

## TRINITY'S BRONZE DOORS.

The bi-centennial celebration of Trinity parish, New York City, began May 2. It is not often in America that a church is able to celebrate the two hundredth year of its foundation; for this reason the present occasion is all the more memorable. The bi-centennial was fittingly celebrated by services which extended over a period of a week and which were confined not only to Trinity Church but included the other churches and chapels of the extensive parish.

The interior is worthy of visitation at any time, as it is an unusually handsome church. On the present occasion the decorations were of the most beautiful and costly description. At the head of each supporting pillar of the nave was a marble angel supported upon a pedestal. Each angel held in each hand a white flower which glowed with electric light burning at its center. There was also a profusion of heraldic shields and banners. The nave was also lighted by an elaborate system of incandescent lights behind beautiful ground glass globes representing flowers.

The floral embellishments of the church were uncommonly beautiful. The base of each window was a mass of lilies, roses and other flowers. The chancel, altar and reredos were even more finely decorated in the same way. Altogether, the decorations of the church show what can be done by an almost unlimited expenditure of money when that expenditure is in the hands of those guided by perfect taste.

The occasion of the celebration is so interesting that we present an engraving of the bronze doors which give entrance to the tower. These doors may be regarded as the most important work of art which the church possesses, and the doors show the advanced state of art work at which we have now arrived in this country, as the doors were both designed and executed in America.

On March 10, 1890, the Vestry of Trinity Parish received a letter from Mr. William Waldorf Astor, saying that he wished to give three doors in memory of his father, John Jacob Astor, to Trinity Church, New York City. He asked the vestry to approve of his proposal and to authorize him to carry his desire into effect. Permission to erect the doors being obtained, Mr. Astor employed the late Richard M. Hunt to furnish the plans and superintend the construction of the doors. Mr. Hunt then applied to the rector of Trinity Church requesting suggestions for the subjects of the panels, of which there were to be eighteen in all, six for each door. The front or tower door was committed to Mr. Carl Bitter, the sculptor. Mr. J. Massey Rhind obtained the commission for the northern door, and Mr. C. B. Niehaus that for the southern door.

We illustrate one of the doors, the front or tower door, and it will be described more in detail. The panels of the northern door might bear for their general legend the words of Christ, "I am the Door of the Sheep." Its scenes are representative of the men who, in different ages of the world, have been delivered from tribulation and brought into places of security and rest. The subjects of the panels are the Passover in Egypt; the Flight for Safety to one of the Cities of Refuge; the Deliverance of Paul and Silas from Prison; the Healing of the Lame Man by St. Peter at the Gate of the Temple; and four panels of a legendary and symbolical character. From an artistic point of view this door is perhaps the finest of the entire series.

The south door represents a series of scenes in the history of Manhattan Island and of Trinity Parish. The first panel illustrates the arrival of Hendrick Hudson off Manhattan Island in the year 1609. The second commemorates the missionary character of the work of Trinity Church in ancient times. It represents the Rev. Henry Barclay, D.D., preaching to the Indians. The third panel brings us to the close of the revolutionary war and to the date of the inauguration of George Washington, the first President of the United States of America. The event which the panel commemorates took place in New York immediately after the ceremonies in Wall Street, when General Washington proceeded to St. Paul's Chapel, where a religious service was held. The other panels deal with scenes connected more particularly with the later history of the church. The more modern panels are hardly as effective as those which treat of earlier events,

as the costume of to-day is not well adapted for translation into bronze.

The front door consists, like the other doors, of two bronze valves rectangular in shape, three panels in each; apostles in carved stone appear in the transom sitting on thrones, while the tympanum contains a figure of Christ stretching forth His arms in welcome to the faithful. It is intended that the panels be examined in pairs, the lowest concerning the advent of Christ, the second His life on earth and the last His reign in heaven. The expulsion from Paradise occupies the first panel, while the second is Jacob's Dream. The third contains the Annunciation to the Virgin. Its companion is the empty tomb of the risen Lord, symbolical of the victory of life over death. The top panels, which are the least pleasing of the series, contain visions from the Revelations of St. John the Divine. One of the panels represents the worship of the Church before the Throne, and the other Angels casting down the Kings of the Earth. Many smaller sculptures are included in the work. Four figures below the lowest panel represent Mortality, Sin, Time and Tradition. Recumbent figures above the top panel represent Energy and Divine Justice. Other statues of Abraham, Moses,

the general custom to divide the statue, when of heroic size, into several sections, make a separate casting of each section and then unite the parts by riveting; the joint so formed, owing to the increased thickness of the metal, being of greater strength than the adjoining parts. But a great step in advance was recently made by the Henry-Bonnard Bronze Company, of this city, when they succeeded in casting practically in one piece Mr. J. Q. A. Ward's statue of the New England Pilgrim. To this achievement they have added the greater one of casting each valve of the Trinity doors in one piece, and it is interesting to note that they secured the execution of these last monumental works, though they were more than \$14,000 higher than the other bidders.

