So the end of the beam was left exposed, as it remains to this day, that all may see the miracle wrought, as the monks believed, by Our Lord Himself. And again if we are to believe these traditions (and why not at least give them their due), all during the building of the priory church the monks noticed one extra helper. Never did he speak, never was he present at meals, nor did he ever claim any remuneration for his labor; and the brothers came to believe that the silent stranger was none other than Our Lord who came there to help and encourage them in their work, and that the church was under His special care.

The nave of the present church was begun about the year 1100, on the site of a much older one of which we have very little record; but there is mention of it in the Doomsday Book showing that there was a monastery at Twynham at that time, but for how long before can only be conjectured. Whenever it was that the first church was built, those who had to do with the selection of the

site showed a remarkable amount of good judgment and concern that their church should be surrounded by all the beauty with which Nature has endowed the place. Just before reaching the Priory the Stour and the Avon unite and flow, a goodly stream, through meadows decked with feathery willows and alders, onward to the sea about a mile away; and it takes no great imagination to understand the joy which must have come to that monk who, being free for his hour of recreation, crept stealthily down to the bank of the little stream to try his luck at the gentle art of angling.

At the time of Edward the Confessor the Priory held extensive lands in both Hampshire and the Isle of Wight. The Twynham monastery itself, according to Professor Freeman, was made up of a group of settlements having a central minster, and no less than nine smaller churches, besides houses for the canons. This grouping of small churches around a larger one was not unusual in the English monasteries, and the reason for it was that British monks lived and worshiped in small communities rather than in large units as the monks did on the Continent. In England each community had its own living quarters and house of worship, but they were all under the general supervision of the abbey or priory church.

It is from the cartulary records of the monastery, written in the Fourteenth Century and now in the British Museum, that we get most of our information about Christchurch. It was given by William Rufus to Ralph Flambard, his chancellor, and it is to Flambard that we owe the remodeling of the old monastic church and the erection of the present nave. It is, I believe, the largest parish church in England, and nowhere will one find a better opportunity for studying all the styles of ecclesiastical architecture from the earliest Norman to the Sixteenth Century Perpendicular than here at Christchurch.

The view which one gets of the church from the cliffs Southbourne is quite out of the ordinary, as it emphasizes the great length of the building. In reality there were three churches in one. At the west, what is now the nave which has always been used as the parochial church; the present choir, which belonged to the monks; and the Lady Chapel at the extreme east end. At one time there was a central tower with a spire which is quite plainly shown in the ancient seal of the Priory and a few fragments of the tower still remain at the union of the nave and choir. The tower is supposed to have fallen some time in the Thirteenth Century, taking with it almost all that remained of the very early monastic church. Later another tower was built at the west end of the nave.

Perhaps the most striking part of the exterior of Christchurch is the north transept. It has been altered a little, having had an apsidal east side removed, but the Norman arcading is splendidly preserved. As a whole, the transept is considered one of the finest in England, although most of its round-headed windows have been destroyed and replaced by a heterogeneous assortment which detract rather than add to what otherwise might have been a perfect Norman transept.

The interior of the church is composed of a nave, choir with ambulatory and chantries, transepts, and a Lady Chapel; and as one goes through the church from west to east he is impressed by the variety of styles of architecture. Fortunately these have been kept more or less distinct. For example, the nave, with the exception of some rather ugly Early English windows in the aisles, is an unusual specimen of the Norman in the finest period of its development, and there is a dignity and an almost perfect proportion between the heights of the triforium and clerestory, of which few churches can boast. Scale ornament and hatchet work abound and the variety of designs used on the columns and capitals show the remarkable ingenuity which the Norman craftsmen possessed.

The parochial altar in the nave was dedicated in 1214 and is supposed to have contained relics of all sorts—parts of the manger of Our Lord, parts of His sepulchre, and many bones of the saints.

The reredos in the sanctuary, and that in the Lady Chapel, have both been sadly scarred and mutilated by the Reformers of the Sixteenth Century in their effort



LADY CHAPEL, CHRISTCHURCH PRIORY

to remove from the church every image of the Mother of Our Lord. Of the beautiful glass which once threw its polychromatic reflection across nave, transepts and choir, only a few scattered fragments remain which have been carefully reset in the tracery of the windows on the north side of the choir—silent witnesses to a departed glory.

At the dissolution of the monasteries the monks of Christchurch were more fortunate than those in many other places, for they were pensioned. The properties of the Priory were sold for the benefit of the Crown and the conventual buildings destroyed with the exception of the fine old church itself, which happily escaped serious damage.

## Craftsmanship Medal Award

William D. Gates of Chicago received this year the medal of the American Institute of Architects, awarded, through its Committee on Allied Arts, "for distinguished achievement in craftsmanship."

In presenting the medal, at the Sixty-first Convention of the Institute, the chairman of the Committee, J. Monroe Hewlett, called Mr. Gates "Master of Terra Cotta and Faience."

# Ideal Auditorium Acoustics\*

By F. R. WATSON

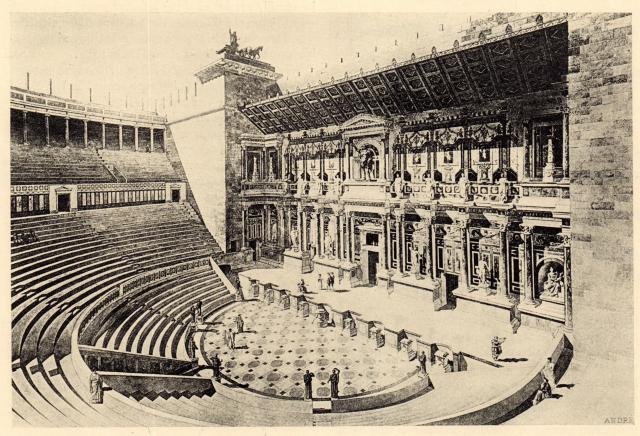


Fig. 1.—The Open-Air Theater, which recent investigations suggest is ideal for acoustics. Photograph shows theater at Ostia, restored by Andre, from D'Estony's "Fragments Antiques"

HE writer appreciates the honor conferred on him by the invitation to address the Institute at this annual convention. At the same time, he is inspired by the belief that he has a real message for architects in the discussion of recent investigations that seem to point the way for securing ideal auditorium acoustics.1

The science of the acoustics of auditoriums is of comparatively modern development, beginning with the classic work of Wallace C. Sabine about 1900.2 Sabine conducted a series of painstaking and fundamental researches that revealed the action of sound in a room. Aside from minor qualities, he showed that the time of decay of sound depended directly on the volume of a room, on the loudness of sound, and inversely on the absorption. Most of the investigations since then have

\*An address delivered at the Sixty-first Convention of the A. I. A., St. Louis, Mo.,

May 17, 1928.

<sup>1</sup> See article on "Acoustics of Auditoriums" in Science, March 30, 1928, page 335, which gives a number of references.

<sup>2</sup> Collected Works on Acoustics, 1922.

only amplified and extended Sabine's fundamental conclusions. As a result of his work, auditoriums have been greatly improved in acoustical qualities, and it is now a routine matter to calculate the absorption needed to secure satisfactory effects.3 Attempts made to improve Sabine's method so as to specify "optimum" conditions with the hope of securing perfect acoustics have not been very successful, the reason for the failure not being evident.

While the application of these methods has resulted generally in satisfactory effects, complaints have been made from time to time by speakers and musicians that acoustic conditions were not right, but no adequate explanation has been given to explain the nature of the trouble. In the meantime, within the past few years, a number of investigations have been made which seem to point the way to perfect acoustics. The writer has been

 $<sup>^{8}\,\</sup>mbox{See}$  Appendix to this article, which gives an example of the adjustment of acoustics in an auditorium.

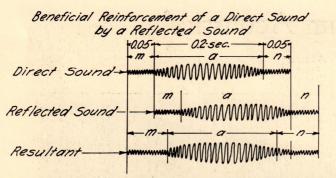


Fig. 2.—Showing how the word man may be beneficially re-enforced by reflected sound

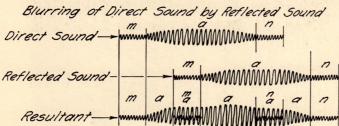


Fig. 3.—Showing how the word man is blurred if reflected sound follows 0.1 second after the direct sound

interested to study and compare these publications and finds that they lead to the surprising and unexpected suggestion that ideal acoustics may be found with conditions resembling the open-air Greek Theater, but that further study should be made concerning the stage walls near the performers. That is, the problem of acoustics of rooms is two-fold—first, a study of conditions that aid the perfect generation of sound, and second, the conditions needed for perfect reception of sound by auditors. The investigations by Sabine and his followers appear to be concerned mainly with the second problem—the conditions for auditors—so that but little attention has been paid to the performer.

#### The Generation of Sound

One of the recent investigations was made by Petzold,<sup>4</sup> who has shown that speech is reenforced if the sound reflected from walls near the speaker reaches the auditor within .05 second or less after the direct sound. This reenforcing of speech sounds is illustrated in Fig. 2, which pictures the spoken word man. This word consists of the vowel sound a which is begun by the consonant m and ended by the consonant n. It is assumed that the time taken to say the word is 0.3 second—.05 second for each consonant and 0.2 second for the vowel. The values pictured in Fig. 2 are average values, but it should be remembered that spoken words

<sup>4</sup> Ernst Petzold, "Elementare Raum Akustik," 1926.

vary considerably in characteristics, depending on the words and the speakers.<sup>5</sup> The figure is not an exact representation of a vowel, because there should be many more vibrations than pictured.

Inspection of Fig. 2 shows that the direct sound is beneficially reinforced if the reflected sound follows .05 second later. In this case, the resultant shows that the vowel is amplified and the consonants lengthened slightly, but that the word is not changed essentially.

When the reflected sound follows .05 second or more after the direct sound, a blurring is set up. In Fig. 3, the reflected sound is pictured 0.1 second after the direct sound, and the resultant shows a mixture of vowels and consonants that appears to give the confused word mamanan. The reader can easily imagine the resulting echo in case the direct sound is 0.3 second or more behind the direct sound, or the advantage of having the reflected sound follow the direct with a time interval of less than .05 second.

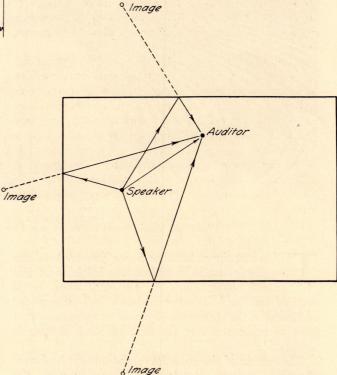


Fig. 4.—Plan of room, showing speaker and acoustic images

Possibilities of the reenforcement or blurring of sound in an auditorium are explained by reference to Fig. 4. Each surface of the room acts as an acoustical mirror, so that an "image" behind the wall says the same words at the same time as the speaker. Of course this image is imaginary, and its speech is nothing more than the

<sup>&</sup>lt;sup>5</sup>I. B. Crandall, "The Sounds of Speech," Bell Telephone Laboratories Reprint, B-162-1, page 23, 1925.

