ON THE GLAZING OF THE NORTH ROSE WINDOW OF LINCOLN CATHEDRAL.

THERE is no task more agreeable to the archaeologist than that of recording the preservation of an interesting relic of ancient art. The painted glass in the North Rose of Lincoln Cathedral, which was observed to be in an insecure state during the Institute's visit to Lincoln in 1848, was, in the course of the year before last, releaded, and the stonework in which it is placed reset, at the expense of the dean and chapter. It is impossible to speak too highly of the substantial character of the repair; and as no "restoration" of the glass was attempted, what remains of the original glazing is likely to continue for many generations a trustworthy witness to the state of the arts at the time of its execution.

Having had an opportunity during the repairs of more closely examining the glass than I had before been able to do, and finding that my description of it in the Lincoln volume of the Institute's proceedings was in some respects inaccurate, I am induced to subjoin the following amended description, in which I have again availed myself of the diagram that illustrated my former statement.

No. 1. This picture is in a very mutilated state. It represents Christ. The head is youthful, but of inferior execution to the head of the figure in No. 16. It is adorned with a yellow nimbus, bearing a white cross. What remains of the figure is clothed in a red robe, and a white undergarment having yellow cuffs. The right hand is raised in Benediction; it exhibits no stigma. The left hand is destroyed. It once held a book, which still remains. One foot is perfect, it exhibits no stigma. The body of the figure, with the exception of a small fragment of the white dress, is destroyed. The flesh colour of the figure is very deep, almost purple, as is the flesh colour of several of the other figures.

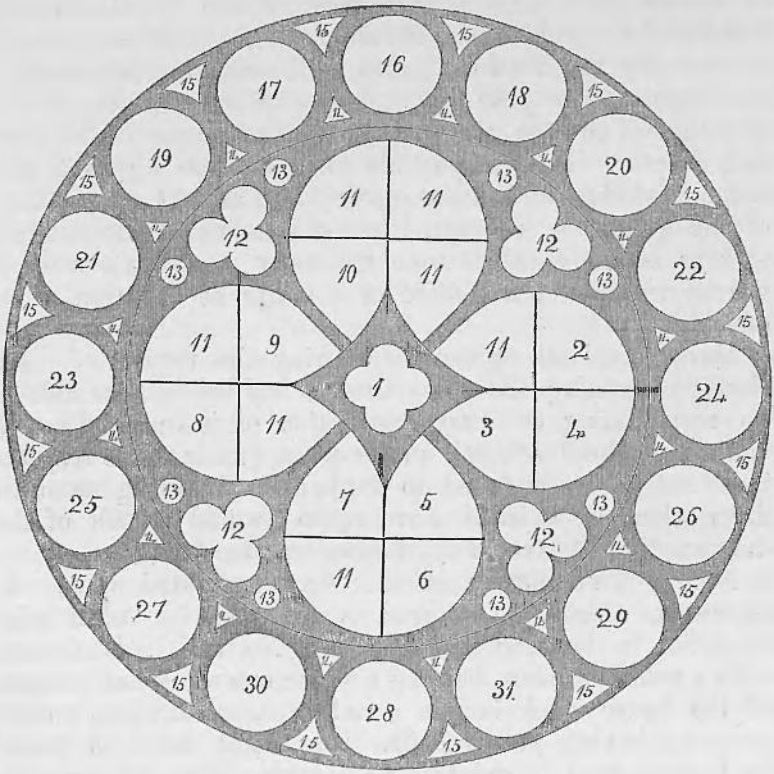
No. 2. Represents three figures seated in attitudes of

adoration, and looking towards No. 1. The first figure of the group from the centre of the window, wears a mitre.

No. 3. A similar subject. The group consists of a female and two male figures.

No. 4. A similar subject. The group consists of three male figures, the first of which is mitred.

No 5. This picture is much mutilated. The group consists of three figures seated like the others. The heads are smaller than those of the rest of the figures, and are apparently insertions.



No. 6. Represents a similar subject, consisting of two male figures and one female.

No. 7. A similar subject, consisting of three figures. The last of the group has the head of a monk, but this is an insertion.

No. 8. This picture is much mutilated. One figure only of the group remains. Part of a "Jesse" is inserted.

No. 9. A similar subject. The group consists of three male figures.

No. 10. A similar subject.

Nos. 11, &c. Each of these seven compartments is filled with painted glass collected from other windows, and mostly of a date somewhat earlier than that of the original glazing of the Rose. The subject of one of the paintings is the legend of St. Gregory.

Nos. 12, &c. Two of these four compartments contain each the figure of an angel swinging a Thurible, the remains of a similar figure occupy the third compartment; the figure of the fourth compartment is lost.

No. 13. Each of these eight compartments contains, or did contain, a small four-leaved ornament in a circle.

