THE TIFFANY CHAPEL.

DESIGNED BY
LOUIS C. TIFFANY.

A PART OF THE GLASS-MOSAIC ALTAR, RETABLE AND RERÉDOS.
TIFFANY GLASS MOSAICS FOR WALLS, CEILINGS, INLAYS, AND OTHER ORNAMENTAL WORK; UNRESTRICTED IN COLOR, IMPERVIOUS TO MOISTURE AND ABSOLUTELY PERMANENT.

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1896.
THE TIFFANY CHAPEL

DESIGNED BY

LOUIS C. TIFFANY.

THE LECTERN OF MARBLE AND GLASS MOSAIC.
GLASS MOSAIC.

As soon as man began to erect buildings made to withstand the action of time, he sought to discover, for purposes of embellishment, materials of a permanent character, more especially when desiring to produce chromatic and polychromatic effects. From this quest was born the art of the mosaicists, the art of placing colored tesserae in juxtaposition, one to another, and each to all, so as to form ornaments or pictures.

The origin of the art is lost in the dawn of sacerdotal and palatial constructions. It is probable, however, that the minute inlays which enriched the sacred emblems, mummy cases, jewelry, and ivories of the Egyptians, the Assyrians, and other ancient peoples were the initiatory steps in development of architectural decorative
mosaic. In the beginning it was used upon the floors of temples and palaces, and was invariably made of stone or marble, or both. In the book of Esther will be found an allusion to so employing it (600 B.C.) in the court of a palace at Persepolis, and it is briefly described as having been made of "red and blue and white and black marble."

Just when glass was introduced into floor mosaics it is impossible to say, but in the time of the Roman Empire opaque slab glass in combination with colored marbles became very common. Minutole gives an illustration of a floor of this nature from a private house of the time of Hadrian; and similar floors have been from time to time unearthed at Pompeii. The most beautiful one so far discovered is in the house of the Faun, and is composed of small pieces of glass paste,
SAINT AGNES CHURCH
NEW YORK.

WILLIAM A. POTTER,
ARCHITECT,

A WHITE MARBLE BAPTISMAL FONT
INLAID WITH GLASS MOSAIC.
of various colors, mixed with tesserae of semi-precious stones and costly marbles. There is a tradition in the Orient, preserved in the Talmud and repeated in the Koran, that Solomon received the Queen of Sheba in an apartment floored with transparent (glass) mosaic, beneath which there was running water, alive with fish.

The application of glass-mosaic to mural surfaces was subsequent to its use upon floors, or, as the elder Pliny tells us, it vanished from the floors to appear upon the walls.

As soon as the Christians began to beautify their churches, they appropriated the art of the mosaicist, made it their own, and carried it to the highest point of artistic excellence. Very little of their earlier work has survived to our day, beyond that in the baptistery(?) adjacent to the Basilica of S. Agnes, out-
side the walls of Rome; the dome of the Church of S. George at Thessalonica, now Sulonika; and the Church of the Nativity at Bethlehem. In the first there are representations of vintage scenes interspersed among conventionalized vines, massed against a background of white; in the second the mosaics cover or line the inside of a dome 216 feet in circumference, and contain 9,732 square feet, consisting of over 36,000,000 tesserae, and present a series of holy personages, buildings of fantastic forms, decorative hangings, lamps, and birds of gorgeous plumage, all on a background of gold; of the third there is little to be said, as fragments only remain—a few imperfect scenes from Scripture, angels, inscriptions, and arabesques. To enumerate and describe all the important mosaics, still in good preservation, dating from the days of
MAUSOLEUM AT GLEN COVE, L. I.

WILLIAM B. TUBBY,
ARCHITECT.