#### IDEAL AUDITORIUM ACOUSTICS

reflected sound. Each reflection of sound furnishes such an image, so that the auditor is surrounded by a host of image speakers at increasing distances, all speaking the same words as the speaker and at the same time. There may be as many as 200 to 300 images, depending on the number of reflections before a sound dies out. Reflected sounds reaching the auditor within .05 second after the direct sound are beneficial, while those arriving later than this time produce a blurring. Since sound travels at the rapid rate of 1120 feet per second at ordinary room temperature, this means that the reflected sound cannot be more than 56 feet  $(.05 \times 1120 = 56)$  behind the direct sound, and that the reflecting walls must be near enough the speaker to satisfy this condition. That is, if the distance from the image to the auditor is approximately 56 feet more than the distance from the speaker to the auditor, the sound is beneficially reenforced. If the difference between these distances is more than 56 feet, the reflected sound blurs the direct sound. Fortunately, these later sounds are weaker, since they come from greater distances and have suffered loss of intensity by absorption at the walls. If reflected from a curved wall, however, the reflected sound may cause a disturbing echo.

Thus far, only speech sounds have been considered. In the case of music, the effects are somewhat different. It is possible to have acceptable music with several tones existing at the same time, whereas, in speech, it is necessary to have words spoken separately. Experiments, however, show that reflecting boards are advantageous for music as they are for speech.

An experiment by the writer illustrates this point. A reflector, twelve by fourteen feet, was hung horizontally over a band stand, and, by means of ropes and pulleys, could be raised or lowered. When the reflector was lowered successively to positions twelve, ten, eight and seven feet above the players, the acoustic conditions were improved. The comments of the players were: "Plays easier," "Tones are more natural," "Gets better as the reflector gets lower," "Tones are smoother," etc. The resultant music in the hall for auditors was also better as the reflector was lowered.

Not only are the auditors benefited by this arrangement, but the performer himself gets an immediate response to his effort that allows him to adjust his speech or music to get the best effect. Without this, the performer feels lost, and the resulting sound, particularly music, lacks perfection. Musicians state that they prefer to sing or play near a wall—and always with a resonant stage floor, without carpet—presumably because of the reassuring support given by such reflecting surfaces.

#### The Decay of Sound in a Room

In the previous discussion it was seen that the reflected sound should follow the direct sound within .05 second to generate satisfactory speech.

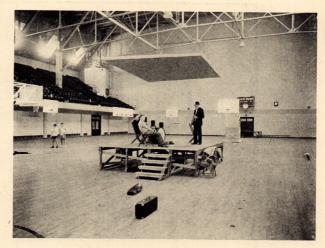
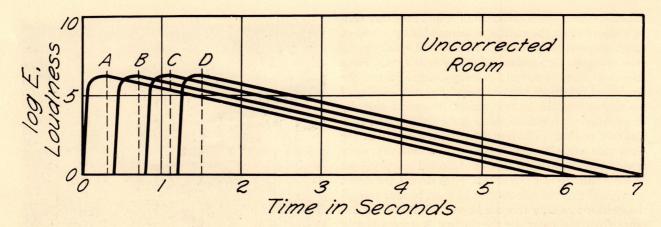
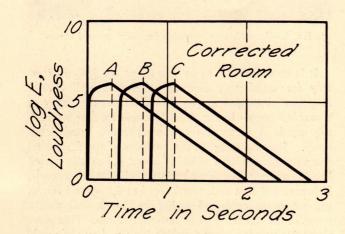


Fig. 5.—Reflector over musicians improved acoustic effects

It is now desirable to inquire about conditions necessary for satisfactory hearing. To this end, several diagrams have been drawn that illustrate the decay of sound in a room. In Fig. 6 the loudness for four succeeding words is pictured for a reverberant, uncorrected room. Starting at fig. 0, the loudness of the first word increases rapidly to a value of about 6.5 at the dotted line A, when it dies down to inaudibility in 5.5 seconds. It is assumed that each word requires 0.3 second for its generation, as explained earlier in Fig. 2, and that a pause of 0.1 second is made between words. This gives about 21/2 words a second, which is a usual rate of speaking. The second, third and fourth words show maximum intensities at B, C and D. These values are calculated for an actual room of 44,000 cubic feet at the University of Illinois. The diagram shows how the four words with nearly equal loudness fill the room at any one time, so that there is a resulting mixture that is confusing to an auditor. If absorbing material is added, as in the corrected room (Fig. 7), the time of decay is shorter, and an auditor has a better chance of understanding because the first word spoken dies down quicker than before and leaves the field more free for the next word. For satisfactory hearing the loudness of the first word should drop to about one-third the loudness of the succeeding word about to be heard.

In Fig. 8, the advantageous sound absorbing effect of the audience is shown. Taking the first two words, it is seen that the loudness of the first word with the empty room has dropped to about 80 per cent of the loudness of the second word when the second word reaches its maximum at B. With one-third audience present the loudness drops to about 60 per cent, while with a capacity audience the loudness drops to about 50. The more rapid decay of sound is due to the clothing worn by auditors. If a speaker separates his words by greater





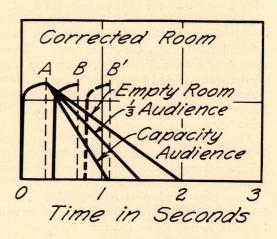


Fig. 6.—Showing overlapping sounds in an uncorrected room
Fig. 7.—How speech is made more distinct by absorbing material in a room
Fig. 8.—Showing beneficial effect of absorption of audience on the distinctness of hearing spoken words

intervals as shown by the heavy dotted line B' the overlapping of words is much less, and the resulting speech is much more easily understood. It is a fact of common knowledge that when a speaker talks slowly to a large audience, there is little difficulty in being understood. The diagrams in Figs. 6, 7, and 8 set forth these facts in actual numbers.

One further fact deserves mention. The loudness of words in the corrected room is almost as great as in the uncorrected room; that is, the presence of a considerable amount of sound deadening material has but little effect on the loudness of sound. This is because the loudness is proportional to the logarithm of the intensity. If two sounds have intensities of 1000 and 100,000, their relative loudnesses are 3 and 5 (log. 1000 = 3, log 100,000 = 5).

The diagrams in Figs. 6, 7, and 8 show the desirability of having the time of reverberation quite short, if words are not to overlap seriously. The question now arises as to how much of an overlap will give the best results. Information in this regard is given by Petzold, who calculated the value of the direct sound at a point 18.1

meters from the source in a room 30 x 20 x 12 meters in volume, and estimated also the added effect of the reflected sound. Neglecting interference phenomena, he assumes

Volume of room = 254,000 cu. ft.

Auditor approximately 59 ft. from speaker.							
		Loudness					
	(I)	(log. I)					
	Units		Seconds				
Direct sound	10,000	4.00	0.00				
First reflected sound	7,800		0.005				
Second reflected sound .			0.012				
Third reflected sound	4,640		0.022				
Fourth reflected sound .	2,590		0.047				
		Carry transfer					
Total	31,210	4.49					

Beneficial reflected sound, arriving within .05 second after direct sound, adds approximately 0.5 units to the total of 4.5 units, or only 1/9 of the total sound.

Fig. 9.—Loudness of Direct and Reflected Sounds.

#### IDEAL AUDITORIUM ACOUSTICS

that the direct sound gives 10,000 units. To the direct sound, the beneficial reflections, that is, those that arrive quickly enough to avoid blurring the direct sound, add enough to give a total of 31,210 units. The resultant is then about three times as intense as the direct sound, but the loudness, as perceived by a listener, is less than this, being proportional to the logarithm of the intensity. The relative effects for auditors are the logarithms of 10,000 and 31,210, or 4 and 4.5, respectively; that is, the beneficial reflected sound contributes one half unit to the four units of the direct sound, or only one ninth of the total sound.

"Outdoor theaters differ considerably with regard to acoustic qualities, but in general it is surprisingly easy in any of them to hear what is said or sung on the stage." Regarding the Garden Terrace Theater at Yankton, South Dakota, the author writes: "The acoustic properties are a surprise to every one. At the extreme rear, 180 feet from the stage, an ordinary stage or platform voice is perfectly clear and satisfactory." In the Greek Theater at the University of California, that holds an 8,000 audience, one can see and hear in every seat. Again, "The acoustic qualities of the theater (Isis Theater, Point Loma, California), like those of every other outdoor



Fig. 10.—The Eastman Theater, Rochester, N. Y., which has fine acoustics. (Gordon & Kaelber, the Architects; McKim, Mead & White, Associate Architects)

From these calculations, it would appear that the reflected sound could be omitted entirely without vital consequence—a conclusion that is quite contrary to the usual conception of auditorium acoustics, where the reflecting walls are supposed to be quite beneficial in increasing the loudness. Omitting the reflected sound would have the advantage of eliminating any possible blurring defects of reflection, as previously described. But this arrangement surprisingly suggests the open-air theater, such as was used by the Greeks, with no reflecting surfaces except the wall at the rear of the stage, and generally regarded as having very good acoustics. (See Fig. 1.)

A book<sup>6</sup> on outdoor theaters bears out this supposition about satisfactory acoustics. For example, we read,

theater without exception, are spoken of as remarkable." And so on for other theaters.

#### Summary of Recent Investigations

If the results of the investigations and experiments are summarized, they lead to the following conclusions;

1. That the generation of sound by a performer is aided by the use of nearby reflecting walls.

2. That the reception of sound appears most satisfactory under conditions resembling outdoors.

An experiment by the writer furnishes a suggestive example of these conclusions. In an investigation on "Optimum Conditions for Music in Rooms," the fact

<sup>6</sup> Frank A. Waugh, "Outdoor Theaters," 1917.

<sup>&</sup>lt;sup>7</sup> Science, LXIV, 207, 1926.

was brought out that musicians preferred a reverberant space to play in, but that auditors found "dead" surroundings preferable for listening. What was done was first to adjust a room of approximately 6,500 cubic feet volume to give "optimum" reverberation by placing sound-absorbing material about the walls. A quartette of musicians (three violins and a cello) then played at one

end of the room. They did not like the musical effects nor were the auditors pleased. But when the absorbing material was successively transferred from the walls about the musicians to the end of the room occupied by the listeners, the musical effects for both playing and listening improved until, in the final stage, they were thought "perfect." This arrangement appears to imitate an outdoor theater. reverberant The walls about the performers suggest the stage walls of the theater, while the "dead" conditions surrounding the listeners are repeated outdoors by the perfect absorption of the open sky, but there would be some reflection from the leaves of trees and plants.

Experiments by Knudson 8 show that speaking is better understood as an auditorium is made successively "deader" with sound absorbing materials, thus imitating an outdoor theater. He found 9 for an open-air theater (Hollywood Bowl, Los Angeles) that a listener one hundred feet from the speaker could understand speech better than in the most satisfactory Los Angeles theater.

The Eastman Theater, Rochester, New York, gives further information in this regard. Some apprehension was felt in designing the acoustics of this theater 10 whether or not music would be heard distinctly on the mezzanine balcony. The opening to this balcony, under the main balcony, was comparatively small (approximately 9 feet free opening, and about 6 feet back of the main balcony), and it seemed likely that only a small amount of sound would enter. Also, this space was furnished with a considerable amount of sound absorption in the

> upholstered and carpet. completion of the theater, however, the reception of music on this floor was thought superior to other locations. Here again it appears advantageous to have conditions for listening quite dead acoustically.

There are numerous other examples that show the adfurniture

vantage of generating sound near reverberant walls, while the listening takes place in a room which is quiet. For instance, in a residence, if a piano is played in a reverberant room with few furnishings the performer is pleased, but the resultant music sounds better for listeners in an adjacent room that is quieted by upholstered and rugs. In view of this experimental evidence, which appears

to confirm the conception of a two-fold requirement for

ideal acoustics—the suitable generation of sound, and deadened conditions for listening—it is interesting to try

to interpret previous tests, where observers listened to

decide when music "sounded best" as absorbing material

was gradually added to the room. If the room used was

AUDITORIUM 110 13 10 13 10 BA 10 PROPERTY ROOM IRST FLOOR PLAN

Fig. 11.—Plan of proposed theater at the University of Illinois

8 Phys. Rev., 27, 618, 1926.

<sup>9</sup> The Architect and Engineer, Sept., 1926.