No. 14. Each of these sixteen compartments contains, or did contain, a white star of six wavy points, on a red ground.

No. 15. Each of these sixteen compartments contains, or did contain, a red star of six wavy points, on a blue ground.

No. 16. Represents Christ sitting on a rainbow. There is a candle on each side of his seat. The head is youthful, is bearded and adorned with a red nimbus bearing a white cross. The figure is draped in white and purple. The stigmata are shown in both the hands and the side, but not in the feet. The picture is enclosed in a quatrefoiled frame or border composed of two bands, the innermost purple, the outermost white, at the angles of which are the Evangelistic symbols, thus arranged: the angel and eagle at top, the lion and bull beneath. None of these symbols is nimbed. A symbolic disposition of colour, such as is partially adopted in this design, is of rare occurrence in painted glass.

No. 17. Represents two angels supporting the Cross, inscribed,—IHC NAZARENVS.

No. 18. Represents two angels carrying the Spear; the head of which is formed of a piece of ruby glass, imperfectly coloured, and appearing as if it were white, with a trifling smear of red.

No. 19. Two angels, one carrying the three Nails and the Napkin; the other a Thurible.

No. 20. Two angels, one bearing the Crown of Thorns; the other a Thurible.

No. 21. St. Peter with the Keys, preceding five other

figures, three of which besides St. Peter are nimbed. One of the figures is that of a female seated and crowned, but not nimbed. The rest are standing.

No. 22. Seven figures seated.

No. 23. Two angels sounding the trumpets.

No. 24. A similar subject.

No. 25. Part of the general Resurrection; the subject represents the dead rising from their coffins.

No. 26. This picture is an insertion, it represents Adam digging, and Eve spinning. In the centre are the remains of a tall figure, or angel. The glass seems somewhat later than the original glazing of the Rose.

Nos. 27, 28, 29. These pictures are clearly insertions. Each represents a bishop seated, giving the benediction. The glass seems somewhat later than the original glazing of the Rose.

Nos. 30, 31. These pictures also are insertions. Each represents an archbishop seated, giving the benediction. The glass is of the same date as the last three subjects.

Amongst the fragments inserted in the North Rose, are some trifling remains of the original glazing of the choir windows, which glass appears to be of the time of Edward I.

From the above account it appears that the intention of the designer of the North Rose was, to represent in the central part of the window, the Kingdom of Heaven, under the type of Christ seated in glory amidst the blessed (many of these figures are nimbed); and to represent in the outer series of circles, the Day of Judgment. The circle, No. 26, doubtless contained originally a similar subject to that in No. 25. And the remaining five vacant circles, Nos. 27, 28, 29, 30, and 31, were in all probability occupied with the Resurrection, and its usual incidents, the rescuing of the Good, and the abandonment of the Bad to the Infernal Powers. The mode of describing a connected story by means of representations of its incidents arranged in symmetrical order, so common in the medallion windows of the XIIth and XIIIth centuries, had its origin in remote antiquity. It is indicated in some of the Assyrian sculptures in the British Museum.

The original glazing of the North Rose consistently with its character, would admit of a date being assigned to it as early as the end of the XIIth or beginning of the XIIIth

century; which, I believe, coincides very nearly with the date generally attributed to the stone-work. And it is on the whole a valuable specimen of the art of the period, although possessing nothing besides its general design, which calls for particular notice. The colours of the glass are very fine, being rich and brilliant, and low in tone, as compared with those of ordinary modern glazing. The blue, which is not so pure, and more resembles a neutralised purple than that commonly employed in the XIIth century, occasionally exhibits narrow streaks of red; by no means an unusual occurrence in XIIIth century blue glass, denoting the presence of copper used to correct the rosy hue of the cobalt, some of which has unintentionally been converted into ruby glass. The white glass is of a sea-green tint, and the yellow (a pot-metal) is strongly impregnated with blue, the effect of the deoxidising influence of the carbon of the wood-ash used as an alkali, and of the smoke of the furnace, upon the iron contained in the sand, and upon the wood-ash, the constituents of the glass. Much of the ruby is very streaky and uneven in tint, some pieces indeed when seen near are only like pieces of white glass streaked here and there with ruby; although, owing to the intermixture of the rays of light, when seen from the floor of the transept, they appear as if they were of an uniform light red colour. Such of the ruby glass as has been painted upon, and therefore burnt in the glass painter's furnace for the purpose of fixing the enamel, for instance, that used in the draperies, is usually more uniform in tint, and has a thinner coating of colouring matter than that used in the unpainted grounds—a circumstance which may often be remarked in glass paintings of the XIIth and XIIIth centuries, and which perhaps may be accounted for in the following manner. It has been proved by experiments that the ruby colour is produced in glass by adding to the materials of white glass, copper in a state of protoxide, along with oxide of tin, and other substances having a tendency to deprive the copper of its oxygen, as well as oxide of iron; and recent researches conducted by my friend, Mr. Clarke, have gone far to establish the fact, long since suspected by chemists, that the red colour is due to the presence of copper in the metallic state, very finely divided.[1] But whether it is metallic copper, or a precipi-

