time to a manufactory for the forging of arms, and at another to a magazine for forage. Different accounts are given of the foundation of the convent; some writers contend for its having taken place as early as the last year of the fourth century, and having been the work of the piety of Saint Victrice, the Bishop of Rouen; others, and these the greater number, are content with tracing it from the reign of Clothair. Those who adopt the latter opinion are again divided, as to whether the prince himself was the actual founder, or only ratified by his royal sanction what was really the establishment of Archbishop Flavius. In either case, however, they agree in dating the origin of the abbey from the year 535.

Upon the irruption of the Normans in the ninth century, this abbey shared the common fate of the Neustrian convents; and, like the rest, it rose from its ashes with greater magnificence, after the conversion of these barbarians to Christianity. Nicholas, the fourth abbot of the convent, son of Duke Richard II, and of Judith of Brittany, is said by Ordericus Vitalis to have commenced "a new church of wonderful size and elegance." But though he presided over the fraternity nearly sixty years, he did not live to see the building finished; the bringing of the task to perfection was reserved for William Balot, the next but one to him in the succession; and even he died in the very year of the dedication, which did not take place till 1126.

This church which had cost eighty years to build, was suffered to exist but a short time after its completion; only ten years had elapsed from its dedication, when it fell a prey to a conflagration, which was at the same time destructive to the greater part of the city; another church built shortly after, and chiefly by the munificence of Richard Cœur-de-Lion, shared the same fate in 1248. But even these repeated disasters in no wise abated the spirit of the monks; they had retired with the wreck of their property to one of their estates near Rouen, and there, by economy on their own part, and liberality on that of others, they soon found themselves in a state to undertake the erection of a fourth convent, of greater extent than any of the former, and to inclose it with high walls. The honor of laying the first stone of the new church, the same that is now standing, is attributed to one of the most celebrated of the abbots, John Roussel, more commonly known by the name of Marcdargent. He had been elected to the prelacy in 1303; and fifteen years afterwards, he commenced the structure. He presided over the monastery thirty-seven years, and was buried in the Lady-Chapel of the church, which he had completed as far westward as the transepts. The remaining parts of the church were not finished till the beginning of the sixteenth century, when it was brought to its present state by the thirty-fourth abbot, Anthony Bohier, who, in the annals of the convent, bears the character of having been "a magnificent restorer and repairer of ancient monasteries."

Admirable as is the structure, the original design of the architect was never completed. The western front remains imperfect; and this is more to be regretted, as that part is naturally the first that meets the eye of the stranger, who thus receives an unfavorable impression, which is afterwards difficult wholly to banish. The intention was, that the portal should have been flanked by magnificent towers, ending in a combination of open arches and tracery, corresponding with the outline and fashion of the central tower. An engraving of this intended front, is given in Pommeraye's "*History of the Abbey*," from a sketch preserved among the records of the convent.

The view of this church etched by Mr. Cotman, is copied from a drawing made by Miss Elizabeth Turner. It represents the building, as seen from a seat in the gardens formerly belonging to the monastery, but now open to the public; and it is well calculated to convey a general idea of the character of the exterior of the building, including the central tower, which is wholly composed of open arches and tracery, and terminates like the south tower of the cathedral, with an octangular crown of fleur-de-lis. The plate also exhibits a portion of a circular chapel, now commonly known by the name of *la Chambre des Clercs*, the only remaining part of the church built by William Balot, in the beginning of the twelfth century. This chapel, the south porch, the central tower, and a specimen of ancient sculpture in the church, have been engraved by Mr. Turner in his "*Tour in Normandy*." The two first, of the same subjects, together with the western front, a general view of the church from the south, the curious bas-relief over the southern entrance, and a representation of the interior, have since been lithographized in M. Jolimont's "*Mounmens de la Normandie*." Considerable pains have been devoted in both these works to the description and the history of the building; and to them the reader must be referred, who is unwilling to engage with the ponderous folio of Pommeraye.

THE CHARTER-HOUSE, LONDON. SKETCHES BY MR. C. H. BLACKALL.

THE group of buildings now known as the Charter-House is situated in what was the old city of London, opposite the great Smithfield Markets, and but a short distance from the still existing St. John's Gate, a portion of the old city walls. The name has been corrupted from Chatreuse, a Carthusian monastery having been founded here in 1371, on the site of a burying-ground for persons dying of the plague. In 1535, Henry VIII dissolved the monastery, and shortly after, the property passed into the hands of Thomas Howard, Duke of Norfolk. Most of the existing buildings date from this period, and the old work was greatly enriched, and put in thorough repair by the Duke, who made this his family seat. Here Queen Elizabeth was entertained during five days, awaiting preparations for her coronation, and during a subsequent visit she is said to have become greatly incensed with her host, who loved his sovereign too little, or perhaps too much, and who was locked up in his own house for his coldness. James I also kept court in the Charter-House on first entering London. Subsequently, the establishment was much neglected, and was little used until 1611, when all that was left of the former buildings was purchased by Thomas Sutton, a retired merchant, who had made a great deal of money out of Government contracts. He put everything in very thorough repair, making a number of additions and changes, and converting it into a school for forty boys, and an asylum for eighty indigent and deserving gentlemen. Sutton left everything very thoroughly organized and richly endowed, and the Charter-House in many of its appointments has not changed materially since his day. Grace is still said at table in the same words used by the retired merchant, who thought so much of his formula, that he had it ordained that none other should be used. In 1872, the boys school was transferred to new and more sanitary quarters at Godalming, Surrey. The "Merchant Taylors Company" has lately acquired a portion of the old monastery close, and erected a large brick school-house, which however has nothing to do with the Charter-House. The "poor Brethren" still come and go as they did two centuries ago. They are very comfortably housed in apartments facing the interior courts. The school has always been crowded and has had among its former pupils, Barrow, Steele, Addison, Blackstone, Wesley, Grote, Havelock, and Thackeray. In "*The Newcomes*," Thackeray presents some very pleasing pictures of life in the old Charter-House School.