Casting in bronze does not consist solely in simply taking a pattern, making a mould and running in the metal. It is an art only to be acquired by long and patient toil, close study and that most essential and spurring incentive, a fascination for the work. That success can only be achieved by this means will be understood by any one who will spend an hour in a bronze foundry and note the time and care spent in making sure that one step is perfected before the next is even approached. There is no sign of the presence of that

most pernicious habit, too frequently permitted in other callings, in which a distasteful part may be slurred or left half finished and a rush made for something more agreeable. The bitter and the sweet must receive the same attention, as both are equally dangerous when slighted.

It is apparent that the panels in which the relief is in some cases three to four inches will not "draw." Yet this is no obstacle to the bronze founder, and in the case of the Trinity doors piece moulding is carried to its perfection. Each undercut means that one or more pieces are required for it. Each valve of the Trinity doors required approximately two hundred pieces, each made of French sand bonded together with iron carcasses and built up on wires and clamps. The workmen often spent weeks on a single panel. The pieces were then all assembled and the doors were ready to be cast. To distribute these pieces of sand and remember where each piece belongs is a task of no small magnitude. Gates somewhat resembling a tree and branches were provided to insure that the mould was properly filled; vents were also provided to allow for the escape of the gases. The bronze was melted in crucibles, and was composed of 90 per cent copper, 7 per cent tin and 3 per cent zinc. That the composition was of superior quality is shown by the fine color which the gates have already taken on. The alloy was heated for twenty-four hours. After the cast was made (the flask then weighing 27 tons) the mould was broken open and the doors were taken out, the vents and gates were removed and the necessary finishing, chipping, filing, etc., then took place, though surprisingly little was needed in the case of these doors.

Each pair measured 10 feet 2 inches by 8 feet 6 inches; so that some idea of the enormous amount of labor expended on them may be obtained. It required two years to mould and finish the main door shown in our engraving and three years ten days on the three

sets. Notwithstanding the great weight of the doors, they open and close as easily as ordinary doors of the same size.

Comparisons with other celebrated bronze doors from a technical point of view are instructive. The Washington doors, which were cast in Munich, are very fine, but were cast in pieces. The second gate of Lorenzo Ghiberti (fifteenth century) for the Baptistery of Florence, required twenty-seven years of labor to complete it and it was cast in pieces. When it is considered that only four years was consumed in modeling, moulding, casting and finishing the three sets of doors for Trinity, it will be seen that both technical processes and the speed and facility with which the sculptors now turn out models have improved, though, of course, artistic comparison of Ghiberti's glorious gate and those of modern sculptors is hardly fair.

THE new "annuaire" of the French Automobile Club, which has just been issued, shows that the club has now close upon 1,000 members. Those possessing motor carriages or motor cycles have a small illustration of a motor vehicle against their name, the total number of actual "chauffeurs" being 139.



THE MAIN BRONZE DOORS OF TRINITY CHURCH.

the apostles and saints, etc., also form a part of the work.

It is said that the three doors cost about \$165,000. Trinity Church is a treasure house of art works. The splendid reredos of Caen stone, the marble altar, with its exquisite mosaics, and the jeweled cross are worthily crowned by the splendid doors which give entrance to the church.

These doors are, however, interesting from another point of view besides that of art, for they are splendid examples of the bronze founder's art. It is a satisfaction to know that it is no longer necessary to send works to Munich, Paris or Rome to be executed, and that the industry may now be said to have become thoroughly naturalized in the United States. For many years monumental bronze work had to be executed abroad, but splendid examples of casting are now executed here, casting in which the highest technical skill is combined with strict fidelity to the sculptor's models.

Bronze statues were made two and perhaps three thousand years ago, the earliest consisting of small plates hammered into the desired shape and fastened together by nails or rivets. After this they were cast solid, and also with a core. At the present time it is