<sup>10</sup> Watson, "Acoustics of Buildings," p. 49.

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a small one, comparable with a stage, the opinion would apparently decide the best conditions for the *generation* of sound. In the case of a large room, the observer would apparently be forced to decide simultaneously the best conditions for both the generation of sound and the listening, so that he would probably strike an average time of reverberation which would be too dead for the satisfactory playing of music and too brilliant for listening. In other words, it seems likely that the generation of sound should be done in a room more or less separated from the main auditorium, while the listening is best in the latter room with a sound deadened interior.

An interesting experiment in this connection is now in progress at the University of Illinois, due to the interest and cooperation of Supervising Architect James M. White. A small lecture room theater is being designed according to the ideals proposed in this paper. Fig. 11 shows the plan of the theater. In case of a lecture the stage will be cut off by the fire curtain, so that this reflecting surface directly behind the lecturer, together with the splayed side walls, will coordinate to reenforce the direct sound. For theatrical performances, when the stage is in use, the hard plastered surface of the cyclorama will reflect sound, while temporary stage room ceiling

and side walls will serve further to reenforce the voices of the actors. Fig. 12 shows the section, in which the sound absorbing material specified for the ceiling and upholstered seats for the floor will furnish the desired deadening for the auditorium. The results obtained in this experiment will be instructive.

#### Conclusions

From the investigations cited in this article, the writer is led to certain conclusions. First of all, it appears necessary to design suitable reflecting walls about a speaker or musician to secure the best generation of sound. Further investigation is needed on this phase of the problem, particularly to determine the desirable time of reverberation on the stage.

Second, the audience room in which people listen to the generated sound should be as dead as outdoors. This does not mean absolute deadness, but the time of reverberation should be less than is usually the case in auditoriums, another factor which requires further consideration. If these two conditions are fulfilled, ideal acoustics seem probable.

For the architect, this ideal involves a new element in design. That is, in the case of a church auditorium, for

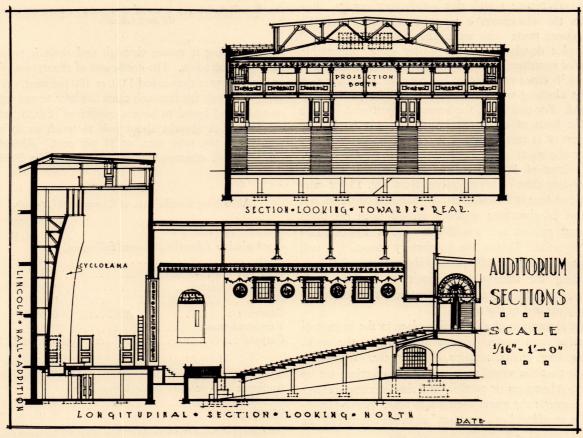


Fig. 12.—Section of theater at University of Illinois

instance, it is not sufficient for the design to give the impression of worship. Conditions must be created by which the speaker, as he begins to talk, will find an immediate reenforcement of his voice without any effort on his part, so that he is given the confidence that comes with the assurance that his speech is at its best and that it is reaching the auditors. In addition to this, the room must be quieted so that auditors can hear comfortably and easily, without strain. The element of quiet adds acceptably to the impression of worship. When these conditions are fulfilled, ideal acoustics appear a reality.

#### Appendix

The method used at the present time by the writer in the adjustment of acoustics of rooms is illustrated by the following example. Consider a room 148 feet long, 57 feet wide and 23 feet average height—for which the volume is approximately 194,000 cubic feet, and the capacity audience is 1000. What is necessary to insure good acoustics?

Sabine's formula for acoustics of rooms is: t = .05V/a, where t is the time of reverberation in seconds taken for a standard sound to become inaudible, V is the volume of the room in cubic feet, and a is the absorption of sound by all of the interior surfaces. It is first necessary to know what time t will give satisfactory results, after which the absorption a may be calculated and the adjustment made with sound-absorbing material.

A plot developed by the writer giving acceptable times of reverberation for different volumes is shown in Fig. 13.<sup>11</sup> Since an audience has considerable absorption in the clothing worn, its effect must always be considered. For this room, the acoustic adjustment is made on the basis of a one-third audience, which may be thought of as an average.

For the room under consideration, the cube root of the volume of 194,000 cubic feet is 58, and the corresponding time of reverberation from Fig. 13 for one-third audience is 2.05 seconds. By Sabine's equation, the amount of absorbing material needed with one-third audience present is :  $a = .05V/t = (.05 \times 194000)/2.05 = 4730$  units. That is, for satisfactory acoustics, it will be necessary to have 4730 units of absorption in the room, including the absorption of one-third audience. It becomes necessary to calculate the amount of absorption already present in the room.

The absorption of sound takes place in the process of reflection from various objects in the room, the walls, ceiling, floor, chairs, curtains, clothing, etc. What happens is that the sound pressures and rarefactions set up a friction between air particles and the reflecting surfaces that converts the sound energy into heat. An open window is considered as a "perfect" absorber because all the

Fig. 13.—Plot showing times of reverberation for auditoriums of different volumes

sound striking it passes through and none is reflected back into the room. The coefficient of absorption of the open window is thus called 1.00, or 100 per cent. In this same scale, hair felt one inch thick has been tested experimentally and found to have a coefficient of 0.55, which means that it absorbs about half as much as an open window of the same area, or 55 per cent. Absorbing coefficients of common materials are given<sup>12</sup> in Table 1.

TABLE I

Absorbing Coefficients of Common	Materials
	Coefficient per
	sq. ft.
Open window (absorbs all sound falling on	
it)	1.00
Hair felt one-inch thick	. 0.55
Plastered surfaces	0.025 to 0.034
Glass	0.027
Concrete	0.015
Varnished wood	0.03
Carpets	
Individual Objects	Absorbing Units Each
Audience (per person) about 15 sq. ft. of	Cinto Lucii
clothing	4 70
Wood seat	0.10 to 0.20

 $<sup>^{12}</sup>$  Acoustics of Motion Picture Theaters. Trans. of Soc. Motion Picture Engineers, Vol. XI, p. 641, 1927.

Time of Reverberation in sec.

88,000

64,000

Clittle Theater
Wesley Auditorium
Macon Church

College of NY
Great Half

C

<sup>11 &</sup>quot;Acoustics of Auditoriums," Architecture, May, 1927.

#### MUSIS AMICUS

The absorption a for the room being considered is calculated from values in Table I as follows:

	Units
Wood floor8436 square feet at 0.03	253
Plaster ceiling 8436 square feet at 0.033	278
Plaster on tile walls9430 square feet at 0.025	236
1,000 seats at 0.15	150
Absorption for the empty room	917
Average audience (330 people) at (4.7–0.15)	1500
Total, in round numbers	2420

It should be noted that the absorption of the audience is nearly twice that of the surfaces in the room.

Since 4730 units are needed in the room to give acceptable effects, and the room with one-third audience furnishes only 2420 units, it will be necessary to add the difference, or 2310 units of sound absorbing material. If hair felt of coefficient 0.55 is selected, the area needed will be 4200 square feet  $(2310 \div 0.55 = 4200)$ . This could be applied in panels on the ceiling.<sup>13</sup>

Summing up, the times of reverberation for the corrected room will be:

<sup>13</sup> See list of commercial materials now available for acoustic treatment in a pamphlet: "The Acoustic Absorption of Materials", by F. R. Watson. Bulletin 172, University of Illinois Engineering Experiment Station, cost 20 cents.

	Seconds
t(one-third audience)	$=0.05 \times 194000/4730 = 2.05$
t(two-thirds audience)	$=0.05 \times 194000/6230 = 1.55$
t(1000 audience)	$=0.05 \times 194000 / 7730 = 1.24$

It is interesting to compare the times of reverberation that would prevail in the uncorrected room, which would be too reverberant.

t(empty)	$=0.05 \times 194000 / 920 = 10.5$
t(one-third audience)	
t(two-thirds audience)	$=0.05 \times 194000/3920 = 2.46$
t(1000 audience)	$=0.05 \times 194000 / 5470 = 1.77$

With a capacity audience present in either the corrected or uncorrected room, the time is not very different, due to the large absorption of the clothing. This accounts for the fact that almost any auditorium is not objectionable with a large audience present. But with no audience present, the corrected room is much quieter and could be used for rehearsals and organ practice with practically the same effect as with the capacity audience present. With small audiences, the uncorrected room will be too reverberant, so that the words of the speaker will overlap objectionably as shown in Fig. 6, while in the corrected room the hearing will be more distinct, as pictured in Fig. 7.

# Musis Amicus

"Me doctarum hederae praemia frontium Dis micent superis;"

Hor. car. I. 1.

By HUBERT G. RIPLEY

To THE greatest Architect post hominum memoriam, is ascribed but one building, the basilica at Fano, and even its authorship is in some doubt. There is no doubt whatever as to the greatness of M. Vitruvius Pollio. Posterity has awarded him an imperishable immortal crown. Not one of gold with priceless jewels set in platinum, cunningly wrought with the skill of a Benvenuto, but a simple wreath of laurel and bay and wild olive, whose leaves are forever green.

The personality of this great man is revealed in his writings. He was a kindly soul, with charity for all and malice toward none, yet steadfast always for the highest ideals of sound practice combined with an altruistic ethical standard on an unusually lofty plane. His great work, De Architectura Libri Decem, was undertaken in his old age, in gratitude for the recognition of that great patron of the arts, Augustus, who had appointed him, together with three of his associates, M. Aurelius, P. Numidius, and C. Cornelius, as superintendents of ballistae and other military engines such as catapultae, and scorpiones and testadones. Vitruvius

owed this post to the favor of Octavia, sister of Augustus, who, it will be remembered, was for many years the toast of the Empire, celebrated for her beauty and many virtues. She married, en seconde noces, Marc Anthony, who for a while was most devoted until he fell under the spell of Egypt's great Queen. After Anthony's death Octavia cared tenderly for his many children, in itself no small an undertaking, including her own two daughters by the sheikh, Antonia Major and Antonia Minor.

This was about a dozen years or so before the Christian era and brings up a much mooted point that has vexed the various translators of Vitruvius from the time of William Newton down to the present day. Did Vitruvius dedicate his great work to the Emperor Augustus, or to the valorous Titus Vaspasianus? The arguments on both sides are presented at length in William Newton's preface (London 1791), for those who care to read them; they need not be gone into here. It will be sufficient to say that Colonel Fullerton is inclined to follow the Augustan hypothesis, in which he is in agreement with Professor Morgan, and it is

from an as yet unpublished brochure of the Fullerton Foundation that we are privileged to present certain hitherto unavailable data.

It now seems to be generally agreed that Vitruvius was born in the early part of the first century, B. C., in Formiae (now Mola di Gaoeta), one of the most ancient towns in Italy, near the borders of Campania in Latium. The site of the town is on the Caietanus Sinus, just across from Sicily, home of the fabled Laestrygones, from whence a colony under Lamus settled. The Laestrygones were a race of giants addicted to many prehistoric vices and Ulysses had a tough job escaping from their clutches. By the time little Marcus appeared, however, they had greatly mended their ways and had become a peaceful law-abiding folk, fond of light wines and the celebration of the Lupercalia. This yearly festival, instituted in honor of the she-wolf that suckled Romulus and Remus, was great fun. On at least one occasion it seems probable that the youths, Vitruvius and P. Numidius, were honored by being touched on the forehead with the sacrificial knife, after which they ran through the streets of Formiae in puris naturalibus, whipping freely all those they met with goat thongs. Ovid says (Fast. 2, v. 127) that women in particular were fond of receiving the lashes as they superstitiously believed that they removed barrenness and eased the pains of childbirth.