THE CEILING LINED WITH GLASS MOSAIC.
Constantine, under whom the above were made, down to the end of the thirteenth century, when the art fell into abeyance, would take too much space and extend this small brochure to a goodly sized volume; hence the reader is referred to the following books, in which he will find full descriptions and drawings of the same: Gerspach’s La Mosaique; Ciampini’s Vetera Monimenta; Texier and Pullan’s Églises Byzantines; Salzenber’s Bandenkmale von Constantinopel; Appell’s Christian Mosaic Pictures; Rarbet de Long’s Mosaiques de Rome; and Rossi’s Musaici Christiani. The following mosaics, chronologically named, are among the most interesting in Europe, and illustrate the growth and decay of the art:

The mosaics in the churches of S. Lawrence and S. Ambrose, at Milan, were placed there in 415 A. D.
In the church of S. Sabina, at Rome, there are some very beautiful fragments of the year 424 A. D.

There are a series of mosaic pictures in the church of S. Mary Major, at Rome, which show that the artist was largely influenced in his design by the bas-reliefs on the columns of Trajan and Antonius, 432 "

The mosaic on the interior walls and ceiling of the mausoleum of Galla Placida, at Ravenna, should be particularly studied. It was executed in the year 440 "

The mosaic on the triumphal arch of the church of SS. Cosmo and Damian, at Rome, is a good example of the period 530 "

The walls of the apse of the
MARQUETTE BUILDING,
CHICAGO, ILL.

HOLABIRD & ROCHE,
ARCHITECTS.

PART OF A FRIEZE, ONE HUNDRED AND TWENTY FEET LONG, OF GLASS MOSAIC.

DESIGNED BY
J. A. HOLZER.
MARQUETTE BUILDING
CHICAGO, I.L.

HOLABIRD & ROCHE,
ARCHITECTS.

PART OF THE FOREGOING—A FRIEZE
OF GLASS MOSAIC.

DESIGNED BY
J. A. HOLZER.
The Cathedral of Parenzo, in Istria, are covered with the most precious mosaics of porphyry, serpentine, onyx, and mother-of-pearl mixed with glass; the dome is lined with glass-mosaic, carrying figures on a gold ground broken with cloudburs of crimson and blue. The exterior of the gable facing the atrium is decorated in a similar manner, 536 A.D.

The most wonderful creation in glass-mosaic the world has ever seen was the interior of Sancta Sophia, at Constantinople, built and ornamented in the reign of Justinian, from the design of the architects Anthemius of Tralles and Isodorus of Miletus; the vaulting throughout was covered with gold glass mosaic, a jeweled cross expanded its
arms on the zenith of the dome, with a background strewn with stars; the walls were decorated with figures, inscriptions, and ornaments of majestic beauty. Much of this has been destroyed or whitewashed by the Turks. The work was done between 532 and 537 A.D.

The whole interior of S. Vitale, at Ravenna, was originally decorated with mosaic, but the larger part has perished; that surviving is most interesting both to students of art and archæology. 547–562

The two churches of S. Apollinare, at Ravenna, and S. Lawrence, at Rome, were decorated with mosaics at about the same time, 567–580
A GLASS MOSAIC PANEL
FOR A MAUSOLEUM.

DESIGNED BY
EDWIN H. BLASFIELD
AND DRAWN BY
JOSEPH LAUBER.
There are numbers of noted mosaics in the churches of Rome, both figure and ornamental: In S. Agnes, 625; Baptistery of Constantine, 642; SS. Nereus and Achilleus, 800; S. Maria in Dominica, 815; S. Pudenziana, S. Prassede, and S. Cecilia, 820; and S. Maria Nuova, 848 A.D.

In S. Mark, at Venice, mosaics began to be used "somewhere about 1073"

In S. Clement, at Rome, there are mosaics that "yield to none in minuteness of detail and delicacy of sentiment," 1112

The unrivaled mosaics of the Capella Palatina, at Palermo, were made in 1132
The mosaic figures that adorn the cathedrals of Torcello and Murano are dignified, breathing a spirit of devotion, and withal excellent in workmanship, \( \ldots \) 1150 A. D.