Of the old monastery buildings, nothing now remains but the pointed entrance gateway, and portions of the interior walls, though the kitchens appear to have been erected before the time of the Duke of Norfolk. The large dining-hall is considered the most perfect specimen of an Elizabethan room in London. The ceiling is of a Gothic feeling, however, and has the appearance of having belonged to the olden monastic refectory. One end of the room is crossed by a high oaken screen, very rich in carving and Elizabethan strap-work, the columns being very nicely proportioned. The Duke of Norfolk's monogram is cut on the frieze of this screen, with the date 1571. The room has a high wainscot all around and a narrow gallery along one side, connected with a musician's gallery over the screen above referred to. The old fireplace was built by Thomas Sutton, and is adorned with the Sutton arms, and various emblems of the manner in which the old merchant came by his wealth. In the same wing with the dining-hall is the old chapel containing some excellent wood-work, and a very handsome staircase-hall, very well preserved, and exceedingly rich in detail. Portions of the Suttons arms are found on the newel-posts. This staircase-hall has also quite a handsome ceiling of Elizabethan strap-work, and a wide mullioned window, with rich-carved pilasters on either side, and an elaborate soffit. The Queen Elizabeth room is in this same portion of the Charter-House, and is a very perfect example of the interior work of the period, with a huge mantel reaching to the ceiling. Some of the old furniture still exists, and the ceiling of moulded plaster strap-work, is in a very good state of preservation. The appearance of this room is not unlike that of the large chambers in Haddon Hall.

C. H. B.

THE CERTOSA, PAVIA, ITALY.

THE Carthusian Monastery is one of the most celebrated buildings in northern Italy. The famous façade of Ambrogio Borgognone, was begun in 1473, nearly a century after the foundation of the monastery. The view published to-day shows a much less familiar aspect of the structure.

THE CHURCH OF ST. NICHOLAS, GHENT, BELGIUM.

IT is of this church, the oldest in the city, that the following punning description is commonly given: *L'eglise a onze tours et dix sans* (pronounced *cent*) *cloches*. [The church has eleven towers, and ten hundred bells — literally, "ten without bells."] The greater part of this building dates from early in the fifteenth century.

STUDY FOR A HOUSE AT PITTSBURGH, PA., — SKETCH OF THE ENTRANCE. MR. H. P. KIRBY, ARCHITECT, PITTSBURGH, PA.

BLOCK OF TEN HOUSES FOR WM. ROBERTSON, ESQ., NEWARK, N. J. MR. VAN CAMPEN TAYLOR, ARCHITECT, NEWARK, N. J.

THE VALUE OF THE COEFFICIENT OF EXPANSION.— An illustration of the way in which a coefficient like 0.000006, that of the expansion of steel, may become a big thing with a few degrees of rise of temperature and long lengths has been seen, says the *Engineer*, on the new Midland line between Irchester and Sharnbrook, recently opened for goods traffic. The rails were laid during winter time, and insufficient room was left for expansion, consequently the summer heat expanded the rails to such an extent that the road burst out of line. Traffic had to be at once stopped and the permanent way altered and properly spaced. Accidents from the "spreading" of rails are far more frequent than is supposed on roads in this country. Your compiler long ago showed the vital necessity of regulating the space allowed for expansion at the ends of rails by constant reference to the height of the thermometer on the spot and during the whole process of laying the rails.

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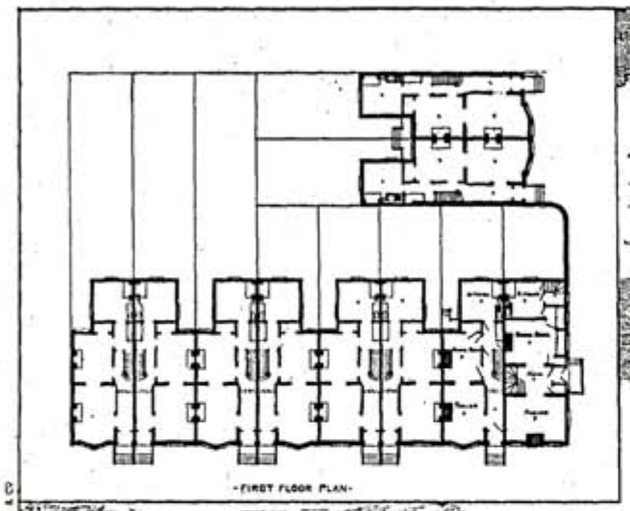

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