When the time came for Marcus to go to school, it was decided to send him to Rome where he would have the advantage of sitting under the best teachers. In the preface to Book VI, Vitruvius pays a graceful tribute to his parents for the privileges he enjoyed in gaining his education. Among other subjects he studied philosophy, geometry, astronomy, physics, poetry, history, decor, taxis, hydrostatics, graphical statics, harmony and acoustics. He excelled in boxing and swimming and was skilled in the pitching of quoits. In Rome he formed an intimacy with Batrachos, a Lakonian, who had come thither to study art, and M. Domitius, a brilliant young engineer specializing in Town Planning. These three gravitated naturally together for the serious consideration and study of the lighter things in life, and where one might be observed, absorbed in some affair of the moment, the other two were sure to be not far away. In accordance with the well-known fondness of the Romans for abbreviating names, the trio were known as the "B. V. D.'s" by the

rest of the students. Batrachos (see footnote) later formed a partnership with Sauras, after Vitruvius had gone to Africa with Caesar, and Domitius (ibid.) had embarked with Crassus in his real estate schemes.

After finishing their studies in Rome, Vitruvius and his inseparable companions, Batrachos and Domitius, voyaged to Rhodes to complete their education in rhetoric under Apollonius Molo. It was their intention to try for the Rhodes Traveling Scholarship, for in those days oratory was a prime requisite, and often a deciding factor in the career of an architect. Vitruvius made an enviable record for himself in all branches save oratory, which art, due to an inherent modesty and hesitancy of manner, he was never able to master. (v. Book III, proem.) For this reason he just failed gaining the grand prize, although on two occasions he was placed second and awarded the S. I. A. R.\* prize of 1000 sestertii. These sums he sent home to his parents in Formiae, for just at that time he had been recommended to Cæsar by Apollonius as a promising young architect and engineer, one who would be useful to the great general in his Spanish campaign.

He served under Caesar in Gaul and was present at the battle of Pharsalia where he had charge of the scorpiones with the rank of centurion. He afterwards accompanied Caesar into Africa and designed a series of pageants for Cleopatra who was noted for her fondness for wild parties even at a tender age. Caesar was anxious that she should have a good time and humored her fancy in every particular. Book V treats of the design of theaters and many valuable hints were gleaned by Vitruvius during his stay in Egypt, although he does not seem to have devoted much serious study to the principles and theories of the disciples of Imhotep, at least it is not so recorded in his De Architectura. Perhaps this was because of his violent flirtation with the limpid eyed Ftatateeta, la dame la plus mignonnement foltare in all the Nile Delta. This little lady, who at the early age of fifteen had tossed her bonnet over the Bougainvillea hedge, gained the title of "Miss Alexandria" at the annual festival of the Posidonia, A. U. C.

Disquieting news from Rome where the S. P. Q. R. were beginning to get nervous, caused Caesar to change his plans hurriedly. It was high time, for conspiracy was rife even in the town, and the great conqueror, accompanied by a faithful band of followers, among

Batrochos and Sauras designed and built the Temple of Morpheus in the galleries of Octavia. Everybody was so well pleased with its graceful proportions and exquisite detail (Batrachos, in addition to being a trained architect was a celebrated sculptor, renowned for the meticulosities of his carvings—he wrought the fine-grained marble of Skyros with the delicacy displayed by Grinling Gibbons in handling bog oak—', that the architects asked permission of Phobeter the High Priest to sign their names to the building. This was refused, but Batrachos, not to be deterred, introduced, twined in the foliage of the capitols, a frog and a lizard, thus proclaiming their authorship to the illuminati. Phobeter and the heriophants chuckled when they found it out, but as the carvings were so beautifully and so sympathetically handled, Batrachos was forgiven. Pliny, alluding to the incident (XXXVI, 42', places the carvings on the bases of the columns, which apparently were likewise enriched. Furtwangler, however, is inclined to the opinion that the fragment that remains is from the abacus of the bell, in which view he is fortified by Colonel Fullerton.

When Crassus began to invest heavily in Roman real estate, he found an able and crafty assistant in Domitius. Together they combed the city for likely sites, even going to fires, which were very prevalent in the more congested quarters of the city, and bargaining with the unfortunate owners of property adjacent to or actually involved in these conflagrations. The panic-stricken citizens of the quarter would flock around Crassus, anxious to sell out at any price. In this way large holdings were obtained and Domitius would design modern model homes, with a better allowance for exposures and of fire-resisting construction, separated by suitable party-walls at frequent intervals, in much the same way the Architects Small House Service Bureau functions at the present time. All this activity tended to stabilize values and raise the standard of building, for although Crassus accumulated an enormous fortune, he expended it generously and wisely. Domitius, sometimes called Marsus, was also a poet, and wrote a series of amusing verses, very popular even though of a somewhat dubious propriety.

\*Sodales Imperalis Architectorum Romanorum.

#### MUSIS AMICUS

whom were Vitruvius and P. Numidius, was forced to swim from his ship in the bay of Alexandria with his arms in one hand and his commentaries on the Gallic War in the other. The two architects were thoroughly at home in the water, due to their early training in the bay of Formiae, and rendered valuable assistance to their chief, who, but for their aid, would surely have had to abandon either his sword or his notebook and perhaps both. The two centurions were absolutely devoted to Caesar, which was natural enough for Vitruvius, coming almost from the same home town, as one might say, and in the case of P. Numidius even more laudable. The latter was a Mauretanian by birth, a distant cousin of Juba, whose son was led back to Rome to grace the conqueror's triumph on his return from Africa. Young Juba behaved so handsomely during this trying ordeal that he won the hearts and admiration of all by the nobility of his mien. The Roman populace, always generous to a vanquished foe, cheered him to the echo as he marched along in the procession to the martial strains of the Imperial trumphets, patting Juba on the back, crying out, "Io, Evoe, te salutamnus Juba!"

For four or five years after the African campaign there was peace in the state, and Vitruvius at last had an opportunity to practice the purely æsthetic side of his art. Besides being one of the greatest generals the world has ever known, the conqueror of three hundred nations and eight hundred cities, Caesar "could employ at the same time his ears to listen, his eyes to read, his hand to write, and his mind to dictate." It comported with his plans for the organization of the Empire, to improve the condition of the gateways of commerce. One of these was Fanum Fortunae,\* in the northeastern part of Italy in the province of Umbria, on the Flaminian Way between Pisanum and Sena Gaelica, on the seacoast near the river Metaurus.

Caesar decided that the Forum was wholly inadequate both in size and dignity for the growing importance of the city, and commissioned Vitruvius to design and "conduct" a basilica "at the colony of Julia," as Vitruvius tells us in Book V, c. 1. The forum is an ample open space a little over 200 feet wide by 320 feet long, surrounded by a two-story portico, with a wide intercolumination, "because, by ancient custom, the shows of gladiators are usually given in the forum . . . and in the surrounding porticos the shops of the bankers are disposed, with galleries in the upper floors, properly adapted for the use and management of the public revenue."

The basilica was placed on the warmest end for the convenience of business conferences, removed from the inclemencies of the weather. On the opposite axis was situated the temple of Jupiter. At one end of the

\*There is an account of the city in Eustace's Classical Tour. It was a well-built handsome town with a fine Temple of Fortune and a noble Theatre. At the present time there are several handsome churches containing valuable paintings by Domenichino, Guido, one by the father of Raphael, and an altarpiece attributed to Raphael himself. Here, in 1314, Julius II established the first printing press known in Europe, with movable Arabic type. The 13th century Gothic Town Hall is a notable structure.

basilica was the pronaos of the temple of Augustus, which would seem to indicate that the work was not finished until after Caesar's death. The basilica itself was a large hall of noble proportions, 60 feet wide by 120 feet long, with a tribunal in the form of a hemicycle 46 feet long by 15 feet deep, where the magistrates sat. Thirty free standing Corinthian columns each about 4 feet in diameter and 45 feet high supported a roof of beamed construction with a ceiling which Vitruvius calls a "testudo," which was a flat arch like the back of a tortoise, "for the Romans distinguish such kind of arches by that name." Like most of the basilicas and temples of the Romans the columns and entablatures were of first class construction while the roof was of the second class or slow-burning type. This particular building seems to have been used as a combination stock exchange, court of justice, and war memorial. According to the plan and section as reconstructed by William Newton, the forum with its attendant structures must have formed a splendid civic center, worthy of an important town.

After this job was completed, Vitruvius seems to have been neglected for a number of years, due doubtless to his innate sense of modesty and lack of aggression in putting forward his claims for consideration by the state. The proem to Book III is a description of his own time, and William Newton, writing in 1791, observes that it seems very justly to agree with the present, inasmuch as "It is now usual for ignorance and interest to prevail over merit; it indeed seems to be the natural effect of things; for merit is naturally diffident and reserved, as ignorance (having nothing else to depend on) is necessarily assuming and forward; and the latter qualities must generally prevail; because the majority of people cannot have so much knowledge in every art as is requisite to enable them to distinguish merit from incapacity; for which reason they are obliged to form their opinion, on the pretenses, appearances, or public fame of persons, or else are governed in their choice by interest and prejudice. If merit is preferred for its own sake, it is as much owing to the knowledge of the judges, as to the skill of the artist; for how should merit be preferred, unless it is perceived, and how should it be perceived, unless the judges have a sufficient knowledge of the art, to enable them to distinguish it?"

In order to convey an idea of Vitruvius' style, which to our way of thinking has been somewhat harshly criticized as involved and obscure, we cannot forbear quoting the following passage:

"Apollo of Delphos, by the voice of the priestess, pronounced Socrates to be the wisest of men. This wise and judicious man is reported to have said that the human breast should have been open as a window, that the thoughts might not have been concealed, but have been exposed to observation; so, following his idea, I wish that all nature had been constituted open and apparent; that not only the virtues and vices of mankind might

have been readily discerned, but also that the knowledge of all sciences might have been evident to the senses; that no erroneous opinions might have prevailed, and all arts and erudition have been truly comprehended. But as things are not thus constituted, and it is not possible to discover the capacity and knowledge which lies concealed in the minds of men, it therefore often happens that artists of great abilities, who are not rich, or have not become known by long business, or by recommendation, and are also unskilled in popular eloquence, cannot obtain by their works the reputation of possessing so much merit as those who are eminent are believed to possess.

"This we may chiefly observe among the ancient statuaries and painters, who have gained commendation, and whose names will remain famous to the latest posterity; as Myron, Polycletus, Phydias, Lycippus and others who have acquired reputation by their art; for they have obtained it by executing works for great cities, kings, or noble persons; while others who have not been less ingenious and capable, and have performed excellent works for private and unknown persons, have obtained no fame; not for want of industry, or capacity, but of good fortune; such are Hellas, of Athens; Chion, of Corinth; Myagrus, of Phocis; Pharax, of Ephesus; Bedas, of Byzantium, and many others. Also among the painters, Aristomenes, of Thasos; Polycles, of Atramitene; Nicomachus and others, who were neither deficient in industry, the knowledge of their art, or ingenuity; but either poverty, ill fortune, or being overcome in their pursuits by their opponents, have impeded their success. Nor is it wonderful that, on account of people's ignorance of the arts, the meritorious should be neglected; but it raises our indignation when the interests of friends influence the judgment to a false preference. Wherefore, as Socrates said, if all thoughts, opinions, and knowledge became visible and evident, neither favor nor interest would avail; but whosoever by real application and study became most capable, would be voluntarily employed. However, as things are not thus open and apparent, and I observe that the ignorant receive encouragement more frequently than the skillful, I judge it not proper to contend with the illiterate; but rather, by publishing these precepts, to manifest the usefulness of our art."