[1] That metallic gold in a finely divided state will produce a red colour when

tate of a suboxide of copper, which produces the ruby (the protoxide of copper only imparts a green colour) it is evident from inspecting a piece of streaky ruby glass that its colouring matter lies in several parallel planes separated from each other by greenish or yellowish white glass,[2] and forms thin strata of an elongated character, varying in breadth from an inch or more to a mere thread ; and that the streaky appearance is owing to the coloured lines in one plane lying in a different direction from the coloured lines in another plane, the complexity of the streaks being in proportion to the number of strata and non-coincidence of lines of colour. This may be accounted for by supposing that the red colour occurs when the oxide of iron, taking the place of the suboxide of copper, or metallic copper, precipitates the latter ; and that as this precipitation is irregular, the colour also is irregular ; and that the mechanical action of blowing the glass into sheets causes these irregularities to take a streaky form, the more complicated in proportion to the number of planes in which the precipitation takes place, and the extent to which the soft glass becomes twisted in the operation. The precipitation of the copper by the iron, depends upon a proportion of materials in the glass, the amount of heat to which it is subjected, and apparently to other causes with which we are not yet acquainted.

In general, the greater the length of time to which the glass is exposed to heat, the more the precipitation takes place, and the more fully is the glass coloured.[3] Those sheets of glass which in the manufacture show the least traces of colour, will therefore, in general, endure the greatest quantity of heat without becoming too dark. The thinner also the coating of coloured glass is, *ceteris paribus* the less intense the colour will be.[4] It is probable that

held in a transparent medium, has been shown by Professor Faraday's experiments. See Proceedings of the Royal Institution, vol. ii. p. 310. Glass coloured with gold is more pink in hue than that coloured red with copper. The Railway night danger signal is generally constructed with the gold ruby.

[2] Diagrams of ruby glass, seen in section, in which the laminæ of colour are shown, are given in the "Inquiry into the Difference of Style observable in Ancient Glass Paintings. By an Amateur." P. 22.

[3] Sometimes the same process will convert the red glass into white glass ; but this is perfectly consistent with what is stated in the text.

[4] The thinly coated ruby of the XIIth and XIIIth centuries, before it is burnt is streaky in colour, and its ruby coating when seen with the microscope is found to be filled with thin laminæ of red, like that of the thickly coated ruby. The streakiness of the thickly coated ruby is, however, rather more strongly

the experience of these consequences led the ancient glass painters to select for the purpose of being painted and burnt such portions of the ruby-glass as were ascertained to have the thinnest ruby coating, in which no other change might in general be apprehended than the conversion of streaky ruby into smooth ruby, and a general though unimportant increase in the depth of colour. During the XIIth and XIIIth centuries, and in England until about the last quarter of the XIVth, glass thinly coated with ruby is comparatively rare; the great majority of specimens of ruby having a ruby coating of a depth varying from one-fourth to one-half of the thickness of the entire sheet.[5] And there can be little doubt that the thinly coated ruby of this period, the colouring matter of which is about the thickness of a sheet of stout writing paper, was produced by some accident in the manufacture.

The smooth ruby which superseded the streaky in England about 1370, and in Germany a good deal earlier in that century, has a coating of colouring matter not thicker than a sheet of writing paper, which is almost always entirely converted into ruby in the first instance. This glass, therefore, either is not altered at all in colour, or undergoes but a very slight increase in depth of colour on being burnt; and for this reason the change in the manufacture was probably at the time considered as an improvement by the English glass-painters, who were then beginning to treat paintings on glass less as mosaics, and more like pictures. If they had continued to practise the older system of designing, they would have found the new material productive of a flatter and tamer effect than the old streaky ruby. But the change in the manufacture of the material exactly suited the change in the style of glass painting which, in England, took place nearly contemporaneously with it. Some of the German glass paintings of the first half of the XIVth century, and most modern glass paintings which affect so early a style, may be referred to as illustrating the truth of the above remark.

The actual painting of the glass in the North Rose, when compared with that of contemporary specimens, must be

marked than that of the thinly coated ruby.