The mosaics at Monreale were modeled on those of the above-named "Capella Palatina," and are marked by a severity of treatment, \( \ldots \) 1174 "

Fra Giacomo, who ornamented the Tribune of the Baptistery at Florence in 1225, executed, with the assistance of his pupil, Fra Giacomo da Camerino, a representation of the Coronation of the Virgin for the church of S. Mary Major, at Rome, a mosaic singularly august and grand, both in the general composition and the individual figures. At the
FIRST INDEPENDENT CHRIST CHURCH,
BALTIMORE, MD.
A GLASS MOSAIC PANEL OF THE LAST SUPPER.
FROM THE DESIGN OF
FREDERICK WILSON.
A DECORATIVE FIGURE IN GLASS MOSAIC.

FROM THE DESIGN OF PROF. EWALD OF BERLIN.

PAX
same time these mosaicists made one, just as original and sublime, for S. John Lateran, 1289 A.D.

Andrea Tafi covered the interior of the dome of the Baptistery at Florence with mosaic in . . . . 1290 "

Gaddo Gaddi, the last of the great Italian mosaicists, executed the façade of S. Mary Major, at Rome, in . . . . 1308 "

After this last date, glass-mosaic gradually passed out of use, except in S. Mark, at Venice, where it remained the essential decoration in all additions. In other parts of Europe, colored windows, frescos and stuccos took its place as decorative materials, until its revival at Venice, in 1838, from which time it has gone on regaining its lost place in European art.
In America, artists like Louis C. Tiffany and others, knowing its value, have been trying for years to introduce it in their work, Mr. Tiffany employing it as long ago as 1879, in the decoration of the Union League Club, New York, and from that time to this using it wherever he could, endeavoring to make manifest to all its color-decorative possibilities.

His efforts and enthusiasm, however, would have been in vain, fruitless, but for the fact that architecture, like everything man has to do with, comes under the universal Law of Consequence—similar conditions producing like results; hence, as our buildings took on monumental and indestructible qualities, and as decorations are governed by construction, the decorative artist was called upon to display his art with materials that would resist effectually the corrosion of
ALEXANDER COMMENCEMENT HALL,
PRINCETON, N. J.
WM. A. POTTER,
ARCHITECT.
DECORATED WITH GLASS MOSAIC INLAY AND FIGURE PANELS.
FROM THE DESIGN OF
J. A. HOLZER.
ALEXANDER COMMENCEMENT HALL, PRINCETON, N. J.

OUTLINES OF THE GLASS-MOSAIC PANELS.

Designed by J. A. Holzer.
ALEXANDER COMMENCEMENT HALL,
PRINCETON, N. J.

WILLIAM A. POTTER,
ARCHITECT.

A DETAIL OF THE GLASS MOSAIC.
natural and artificial decay, ones that would hold their pristine beauty the longest. The past proves beyond contradiction that, among these, glass mosaic takes the first rank. It is non-absorbent, fireproof, and practically indestructible except by direct violence; moreover, it is limitless in color and texture, easily made, and comparatively inexpensive in view of its durability.

Glass mosaic, more than most decorative materials, in order to be handled successfully and with artistic results, requires the designer to be thoroughly familiar with its possibilities and impossibilities, the modifying effect produced on one color by placing it side by side with a contrasting color, the mechanical obstacles of construction and application, and the limitation of the artisan who carries out his design. This last knowledge
is all-important, as the success of the mosaicist largely depends on the skill and æsthetic intuition of the artisan, for his individuality will assert itself in the selection and placing of the pieces of glass. It follows from this that the workman, or, as the putter-together of tesseræ and sectilæ was anciently called, the Musivarius, should be endowed with a keen color sense, an appreciation of form, together with dexterous handicraft, in order to arrive at a dædalian and truthful translation of the design.

Again, the mosaicist, to be successful, must keep his design in strict accord, not only with the material, but also with the local conditions, for it must not be forgotten that a mosaic is a permanent architectural surface decoration, intimately allied to the structure it adorns, and that the history of the art dem-
ALEXANDER COMMENCEMENT
HALL,
PRINCETON, N. J.

WILLIAM A. POTTER.
ARCHITECT.

A DETAIL OF THE GLASS MOSAIC.
A MUSIVARIUS AT WORK
ON THE MOSAIC FOR THE
ALEXANDER COMMENCEMENT
HALL,
PRINCETON, N. J.