A great student of Greek theory, Vitruvius maintained a measure of philosophic contentment under adversity that completely won the friendship of the illustrious and high-minded Octavia. She recommended him to her brother Octavianus, to whom he rendered valuable assistance in his campaigns against Lepidus and M. Antonius. He was wounded at the battle of Actium and suffered greatly from exposure from which he developed a severe case of neuritis which affected his

spine. In his book he describes himself as bowed with age and infirmities, yet throughout the entire work there is kindliness and charity and an intimate knowledge of practice and theory that arouses our admiration for him as a man with the soul of a true artist. He insists that the illiterate and unskillful should not be allowed to practice the art of architecture, thus revealing to us that in his time as in ours, "persons unfounded and ignorant in the Art assumed the name of Architects!" This will probably ever be the case, for the habits of mind and the time necessarily devoted to the mastery of the many complexities of the Theory and Practice of Architecture unfit that one to cope with the chicanery of politics and the astuteness of commerce—not to put too fine a point upon it.

Vitruvius' last years were, it is pleasant to know, passed in congenial company. He was a contemporary of Virgil, Manilius, the astronomer, Dioscorides, the celebrated physician who attended Anthony and Cleopatra, and Asinius Pollio, orator, poet and historian, all intimates of Augustus. Asinius handed Augustus the polite raspberry when the latter, who had satirized him in verse, requested the poet to answer in a like manner. "Nay, O Caesar!" replied Asinius, "You have the power to proscribe me, should my verses prove offensive to you."

Maecenus, of course, and Agrippa and Strabo, and Horace, were friends of Vitruvius, and Macer of Verona, noted for the elegance of his verse. Musa, the physician to Augustus, an early exponent of the cold bath theory, whose prescriptions were not always successful; Propertius, Livy, Ovid, Tibullus, prince of elegiac poets, whose love poems to Delia and Plautia and Neaera possess an uncommon grace and purity of sentiment; Bathyllus, who claimed one of Virgil's distiches, Tucca and Varus—were some of those sprightly souls who frequented the court of the brilliant Emperor, and with whom Vitruvius, when his neuritis permitted, used to play around with at symposia and shows.

While to a certain extent he lacked a just measure of the appreciation of his contemporaries, he was beloved by all and the greatest Architect in history, one whose influence may be said to have moulded the destiny of nations, was content to spend his declining years in the preparation of his Magnum Opus. His highest ambition was to instill in the public mind a percipience of the art and function of Architecture, and the naive hope that he might be known to posterity. These hopes have been realized!

# De Gustibus

By Louis La Beaume

ASTE is something, so the saying goes, that may not be discussed with profit; and seldom with taste itself. To engage in an argument about it would be, to put it mildly, indecorous. Taste is one of God's great gifts to man, a holy gift, and to disparage what God has given to another is blasphemous; to vaunt one's own good fortune vulgar, and therefore the very antithesis of taste. So the wise course has ever been to take one's own taste, like one's neighbors', for granted, and to say as little as possible about it. Only thus may we hope to attain the pinnacle of perfect taste.

But when the mind begins to become active, the eye is apt to become cold with a look of appraisal, and seek to measure the validity of those spontaneous reactions to which we refer as Taste. It is then that, no matter how tactful, how tolerant or democratic we may be, the divine spark within us may kindle some mental reservation, particularly with regard to another's taste. And once this question of Taste is allowed to become tangled in the convolutions of the brain, our worries and the world's worries undergo enormous multiplication. Our efforts should therefore be to keep Taste natural, instinctive, impulsive, pure. We speak occasionally of some predilections as Cultivated Tastes, but, to the unspoiled man, these inevitably smack of affectation if not of positive perversion. To be truly happy we must know what we like even though we may not know why we like it.

It is fortunate that even the tastes of the palate, seemingly the simplest, are difficult to analyze. Most of us enjoy a considerable range, but each one's gamut is different from his brother's. One man's meat is not another man's meat. Nor are we always heedful of nature's demands in our diets. Some of us "balance" badly, but none the less ecstatically on that account. On the other hand some of us eat and drink as carefully as though Vignola himself were watching us draw our Orders. And who will say that a taste for terrapin or a craving for canvas-back is a sign of sophistication, of degeneration or of moral fastidiousness? There is one glory of the Scotch, another glory of the Bourbon and doubtless another of the Vodka, yet each differeth from the other in glory. So taste, as the expression of personal idiosyncracy, as the inalienable right of every free man to the peculiar gustatory titillations that his soul cries out for, must not be disputed. But even in the field of gastronomy sheep browse, and sheep follow bell-wethers and bell-wethers are amenable to shepherds. coming under the comforting spell of convention, or resigning its waywardness to authority, tends to satisfy itself with the flavors and juices decreed by social fiat. We may with little effort learn to like the bitter nostrums

prescribed for us by those necromantic scientists who claim to know our livers better than we do. Thus taste originating as a manifestation of individuality may be transformed into an evidence of social conformity, or even into a sign of familiarity with the orthodox.

However it remains taste just the same. It is preference, and preference no less, if we like what we are told to like. Often it may be counted better taste just for that, and sometimes the Taste which is Timidity is the most delicate taste of all.

When men gather into groups, as other gregarious animals do, habits are formed and rules are passed, so that waves of taste are communicated almost with the speed of light, and those not washed by such waves are left defiled, or outside the circle—eccentric. Such a condition is not enviable, and it behooves us neither to lag too far behind nor to hurry much more than a day's march ahead. That is if we have any taste for popularity and all the blessings that flow from it.

It is a serious matter, this matter of taste, and Society lays great stress on the importance of it. An almost unlimited scope has been granted us as far as the natural physical appetites are concerned, though we are constantly warned about forbidden fruit. In the realm of aesthetics our restrictions are narrower as perhaps our reactions are less spontaneous. It is here we more often call for guidance and stabilization. We do not trust our eyes or our ears so confidently as we trust those glands which make the pleasures of the table so delightful. And yet our hunger for beauty is only less keen than our hunger for food and drink. Some respond pretty readily to the lure of the most exotic viands, especially if they are presented with Art. But Masterpieces of Art are not always recognized at first glance even by the cognoscenti.

It has thus become necessary in every age, not only for the preservation of decorum, but for the aesthetic nourishment of the famishing, to set up arbiters of taste who may by a nod, by the lifting of an eyebrow, or by vociferous outcry direct our attention to the best the market affords. The best, of course, may not be the freshest, for as there are epicures who like their game high and their wines dry, so there are connoisseurs who like their Art high, and dry also. Not all of them to be sure, for fortunately there are divergencies of taste among the arbiters, and we are offered some freedom of choice. We may choose to go in for Ming Pottery or for Catalan Primitives, for Chippendale Furniture or for Negro Sculpture, for Gaugain or for Corneille de Lyon or Mestrovic. Any of these will be considered very good form, as Corot and Mauve, Wagner and Robert Louis

#### A WESTERNER LOOKS AT THE EAST

Stevenson, Richardson and Whistler were so considered a generation ago.

The arbiters are kept very busy and it is not strange that they may sometimes overlook a masterpiece or Master. Out of the mists of the Quattrocento forgotten names are being rescued. Geniuses of the Sixteenth, Seventeenth and Eighteenth centuries are arriving every day. A hungry world mislaid El Greco for some hundreds of years. And after a century of eclipse the glittering star of Ingres takes on a renewed brilliance. Renoir and some others had not so long to wait.

It would be foolhardy to deprecate the time element in any consideration of Taste. It plays so important a part. Time is apt to relate the apparently unrelated; to trace out the strains of the blood royal that bind the makers of great art into one august family. And we are challenged to recognize the common kinship of all beautiful things. The challenge is one that should keep us ever alert in the conning tower, or on the parapet, for out of the dawn may emerge some shape unfamiliar and strange to look upon, which in the halflight may startle us. The arbiters may shout imprecations on it, and strive to exorcise it by calling on the name of some old and venerated Spirit. But as the light grows stronger, and if our eyes are keen enough, we may perhaps discern the lineaments of the elder God himself come again in raiment of a new devising.

History is the sad tale of superstitions, crucifixions, martyrdoms and repentances. The story of Art is the record of man's struggle at different times, in different places, and under differing circumstances to embalm and fix some harmony his ear has caught, some radiance his eye has seen, some line or form which has brought him peace, out of the welter of chaos and anarchy in which his lot has fallen.

What is Taste then? Something that may not be disputed? Perhaps, for disputes are distasteful. But surely we may ponder it a little. Scarcely is it a thing to be confounded with pedanticism, foppishness, arrogance, acquiescence in the mode of the moment, or preciosity. It is rather something fluent, expectant, shy and generally humble. It is virile, but feeds delicately on phantoms, and though it loves truth, if the truth must be told, it suffers profound eclipses.

Our Museums are crowded with objects of beauty, and the Taste which has garnered them is not to be decried. Time has pretty thoroughly validated it, though who can predict the revisions which increase of Time will dictate. Yet the art of collecting is less fraught with hazard than the Art of creating, as every wise man's son can tell.

It should follow then that Taste in action rather than the Taste of Connoisseurship is the Taste of prime importance. It must have a kind of nimbleness, a lust for adventure and experiment and above all the quickness and wit to recognize Beauty in a thousand unfamiliar guises.

It is not concerned with schools or formulae, with dissection, with analysis, or with technique. Styles change, new patterns take shape, but through them all should run some eternal tincture which it is the function of Taste to enjoy.

Envoi-

"Lines To a Pattern on a Waffle"

What inscription cuneiform Graves your surface brown and warm, Message mystic and inscrutable, Wrought by iron mould immutable, Does each tiny hieroglyphic Spell some rapture beatific? Or proclaim some torment awful Succulent and sizzling waffle?

Toothsome, tantalizing riddle,
Does the geometric griddle
Hold your secret in its metal
How you'll taste and how you'll settle?
I am eager to translate you—
Will I grieve because I ate you?
Neither Sanscrit, Choctaw, Greek,
Holds a flavor more unique.

This great truth you do impart, Fundamental rule of Art— Meaning doesn't really matter If there's virtue in the batter.

# A Westerner Looks at the East

By HARRIS C. ALLEN

ENVER, St. Louis, New York, Chicago—hardly Eastern cities, one would say; but after traveling from the Pacific for two days, Denver seems to be quite far East. A two-hour survey deepens the impression. Except for glimpses of mountain scenery, it

has none of the "Wild West" aura. Rather is it an imperturbable Victorian matron, basking in middle age respectability. The most striking ornament to the lady's buxom belt line, seeming almost new by comparison, is a substantial stone club house which belongs to the Henry

#### A WESTERNER LOOKS AT THE EAST

Hobson Richardson era, well designed, an intaglio which deserves to be cherished. And so to bed, if Pullman bunk may rate that title.

St. Louis, in a driving rain, gives a confused effect; which is not entirely dissipated when the weather clears. Here is an elderly belle in the process of rejuvenation; one remembers the heroine of Gertrude Atherton's "Black Oxen." The gland surgeon is plainly at work (but not with monkey glands—perish the thought!) and one sees the grafting of new skin, in patches, and even the preparations for a drastic operation upon the heart. One can but admire the courage and hopefulness of the lady; seeing how charming are some of her features, that have (almost) escaped the ravages of time, one can well imagine her as the toast of the beaux of last century. And there is evident that quaint mixture of races that makes for vitality. French with a German accent; French verve and ambition, directed by German systematic thoroughness and determination. St. Louis is a Melting Pot (and how!); she does not call forth sympathy, so much as hearty good wishes, in her sporting venture.