[5] It is to be remembered that "Ruby glass" is a "coated glass," *i.e.* glass which consists of a sheet of white glass coloured on one side with a coating of ruby, applied during its manufacture. Such glass is not *coloured* by the glass painter.

considered to be rather careless than otherwise. Nevertheless, it is impossible not to recognise in the drawing throughout, but especially in the draperies, the influence of Greek art, though not quite to the extent to which this is shown in the glass paintings generally of the latter part of the XIIth century, particularly in those which, like some examples at Canterbury, may be considered to be of French workmanship. It would be unreasonable to suppose that the resemblance between ancient works in glass and the remains of classical art is accidental. As Gothic architecture originated in a style borrowed from the Roman, and worked out by Greek or Byzantine architects, and that of the XIth, XIIth, and early part of the XIIIth centuries, is evidently an exotic, the native of a southern climate, we might naturally expect to meet with the same Greek feeling in all other decorations as is so abundantly displayed in the sculpture of this period. It is probably to a connection with Byzantine art, that the glass painters of the XIIth century owe their superiority over those of the XIVth; or, indeed, of any other time than the XVIth. For through such connexion they could feel, although imperfectly, the influence of that standard of ideal perfection on which the art of the Greeks had the advantage of being founded. The closeness of the connection of these early artists with Byzantine art, and consequently the more immediate influence of the latter on them, will be easily explained, if, as there is reason to believe, France, and Limoges in particular, the ascertained abode of Greek artists, and a place in direct communication, through Marseilles and Alexandria, with Byzantium and the East, was the cradle of glass painting: although the excellence of these glass painters may be partly due to the vigour of race. But whether the connection of glass painting with Byzantine art arose in the manner just indicated or not, or whether it was more or less direct, we may conclude that if these artists had had under their eyes that standard of excellence which is the foundation of Greek art, at however debased a period, instead of being able only dimly to perceive it through the corruptions of tradition, they might, in point of drawing, have anticipated the artistic triumphs of the XVth and XVIth centuries. Their works in glass, although not altogether free from the stiffness and severe formality of Byzantine art, in general exhibit a strong feeling for nature; but the nature

these artists affected,—doubtless under the influence of their traditions,—was not a common and imperfect nature, like that represented in the subsequent works of the middle ages, but a noble, refined, and elevated nature, such as is displayed in the antique Roman bas-reliefs,[6] and again, in those great works of the Renaissance, which the discovery and direct study of these antiques so strongly promoted.

Considerations such as these are the best answer to the insensate outcry which has been raised against the employment in the service of our reformed religion, of anything in the least partaking of the character of "Pagan," *i. e.* classic, art, an outcry the less respectable when we know that those who make it the loudest, are at the same time the most eager to palliate the many real paganisms which have been adopted by the Romish church, some of which are by no means so innocent in their consequences as the denounced paganism of artistic truth and beauty. If we recognise the beneficial effect of possessing a standard of excellence in the perfection and freshness of the works of the Renaissance, which seem like the creations of yesterday, since being wholly devoid of quaintness, they address us in the language of our own sympathies,—of our own modes of thought; common sense will suggest the wisdom of referring to such a standard in modern works, instead of, and in our own case without the excuse of necessity, continuing to flounder on, as in the middle ages, unassisted by such a guide. It is possible that this course might lead to the abandonment of the idea that nothing but that lowest of arts, the meagre Gothic of the XIXth century,[7]

[6] See the plates, "Admiranda Romanarum Antiquitatum," by Jacobus de Rubeis. The Roman sculpture, with much of the beauty of the Greek, is less ideal and more natural. It was this latter quality which probably rendered it more useful to the masters of the XVIth century, than the purest Greek sculpture would have been.

[7] Far be it from me to disparage any attempt to improve our national architecture: but although we may criticise the Palladian style, it by no means follows that we ought to set up the Gothic as infallible. Any scheme, indeed, for removing us from the art of the classic epochs is preposterous. No architectural style can ever be a real living style, which does not reflect the spirit of its age, and no style can reflect the spirit of this age, which is at once the most powerful and refined age the world has yet seen, except it be capable of great breadth, simplicity, and refinement; in all which qualities the Gothic style is notoriously deficient. It is impossible not to see that the civil engineers are the real architects of the day, and that they are silently developing a new and original style, founded on the old Roman, whose excellences it retains and enhances, but whose defects it avoids; and which seems to require nothing but fine handling to become a truly noble style, in all respects worthy of, and suited to the XIXth century. Although yet in its infancy, and although but little pains seems hitherto to have been taken with it, its productions, by their symmetry, simplicity, and gran-

is fit for the purposes of our Church; but we may console ourselves with the assurance that the extinction of the notion would be followed by the erection of buildings, better suited to our ritual, to the character of our nation, and practical spirit of the age in which we live, as well as by the advancement of sound principles in art.

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deur, already often put to shame our most studied modern ecclesiastical edifices. They are, moreover, in entire harmony with other works admitted to be embodiments of the spirit of the age, such as our ships, our machinery, our bridges, &c. And the spirit in which they are conceived seems nearly allied to those broad and comprehensive views which characterise our times, and which by contrast, render the narrowminded subtleties of the mediæval era the more contemptible.