WILLIAM A. POTTER,
ARCHITECT.
onstrates that as soon as there is a departure from this principle mosaics lose their artistic value, become divorced from the purpose of their being, are isolated and foreign to their environment, and are only too often reproductions or imitations of works belonging to another art and material. The most important constituent of a mosaic, next to the tesserae (the square and irregular cubes of glass) and the sectiliae (the pieces cut to special forms), is the one upon which its continuity and life depend, viz., the cement. The early workers, realizing this, invented a durable and binding one, composed of pulverized brick, marble-dust, and lime; the Italians thought to improve this by making theirs largely of pozzolana; the French by adding gum andragan to the lime and pounded brick, or burnt clay and litharge ground in
linseed oil; and the English by mixing lime, brick-dust, and pozzolana in boiled oil. Tiffany Favrile glass mosaic is set in the well-known Keene's cement, or in a hydraulic or oleaginous cement where it is exposed to the weather and moisture.

There are a number of methods of executing glass mosaic, but all fall under two divisions, viz., direct and indirect; the first is where the tesserae are applied at once to the wall they are to decorate; the other is where they are worked to a design on paper, to which they adhere, and then are affixed to the wall or cast in slabs, and then placed in position. The former was the one generally used by the ancients, the early Christians, and recently by the late Prof. Richmond in the decoration of S. Paul, at London, and is described as follows: "Each craftsman is supplied with a full-
PART OF A GLASS MOSAIC FRIEZE.

DESIGNED BY

JOSEPH LAUBER.
size colored drawing of the work he is to execute, as well as with an accurate tracing on strong tracing paper. He spreads his cement on the surface to be incrusted, placing the tracing over the cement, and pricks through the tracing the main outlines of the design. He then selects his tesserae to correspond with the tints of the colored drawing, shapes them, if necessary, with pliers, and imbeds each one in the position most favorable for reflection of incident light." The second method is worked in a number of ways too technical to describe, but in all cases the mosaic is either made upon paper or is cast in slabs before it is affixed to the wall.

In some respects, and most important ones, Tiffany Favrile Glass Mosaic is made on new lines; for example, in the indirect as well as the direct method, the
ace of the mosaic is always turned toward the craftsman (the musivarius) so that every detail can be seen as in the finished work; moreover, the artist (the mosaicist) can follow and direct the whole operation, correcting mistakes and making alterations with the same ease as a painter in oil, and this is of the greatest moment, as the right setting of the tesseræ is the key which unlocks their full color values in their relation to one another and to the light.

It will be seen from the foregoing brief historical summary that glass mosaic is not only a most valuable decorative material, but that it is also a durable one, in many cases outlasting the buildings it once adorned. This durability largely comes from its being impervious to moisture and a non-absorbent of atmospheric and chemical gases. From
A MEMORIAL TABLET
IN GLASS MOSAIC.

DESIGNED BY
EDWARD P. SPERRY.
LET THE WORDS OF MY MOUTH
AND THE MEDITATION OF MY
HEART BE ACCEPTABLE IN
THY SIGHT.
O LORD, MY STRENGTH
AND MY REDEMPTION.
Our Father which art in Heaven, hallowed be Thy name. Thy kingdom come, Thy will be done in earth as it is in heaven. Give us this day our bread. And forgive us our debts, as we forgive our debtors. And lead us not into temptation, but deliver us from evil.
Our Father which art in Heaven, hallowed be thy name. Thy kingdom come, thy will be done in earth as it is in heaven. Give us this day our bread. And forgive us our debts, as we forgive our debtors. And lead us not into temptation, but deliver us from evil. Amen.
the artistic side it is without a rival, where permanency, in union with color, is desired.

Tiffany Favrile Glass not only complies with every condition required in mosaic work, but it goes further and furnishes the mosaicist with an unlimited range of colors, so that he never needs to resort, like the workers of old, to contrasting colors in order to supply the deficiency of the palette.

Its value as a decorative material was first shown at the Columbian Exposition in the Tiffany Chapel, where the altar and reredos were made almost exclusively of glass mosaic, as well as the risers of the platform, the lectern, and other accessories.