Another night's journeying—and New York writhes into one's consciousness. Move up the mercury. Here is a Boiling Pot; bubbles—scum—a seething mass of motion; confusing, exciting; feverish; intoxicating.

About twenty years ago, a motor boat trip up the Monongahela river from Pittsburgh, between continuous miles of blast furnaces, coke ovens, factories, chimneys, roar of sound and blaze of light, impressed me—anyone as the most dramatic possible presentation of the Spirit of America—Industry, concentrated, intensified. Today, the spectacle from the Woolworth Tower, or better still from the roof of the Equitable building, produces a similar thrill. But it is Commerce, not Industry, a Hydra-headed Titan that awes and fascinates. This, however, is not to get a fair estimate of New York's full personality. A boat-ride around the Island better conveys a sense of her variety, her flaunting, superb inconsistency. A trip out on the Elevated is incomparable—around you masses of tenements, alleys fluttering with far-flung lines of "wash," banked at the feet of huge contemptuous cliffs of buildings —great tiger-lilies rising from the mud.

Stroll along the Avenues. Thrilling in mass, from roof or river, many of the sky-scrapers seen separately, close at hand, are disappointing. Awkward—unbalanced—like giant step-ladders or partly pulled out telescopes—apparently they leaped unfinished from paper elevation to reality. It is curious, too, how old-fashioned many of them look. Gothic detail is lovely but unconvincing—like stage scenery. Such buildings as the great structure rising on the site of Madison Square Garden, magnificent in mass and detail as it is, seem almost frivolous compared with that epitome of America which is the Columbia Medical Center—for which no adjectives seem adequate.

Observe the flashes of color and light; the rich bands of flaming terra-cotta crowning the Insurance Center;

the crest of the American Radiator Company Tower, flood-lighted at night, a golden vision against the dark blue sky.

New York is a beautiful, full-blown, voluptuous actress; haughty, dramatic, sophisticated. She wears regal robes, muddy at the hem, nor cares. She shows many a trace of vulgarity, of the peasant blood which gives vigor to the old stock. One must not ask such a gorgeous creature the secrets of her private affairs—one can only stare in fascination and wonder at the Sarah Bernhardt of American cities.

A smooth night's ride on the Twentieth Century Limited brings one to Chicago; the great, brooding mother of the plains—Pioneer Mother, in her new opulence not discarding her old toil-grimed garments, but putting over them rich opera cloaks, glittering jewels. Still typical of America's Nouveaux Riche, she is nobody's fool; keen of perception, acute of judgment, tolerant, appreciative, generous, acquisitive of education and culture, teeming with life, health, buoyancy; a subject for respect—amusement—affection.

An architect sees much to admire, little to inspire, in Chicago. The famous Tribune Tower is a successful, well-nigh perfect, study in traditional transposition. It is a beautiful jewel from the Old World treasure chest. One of the few great artistic thrills of life seizes you when you step out on the tile terrace at the twenty-fifth floor level, and between the mighty open buttresses, standing around you like huge dark tree trunks with leafy branches interlacing far above, look out over the gray stretches of the city, the broad blue expanse of the lake.

Another unforgettable impression—the University Chapel, exquisite beyond criticism, Goodhue speaking in his own Gothic tongue; a poem in stone.

And as a last experience to carry West, on the window of the Overland train as it rolled along the flat floor of the prairie, spreading toward endless horizon, there was etched in moonlight the gaunt mass of a concrete silo, grouped towers standing in dark silhouette against a white cloud-flecked sky.

Industry, Commerce, and now Agriculture—all manifesting the Spirit of America, in forms of beauty.

## January and April Journals

There has been an unusual demand for the January and April numbers of The Journal. The supply at The Octagon is exhausted except for file copies. Members who do not retain a permanent file of The Journal would render a service to the Institute by contributing their numbers for January and April.

Please send them to The Octagon.

FRANK C. BALDWIN, Secretary.

# Collaboration Between the Arts in Art Education

By EVERETT VICTOR MEEKS

HOSE interested in education in the Fine Arts who attended the Institute convention in Washington last year must have in every case carried away much fertile suggestion in the matter of what a professional art education might really be brought to mean. That we architects from all over the country have come together again this year with the announced intention of reinforcing the idea of collaboration between the arts, so inspiringly started in last year's discussions, gives new impetus to educators again to take account of stock and see wherein, working with the younger men, with beginners, as they do at the student stage, they may instill, foster and develop the principle of true collaboration between these students in the various arts; that is, between those studying architecture and those specializing in painting, sculpture, landscape and the other arts.

Several weeks ago, after having partaken of a very good dinner as Monroe Hewlett's guest, in a moment of enthusiasm I yielded to his well-known kindly persuasiveness and agreed to come on here to St. Louis and accept the privilege and honor of repeating to you some of the things I had already had to say about the desirability of collaboration between students of the various arts and again to suggest certain possibilities which might help to bring about and realize this desirable and devoutly to be sought procedure and result.

Before that, on the request of Mr. Grady of the Institute Journal, I had been rash enough to rush into print in this matter. And subsequently at a joint meeting in New York of architects and mural painters I took occasion to restate some of the elements in a combined program of study which seemed to bear particularly upon this very question of collaboration; so that if some of you have already read or heard what I am about to say I trust you will pardon a certain amount of repetition and bear with it.

There seem to be three major and fundamental reasons why collaboration between the arts has again become so generally recognized as not only desirable but necessary. In the first place the arts, particularly during the last hundred years, have followed increasingly as we approach modern times a tendency toward specialization. This, to be sure, we find characteristic of all fields of endeavor and activity during the nineteenth and twentieth centuries. But in the arts specialization has gone so far that within the range of even one of the so-called fine arts, taking pictorial art as an example, we find a series of lesser categories

of artists such as figure painters, portrait painters, landscape painters, etchers, engravers, lithographers, commercial artists, illustrators, water colorists and so on; a host of adherents to various sub-professions who deliberately and from choice raise barriers about their work to separate each his own particular avenue of approach to art from that of the next man, a narrowing procedure which has led to cults on the one hand and intolerance on the other.

In the second place we are face to face, in practically all the arts, with what might be called style chaos. Perhaps this lack of a generally accepted style attitude or agreement may be partly a result of the specialization just mentioned. In great part, however, we educators must acknowledge that it is due, as well, to our recent system of art education which, even at the beginner stage, has so often not only permitted but sought out and encouraged self-expression, has stimulated individualism, ninety-nine times out of a hundred unjustified by a corresponding special talent, all at the expense of sound underlying common general training. But principally this split apart, this lack of artistic coordination, is due to that peculiar social, mechanical, political and economic series of discoveries, experiments and developments, coming with a rush in the nineteenth century, which turned us from any real interest in art itself to a purely materialistic general activity. This was, and is, all wrong. If we have schools galore tumbling over each other in rapid succession, if we lack uniformity of style and still wallow in eclecticism on the one hand or radiate into different and unrelated "isms" on the other, it is because we continue to permit this juggernaut of modern efficiency, as exemplified by twentieth century specialization, to roll us out flat.

And in the third place, greatly as a result of such material development now perhaps fully assimilated, and particularly as an indicated coming reaction against the chaotic style conditions just noted, many in the arts, or interested in them, feel that again we are faced with a possible renaissance, a renaissance gaining impetus and momentum every day. Many feel that this coming movement is getting ready to progress with tremendous force and at a tremendous rate. Such a movement when it assumes widespread activity is sure to be based on a general recognition of the true unity of art, demanding, in consequence, true unification of style if it is to continue and not be merely a false start. It would therefore seem that there are almost certain to be even wider oppor-

<sup>1</sup>Address at the Sixty-first Convention of the A. I. A., St. Louis, Mo., May 16, 1928.

#### COLLABORATION BETWEEN THE ARTS IN ART EDUCATION

tunities before us, perhaps even more diversified, than were offered to the artists of the fifteenth and sixteenth centuries. The opportunities may even be within reach, but until we can see them, seize upon them and realize them, they might as well not exist. To do this we must first of all have a new and wider vision in the profession of art.

An educator naturally turns to his own field to see if anything can be done in art education to meet this seemingly imminent neo-renaissance. I believe much can be done, and the opportunities seem evident principally along two major lines of educational curricula. We can train artists, or try to train them, to develop mutual comprehension by the recognition of the necessity for mutual cooperation, with perhaps more of a view to the old-time versatility within the individual. This, after all, is nothing more complicated than a program of collaboration founded on comprehensive fundamental sympathy, enthusiasm and belief in basic principles. And we can train, or try to train, the public. This may sound chimerical. But it is worth the attempt. If a larger and larger class can be built up of educated people who know, admire and crave the work of the artist, again we shall be approaching in its other fundamental the state of affairs which produced the versatile Giottos, Ghibertis, Sansovinos, Raphaels and Michael Angelos. Translated in terms of modern art education it means a two-fold program for the schools which are teaching art.

In the first place schools of art must offer comprehensive training for our artists, be they architects by inclination and final specialization; be they landscapists, painters, sculptors, students in whatever field each one finds the most sympathetic mode of expression. The ideal method for a student to follow might be to postpone specialization until he had penetrated fairly deeply into the general subject of art. This may come. As yet it does not seem entirely practical. The next best step is what I am really supposed to speak about today and that is collaboration. There is no doubt that this can be carried out at the student stage; as a matter of fact, it is being done and with most surprisingly gratifying results. In a well organized school, with an adequate curriculum, there are two normal and easy ways to bring about effective collaboration which will produce at least a fair degree of mutual understanding. The first is in creative work; that is, in the mutual study of so-called collaborative problems of various natures, where a student of painting and a student of architecture—and where sculpture is a part of the program also a student of sculpture—where these together create the design. There is nothing new about this. The American Academy in Rome has been holding competitions at Rome between such teams for years; and latterly for the past two years the alumni of the Rome Academy have set a competition open to students in this country. Only last week I attended by invitation a meeting of the officers of the Rome Alumni. There were present representatives of the various arts, men who a

few years before had been through that great experience in collaboration, the three years at the Academy. Young men almost without exception, they have already achieved distinction in recently executed collaborative work. The entire evening was given over to a discussion of ways and means to interest the various schools of art in this country in the collaborative prize competitions which they proposed to continue. I believe that the time has come when the schools should not only interest themselves but set up the machinery, if it may be called such, to make student collaboration possible and even a part of the regular curriculum. All the facilities for this already exist in many of the schools. It was an inspiring experience to find this group of artists so earnest and convinced, so ready to give time and thought and work to help the cause of collaboration in the schools.

So valuable have we found this exercise at the particular institution with which I am associated that next year a collaborative problem goes into the schedule for all the arts as part of the required work in design. Some of you may have seen young people at work on these problems. Those of you who have observed them, perhaps have taught and criticized them, know how inspiring it is to a teacher to watch these young people getting together and threshing out such problems, arguing earnestly and excitedly point after point, where such association between the landscapist, the painter, the sculptor and the architect brings up questions to be decided. Out of such contact may flow, often does flow, that most intangible but most desirable, I might say most powerful, form of collaboration between students, esprit-de-corps. I know of no factor in art education which may do more to raise the standard of student work than this unaffected common enthusiasm for the common job, this keen and intense interest in each other's work. It is impossible deliberately to devise means to bring about esprit-de-corps among students. Collaborative work is the most powerful stimulus, however.

The second method of mutual contact and understanding between students, from the pedagogical point of view is through what may be called overlapping courses. I believe if we are to pick up the threads of style, if we are to assemble our esthetic ideas and proceed on a basis from which will develop a more or less unified school or style to express what is going on about us-I believe that we must understand in a general way but adequately what has gone before, if only to provide a perspective from which to view our own creative work. Hence the primary justification for historical and critical courses, so-called courses in appreciation, although I do not care for the term. For students who are doing creative work the advantages of such study will be obvious, provided it is understood that students specializing in one of the arts—for I suppose we are never going to get entirely away from it—are required to follow general introductory comprehensive courses in the other arts. Every painter should know the outstanding works which have been

produced in architecture and sculpture, every architect should know the record of achievement in painting and sculpture, and every sculptor must know his architecture and painting, in each case at least intimately enough to grasp and feel the bearing of one art on the others, the interdependence of all on each other.

Another valuable method of inoculating the students specializing in one art with the virus of the other art is by what may be called cross criticism. The painters on a faculty may be called in with great effect to criticize the students in architecture, particularly at the time of rendering and especially in these days of highly developed student use of tempera and other media. Vice versa, the critics in architecture, almost invariably among the leading designers in the profession, are invaluable in criticizing the compositions of painters and sculptors. We all know the sculptor's mastery of three dimensions. Some of the most intelligent criticism given to architects comes from the practitioners in this sister art. There are possibilities here which have not as yet been sufficiently developed. Certainly this is collaboration in education in its most feasible and yet most intensive form.

A fourth common meeting ground upon which to bring together students of the various arts may be found in the careful study of available collaborative exhibitions of professional or student work. The latter bring out particularly full attendance. Students are innately curious about each other's work and free, almost merciless, in criticizing each other. Try the experiment of allowing a class to rate or value its own work and you will find the marks running ten per cent lower than those given by a faculty jury. Best of all, they are almost invariably awarded with surprising intelligence and real discrimination as to comparative merit. Such exhibitions become increasingly valuable if announced, required and carefully planned public criticisms, which the students of the various arts attend simultaneously, are given by the several teachers in the various arts, each man not only criticizing the work of his own students, within his own field, but also criticizing professional and student work in

It seems fairly plain, therefore, that contact may be established successfully between the arts and the students studying them by collaborative problems, overlapping courses, exchange of criticism and common exhibitions; with general, special and stimulating criticism on the part of the teachers and encouraged comment on the part of the students themselves. Thus both in practical and theoretical work in the arts a mutual overlapping and a mutual understanding is not only desirable, but easily possible of attainment. If any of you question this possiblity all I can say is that it is being done,

A moment ago I stated that we must not only train our artists in mutual understanding, but I also expressed our obligation to train the public. A pretty large order, perhaps. Yes and no. If we can train the leaders we can go a great way toward building up a true appreciation of art in important quarters on the one hand, and on the other out of this may develop a smaller group of clients, dilettanti, connoisseurs, purchasers and patrons offering encouragement and stimulus of the most effective and continuing nature. Now, in the universities—that is, in the centers of higher education, so called—we fondly believe we are getting picked human material and are consequently training young men and women to go out and be leaders among their fellows. Certainly the fact of advanced education should, other things being equal, produce an advanced sort of brain. And recently this has been proven by some quite elaborate statistics through the initiative of the president of one of our big business corporations. So that should settle it as a mooted point. If, therefore, we can give proper coordinated and correlated instruction to these apparently selected young people an immeasurable good will be accomplished and an immeasurable stimulus applied.

One of the most hopeful signs today, therefore, in university development is the growth and extension of just such courses and curricula in the fine arts. I am sure I am understating it when I say that at Harvard, Princeton and Yale there is, in each case, an undergraduate group of over four hundred academic students taking art courses. This is over and above the young people specializing professionally in art. It is a growing class of young men and women who feel that they want to know something about art, to learn to understand, to criticize and above all to appreciate it. Out of such grows the intelligent public.

It is, perhaps, too early as yet to judge with any degree of accuracy the results of collaboration between the arts at the student stage. Collaboration in art education is so comparatively new in idea, and even newer in application—that is, speaking in terms of our own era—that one may only prophesy. I venture to say, however, that the mutual tolerance, understanding and support brought about thus early, at the formative period, is going to make our artists of the future take each other's work not only as a matter of course but as a matter of vital common interest. It is hoped that in not too remote a future no architect will think of determining all the factors of his great monument without consulting a sculptor friend or actual collaborator. Nor will he go ahead in his great interiors and continue merely to set aside certain surfaces or panels and say, here shall I have a painter put decorations. He will cease to do this, because he is going to recognize that he will get a more unified, a more harmonious, a more truly artistic result if he collaborates with the painter and sculptor before his ideas have crystallized too far and hardened too definitely into final form. And the same is true with regard to the surroundings of his building and the necessity for collaboration with a specialist and expert in landscape design.

#### HONORARY MEMBERSHIPS BESTOWED

All agree that architecture is the mother of the arts. The first to subscribe to this doctrine or dogma, call it what you will, according to my experience have been the painters and sculptors themselves. It is therefore entirely fitting and proper that we architects should be making the first general, and I devoutly trust effective, move to devise the means by which a true reassembling of the family of the arts may take place. In closing, therefore, will you permit me to say this: A wise mother fosters mutual understanding between her children when these children are young. In terms of today's discussion this makes one feel that one may construct for an effective and permanent collaboration in the arts if such mutual understanding is brought about at the student stage. Students take to the idea naturally and enthusiastically. Honest attempts on the part of the schools, however, in order to be effective, must have the wholehearted support of the older practicing members in the various artistic professions such schools attempt to prepare for. We architects, in particular, must make up our minds whether we want such collaboration wholeheartedly. If we do, we may fairly expect the schools to do their utmost to instill this broad artistic point of view; but we must accept the product of the schools educated and turned out accordingly. We

must go further and assume the responsibility of completing this education by taking young men so trained into our offices, by bearing with them, leading them and making available to them the practical side of the profession; all of course within reason. Such a responsibility we find our fellow practitioners in the other professions willingly accepting, giving freely of their time to supplement the theoretical training of the young ex-student by seeing to it that he gets carefully guided experience. This is the price which the older generation in all professions must pay for the highly trained newer generation which is to succeed it. If we want our next generation of architects to measure up to the higher ideals we are setting here "in convention assembled" we must do fully our part by the young men as they come out of the schools, trained in this revived application of the age-old principle of artistic collaboration. So if collaboration between the arts is desirable, collaboration between the professions and the schools is vital; vital in the sense of collaboration between the older and newer generations. Make no mistake about this new generation. It is composed of enthusiastic, upstanding, idealistic young people. Those of us who come daily into contact with them know how well they deserve by those who have gone before.

#### Honorary Memberships Bestowed

Achievement of eight architects from foreign countries was recognized at the Sixty-first Convention of the American Institute of Architects by the bestowal of Honorary Corresponding memberships. Included were five from South America, proposed, according to the nominating statement, "because of the especial service each has rendered to the profession through his labors in organization of the Pan American Congress of Architects." Ten Americans, not architects, were made Honorary members.

The names of these new members, with citations of their contributions to architecture or collaborating arts, follow.

#### Honorary Corresponding Members

Cart de Lafontaine, London, England.—An architect, already distinguished, whose effective and friendly services to our delegates at the last International Congress, merits our lasting gratitude.

Bernardo Morales, Santiago, Chile.—President of the Association of Architects of Chile, and distinguished member of the Faculty of the School of Architecture of the University of Chile.

Alberto Coni Molina, Buenos Aires, Argentine.— Past President of the Central Society of Architects of Buenos Aires, distinguished member of the Faculty of the University of Buenos Aires, Past President of the Executive Committee of the Pan American Congress.

Raul J. Alvarez, Buenos Aires, Argentine.—Distinguished architect, professor in the Faculty of the Department of Architecture of the University of Buenos Aires, and past Secretary of the Central Society of Architects of Buenos Aires.

Raul J. Fitte, Buenos Aires, Argentine.—Distinguished architect, and professor of the Faculty of the University of Buenos Aires, member of the Permanent Committee of the International Congress of Architects and President of the Third Pan American Congress of Architects.

Francisco Squirru, Buenos Aires, Argentine.— Distinguished architect of Buenos Aires, Secretary of the Third Pan American Congress of Architects. A devoted friend and constant worker for continued friendly relations between the two Americas.

Max Littman, Stuttgart, Germany.—Architect of the State Theater and opera group at Stuttgart, justly regarded as the most perfect group of its kind in existence.

Peter Behrens, Vienna, Austria.—An architect who has succeeded in giving a particular quality of beauty to his designs for Industrial Buildings.

#### HONORARY MEMBERS

Royal Cortissoz, New York.—Art Editor of the New York Herald Tribune. For the past thirty years he has

been recognized as one of America's most discerning writers and critics of architecture, painting and sculpture.

Walter S. Brewster, Chicago.—A notable figure among the men of affairs of the Middle West, a patron of the Arts in the broadest sense. He was a founder of the Foundation For Architecture and Landscape Architecture at Lake Forest, Illinois, and has recently become a trustee of the American Academy in Rome.

Frederick Keppel, New York.—After years of useful service as Dean of the School of Arts of Columbia University, Mr. Keppel became the head of the Carnegie Foundation. His sympathetic appreciation of the educational undertaking of the Institute has been a most important element for the helpful attitude of this Foundation.

Jesse Clyde Nichols, Kansas City, Mo.—For outstanding efforts and results in encouraging and developing architecture and city planning and his work on The National Park and Planning Commission for the city of Washington.

Hermon A. MacNeil, College Point, L.I.—Mr. Mc-Neil's sculptural achievements have been notably architectural in character and include important monuments in New York, Philadelphia, and Chicago.

Herbert Adams, New York.—Sculptor. President of the National Sculpture Society and of the National Academy of Design. He is the author of many distinguished monuments in various parts of the country.

Lee Lawrie, New York.—Sculptor. Mr. Lawrie's sculptural work which forms so vital a part of the Nebraska State Capitol has already been recognized in the Award of the Institute's Fine Arts Medal. He is one of the artists whose association with the Institute as an Honorary Member will, we believe, materially aid the principle of collaboration in the arts.

Ezra Winter, New York.—Mural Painter. Mr. Winter is a Fellow of The American Academy in Rome, a deep student of painting in relation to architecture. His works include decorations of the Cunard Building in New York and the Eastman Theatre in Rochester.

Jules Guerin, New York.—Mural Painter. Director of Color in collaboration with the architects who designed the San Francisco Exposition. Decorator of the Lincoln Memorial and other notable works of architecture.

Bancel LaFarge, Mt. Carmel, Conn.—Mural Painter and maker of stained glass and mosaic. A distinguished and learned artist who is carrying on the traditions of his great father, John LaFarge.

#### Chapter Cooperation Urged

Resolution adopted by the Washington, D. C., Chapter, American Institute of Architects, at its meeting on June 14, 1928, sent with accompanying letters to the Chamber of Commerce, Board of Trade and Federation of Citizens' Associations of the District of Columbia, on June 28, 1928.