Examples of Tiffany Glass Mosaic may be seen in the following buildings:

S. Agnes's Church, 92d Street, West

Chicago Public Library, Chicago, Ill. Shepley, Rutan & Coolidge, Architects. The dome and frieze of the Delivery Room is incrusted with glass mosaics, while the Grand Stairway of white Italian veined marble is inlaid with a combination of glass mosaic with Royal Irish green marble and pearl. The color scheme is that of J. A. Holzer. This is by far the most extensive piece of wall-mosaic work undertaken since the decoration of the Cathedral, at Monreale, Sicily, in the 13th century. (See page 12.) Manhattan Hotel, Madison Avenue, corner 42d Street, New York. Henry J. Hardenbergh, Architect. The
CONVENT CHAPEL,
ELMHURST, PROVIDENCE, R. I.
WHITE MARBLE ALTAR INLAID WITH
GLASS MOSAIC.
FROM THE DESIGN OF
J. A. HOLZER.
wainscoting of white marble in the Grand Rotunda is inlaid with glass mosaic of various designs, carried out by a union of tesserae and sectiliae.


Johnston Building, Broad Street, corner of Exchange Place, New York. James B. Baker, Architect. The frieze and cornice of the Main Hall are made of glass mosaic and marble with mosaic inlay.

Marquette Building, Chicago, Ill. Holabird & Roche, Architects. A historical frieze of glass mosaic, ninety feet long and four feet high, illustrating the exploration of the Northwest by Marquette and Joliet, in years 1673-1675.

The Warner Tomb, Woodlawn, N. Y.

CHRIST CHURCH, Cincinnati, Ohio. William Martin Aiken, Architect. Altar and reredos enriched with glass mosaic.


THE FIELD MEMORIAL ROOM, in the Art Institute of Chicago, Chicago, Ill. A glass mosaic wainscoting.

S. PAUL'S CHURCH, Troy, N. Y. Pictures of Saints, in the Reredos, made of glass mosaic.

ALEXANDER COMMENCEMENT HALL,
CHICAGO PUBLIC LIBRARY.

SHEPLEY, RUTAN & COOLIDGE

ARCHITECTS.

SERPENTINE PANEL WITH THE INSCRIPTION IN GLASS MOSAIC.

"He, who from day to day recognizes what he has not yet, and from month to month does not forget what he has attained to, may be said to love to learn."

—Confucius.
Princeton, N. J. William A. Potter, Architect. Four figure panels, ten feet wide by nine feet high, illustrating Homer.

Convent Chapel, Elmhurst, Providence, R. I. Three Altars of white marble, inlaid with glass mosaic.

S. Michael's Church, Amsterdam Avenue and 99th Street, New York. R. W. Gibson, Architect. Reredos of glass mosaic and relief work.


Chapel of S. Joseph's Seminary, Dunwoodie, N. Y. Schickel & Ditmars, Architects. The mosaics in three marble altars.

S. Matthew's Church, 6th Avenue and 2d Street, Brooklyn, N. Y. Volk & Son,
Architects. Altar, re-table, pulpit and lectern of marble enriched with glass mosaic.

CHICAGO PUBLIC LIBRARY.
SHEPLEY, RUTAN & COOLIDGE,
ARCHITECTS.
WHITE MARBLE PANEL INLAID WITH
GLASS MOSAIC.
The Company embrace in their line of work all forms and materials that are used in the decorative arts, and so large is the field covered, and so excellent is their work, that they received at the Columbian Exposition, at Chicago, fifty-four separate and distinct awards, the largest number granted to any single exhibitor.

Their designs are always original and made to meet the architectural and artistic conditions of the building in which the decorations are to be placed.
The selections of all the materials used are invariably made by trained artisans, but always under the supervision of an artist.
MANHATTAN HOTEL,
NEW YORK.
HENRY T. HARDENBERGH,
ARCHITECT.
MARBLE WAINSCOTING INLAID WITH
GLASS MOSAIC.