Whereas, Members of one Chapter of the American Institute of Architects, from time to time, receive commissions in territory outside the jurisdiction of their respective Chapters;

Whereas, In different localities conditions affecting construction work vary, particularly with respect to architectural traditions, the requirements of the building and zoning laws and regulations, labor conditions and customs, and the types of materials and construction suitable for any given purpose;

Whereas, It is apparent that the local architect, because of his familiarity with these conditions, is in a position to assist materially, with advice and suggestions, in the design and supervision of work to be erected in the locality in which he practices; Therefore be it

Resolved, That it is the sense of the Washington, D. C., Chapter, A. I. A., that when members of one Chapter are commissioned to do work of major importance in the territory over which another Chapter has jurisdiction, such architect ought to associate with him on such work a member of the Chapter within whose jurisdiction the work is to be constructed; Be it further

Resolved, That this resolution be forwarded to the editor of the Journal of the American Institute of Architects with the suggestion that it be called to the attention of members of the Institute through the columns of The Journal; and be it further

Resolved, That this resolution be brought to the attention of the Washington Board of Trade, Chamber of Commerce and Federation of Citizens' Associations, with the suggestion that they support the principle that Washington architects should be given an equitable share of recognition in connection with local work; and that members of the Chapter who are members of these organizations be requested to exert their efforts to bring this about.

GILBERT L. RODIER, Secretary.

# From Our Book Shelf

Statham on Architecture

A Short Critical History of Architecture by H. Heathcote Statham, late Fellow of the Royal Institute of British Architects, etc. Second Edition Revised and Enlarged. Edited by G. Maxwell Aylwin, F. R. I. B. A. Published by B. T. Batsford, Ltd., London. Chas. Scribner's Sons, New York.

A valued friend has translated Armand Silvestre's fine lines which appear in the original French on the page facing the preface to the new edition of this book:

"Who, first of all in history, made essay
To invest the granite with the grace of Line,
Unknown to us, is yet of those who shine
Most bright in Time's bequest to Immortality.

Her models borrowed from Nature's fund alone, Has Architecture's faithful rendering shown Matter as bent to the triumphant mind.

#### A SHORT CRITICAL HISTORY OF ARCHITECTURE

It is a fine text for a sermon, and if the sermon itself seems to fail somewhat in maintaining throughout the same high level of inspiring idea, let that impression be charged to the difficult nature of the task. To saturate the pages of a single volume, intended for a textbook, with the subject matter of a universal history, and at the same time to create literature, is, and has been, an impossible performance. Progress has been made when comparison is instituted with the dry-as-dust, tightly compressed treatises on the History of Architecture which were available in the reviewer's student days. A copy of the first edition of Statham's book is not accessible to the reviewer, but he has the author's "Modern Architecture" (1898), and the advance in the author's thought and the added breadth of his horizon is very marked.

This new book is thoughtfully done, and the effort has been conscientiously made to explain and interpret Architecture in its continued historic sweep through all the recorded days of man's self-knowledge, rather than as the result of the painstaking research of an archaeologist.

In his philosophy the author shows the influence of such men as Lethaby, and quotes him quite freely in the earlier book. It is interesting to note that what was first quoted in an effort to be fair to the modernists has later been absorbed and, no doubt unconsciously, become part of the author's own theory. He says: "It is hoped that the form in which these facts of history are to be presented will assist him (the student) to cultivate an outlook which will define more clearly his attitude towards modern problems. If it merely encourages him, in his admiration of historical masterpieces, to repeat unintelligently forms and manners of a past age, then the lesson of history has been lost. If it instills into him a grasp of those great principles which govern structural design for all time, and a desire to exercise them afresh today, then it will have done its work well.

"The student who is content to stop short at a consuming interest in archæological facts and data is not by way of developing into an architect; for, as the historian is only a servant to the great politician who makes modern history, so is the archaeologist to the architect. To sort out old stones is an important and necessary preliminary towards a right handling of the new, but it is, after all, no more than a means to the latter end."

There are only seven chapters of the text proper, and the cross references from one to the other are illuminating and abundant. 'Architecture before the Great Period,' "Greek and Roman Architecture," "Domed Styles and the Byzantine Type," "From Romanesque to Gothic," "The Saracenic Interlude," "The Gothic Period," "The Renaissance and Modern Times" are the chapter headings. By the simple means of avoiding the cutting up of his text into all the customary compartments, the author has provided a good vehicle for his endeavor to preserve the sweep of historic continuity to which the great subject properly is entitled.

Useful to the student, and for the same reason, is the

author's use of the idea (for which he gives credit to the poet Browning) of a running commentary in headlines through the entire book. The book is thoroughly indexed, has a very superior glossary (though perhaps too brief) and at the end of each chapter is a well prepared chronological chart, which places the great architectural monuments in a relation to world-events which is easy to visualize and to remember. The illustrations are adequate and well selected up to the latter pages, in which the work of the past fifty or seventy-five years receive a curiously sketchy and unanalytical treatment.

This reviewer does not follow with sympathy the enthusiasm which moves some of our American writers in their superlative praise of contemporary architecture in this country. Neither does he understand the basis of appraisal of American work which is used by such writers as the late Mr. Statham. In his book "Modern Architecture," previously mentioned, the ideas expressed about us seem absurdly grotesque, and the author's gain in understanding, so noteworthy in his evaluation of the past, seems to have failed him when he attempts to discuss the American picture. The illustrations are a very commonplace portico (two storied) of an "Eighteenth Century Pennsylvanian House," the Municipal Office Building in New York, the Tribune Tower, and the Field Museum in Chicago, the Morgan Library in New York, and a very comical little half-tone entitled "Country Bungalow in California." Says our author, or his editor: "The short history of American architecture has been rather a curious one." The Capitol at Washington he calls "an effort at sublimity in cement." Richardson he dismisses in a sentence as the author of "a shortlived movement in favor of a kind of Romanesque-Byzantine." Louis Sullivan he does not mention at all.

Candor compels further mention of the picture of the "Old Colonial" example. The same house appears on page 222 of the author's "Modern Architecture" and is there entitled "Old Colonial House in Charleston, U. S. A." The discrepancy in geography might be overlooked were it not for the fact that the house illustrated is far from being the best and most characteristic that might have been selected. Such editorial carelessness throws an added burden upon the reviewer and tends toward a general scepticism regarding possible similar slips in other fields. Our author, and his editor, however, are not the only English writers who are sometimes guilty of snap judgment and carelessness in dealing with American history, manners and customs. The beloved Charles Dickens set the fashion, but he was not writing textbooks and should not be judged as bearing the heavy responsibility of one who presumes to teach.

But the reviewer remembers that he said in the beginning that the task undertaken by the author of this book was impossible, and, in spite of its limitations, he recommends it for its good qualities, and feels assured that it deserves a place on the shelf where are placed the reference books which one wishes to have close by.

WILLIAM L. STEELE.

# William Rutherford Mead

E, the Trustees of the American Academy in Rome, long used to the guidance of our President, William Rutherford Mead, which throughout the eighteen years of his incumbency has ever more closely touched our hearts, must now meet the sad duty of recording his death. And we would strive, by the setting down of words, to say what the loss means to us, even though those words cannot but fail.

Beyond a doubt, the first thought to arise in the mind of each one of us, is that there has been taken out of our lives the presence of a man whom to know was inevitably to love. We think first of that dear friend, so acutely that it is with an effort we turn to the contemplation of him in his official capacity. We think of his modesty, of how the piled up honors of an illustrious career made no slightest difference in his bearing toward no matter whom; of his quick sympathy; of his generosity that hid itself with such disarming fear of laudation. We think of what he signifies as one of that association of three men who mark a great era in American art, and whose contribution to their exalted profession was so profound, so far reaching, of such value to their country, that were our public more sharply sensitive to true values, it would be to them, to such as they, the commemorative monuments would arise. We think of him as an American, devoid of boastfulness, gentle in demeanor, considerate of others, shrewd with the native wisdom of the New England that produced him, true son of her ancient hardwon soil in his shyness that was like the New England springtime. An American gentleman; in its finer aspects there is none finer. And then we think of his loyalty.

It was loyalty that led him to assume the burden of the presidency of the Academy in Rome; loyalty to the person of his late partner; loyalty to the enthusiastic glowing vision of Charles McKim. The burden was heavy. That vision was splendid, so splendid that it must be many a long year before our public could accustom their eyes to it and see it for what it is; the project was ambitious, so ambitious that to realize it by means of an agency constitutionally made up of a heavy preponderance of the professional elements commonly esteemed to be unpractical visionaries, was a task to give pause to the stoutest heart.

He had one. Today the American Academy in Rome isa great institution, established upon a firm basis, proven the worthy recipient of the rich support that has been given it in increasing measure. Year by year it grows, and is destined to grow, in the direction of the high ideal that called it into being. Year by year it reaches farther into the understanding of our community; ever more clearly their eyes see what the vision of McKim holds for our arts. All those who have toiled for the achievement thus far attained, must feel deeply how their labors rested upon the loyalty of William Rutherford Mead.

Full of years, unswerving to the last, to the end unchanged, he is gone from us to his eternal rest. There is sorrow in our hearts, but in them there is also great pride, because of what he was and because of what has been our privilege.

C. GRANT LAFARGE, Secretary.

William Rutherford Mead, senior member of the architectural firm of McKim, Mead & White, New York City, died June 21, at the Grand Hotel in Paris, in his eighty-second year. He was buried in the Protestant Cemetery at Florence, Italy, beside his brother, Larkin G. Mead, sculptor.

Mr. Mead was born in Brattleboro, Vermont. After college, he entered upon the study of architecture in the New York office of the late Russell Sturgis in 1868. In 1871 he went to Florence, Italy, and continued his studies in architecture there for a year, followed by six months in other European countries. He began the practice of his profession in 1872 with the late Charles F. McKim in New York. The late Stanford White became associated with them in 1878.

Among the notable buildings for which the firm has been architect are the Agricultural and New York State buildings at the World's Columbian Exposition at Chicago in 1893; the Boston Public Library; Rhode Island State Capitol; the old Madison Square Garden; the Columbia Library and other buildings of that university; the library and other structures at the College of the City of New York; the University of Virginia; the University, Century, Metropolitan, Harvard and Racquet Clubs of New York; the War College at Washington and the reconstruction of the White House; the General Postoffice in New York; the Municipal Building, the Pennsylvania Station, Bellevue Hospital, additions to the Metropolitan Museum of Art, Madison Square Presbyterian Church, Bank of Montreal, Knickerbocker Trust Company, and the National City Bank, New York; and the Brooklyn Institute of Arts and Sciences.

Mr. Mead was a fellow of the American Institute of Architects and president of the New York Chapter in 1907 and 1908. In 1913 the American Academy of Arts and Letters, of which he was a member, awarded him its gold medal of honor "for distinguished service in the creation of original work in architecture," an honor then conferred upon an architect for the first time.

He was an academician of the National Academy of Design. In 1902 King Victor Emmanuel conferred upon him the decoration of Knight Commander of the Crown of Italy, in recognition of his pioneer work in introducing the Roman and Italian Renaissance architectural style in America.

# Documents of the A. I. A.

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Complete Set in Cover	.40
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A FORM OF AGREEMENT BETWEEN OWNER AND ARCHITECT (Fee Plus Cost System)	.05
A CIRCULAR OF INFORMATION ON THE FEE PLUS COST SYSTEM OF CHARGES (Explanatory of	
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A Form of Agreement between Owner and Contractor (Cost Plus Fee Basis)	.10
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tory of Contractor-Owner Agreement on cost plus fee basis)	.06
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The prices quoted in most cases are to cover the cost of distribution. Postage is extra. The exceptions are the various contract documents which are distributed in large quantities and on which a profit is realized. The prices of the Standard Contract Documents were increased to forty cents for a complete set, with proportionate increases for the separate documents, by order of the Board of Directors—effective February 1, 1928. There is no postage charge on contract forms costing one dollar or more.

It is important to note that dealers in architects' supplies handle contract forms only. All other documents must be ordered from Washington.

Communications and remittances should be sent to the Executive Secretary, The Octagon, Washington, D. C.

