

= Royal Gold Cup =

The Royal Gold Cup or Saint Agnes Cup is a solid gold covered cup lavishly decorated with enamel and pearls . It was made for the French royal family at the end of the 14th century , and later belonged to several English monarchs before spending nearly 300 years in Spain . It has been in the British Museum since 1892 , where it is normally on display in Room 40 , and is generally agreed to be the outstanding surviving example of late medieval French plate . It has been described as " the one surviving royal magnificence of the International Gothic age " ; and according to Thomas Hoving , former director of the Metropolitan Museum of Art in New York , " of all the princely jewels and gold that have come down to us , this is the most spectacular ? and that includes the great royal treasures . "

The cup is made of solid gold , stands 23 @. @ 6 cm (9 @. @ 25 inches) high with a diameter of 17 @. @ 8 cm (6 @. @ 94 inches) at its widest point , and weighs 1 @. @ 935 kg (4 @. @ 26 lb) . It has a cover that lifts off , but the triangular stand on which it once stood is now lost . The stem of the cup has twice been extended by the addition of cylindrical bands , so that it was originally much shorter , giving the overall shape " a typically robust and stocky elegance . " The original decorated knop or finial on the cover has been lost , and a moulding decorated with 36 pearls has been removed from the outer edge of the cover ; a strip of gold with jagged edges can be seen where it was attached . Presumably it matched the one still in place round the foot of the cup .

The gold surfaces are decorated with scenes in basse @-@ taille enamel with translucent colours that reflect light from the gold beneath ; many areas of gold both underneath the enamel and in the background have engraved and pointillé decoration worked in the gold . In particular the decoration features large areas of translucent red , which have survived in excellent condition . This colour , known as rouge clair , was the most difficult to achieve technically , and highly prized for this and the brilliance of the colour when it was done successfully . Scenes from the life of Saint Agnes run round the top of the cover and the sloping underside of the main body . The symbols of the Four Evangelists run round the foot of the cup , and there are enamel medallions at the centre of the inside of both the cup and the cover . The lower of the two added bands contains enamel Tudor roses on a diapered pointillé background ; this was apparently added under Henry VIII . The upper band has an engraved inscription filled in with black enamel , with a barrier of laurel branches in green to mark off the end of the inscription from its beginning .

The cup came to the British Museum with a custom @-@ made hexagonal case of leather on a wood frame , with iron lock , handles and mounts . This was either made at the same time or soon after the cup , and has incised and stamped foliate decoration and a blackletter inscription : YHE.SUS.O.MARYA.O.MARYA YHE SUS .

= = Provenance = =

There is no firm evidence as to the date and circumstances of the creation of the cup . It is first clearly documented in an inventory from 1391 of the valuables belonging to Charles VI of France (reigned 1380 ? 1422) , surviving in two copies in the Bibliothèque nationale de France . This lists :

A hanap of gold , all its cover well and richly enamelled on the outside with the life of Madame St Agnes ; and the cresting of the foot is garnished with 26 pearls , and the crown around the cover with 36 pearls ; and the finial of the said cover (is) garnished with four sapphires , three balas rubies and fifteen pearls . And it weighs 9 marcs 3 ounces of gold. and the said hanap rests on a stand of gold in the form of a tripod , and in the middle of the tripod is represented Our Lady in a sun on a ground of clear red , and the three feet of the tripod are formed by three winged dragons . The said hanap and cover were given to the king by monseigneur the duc de Berry on his journey into Touraine in the year 91 .

John , Duke of Berry (1340 ? 1416) was Charles VI 's uncle and a powerful figure in the kingdom , as well as the most famous and extravagant collector and commissioner of art of his day . He is still best known for commissioning the Très Riches Heures du Duc de Berry , the famous International Gothic illuminated manuscript , and also commissioned the Holy Thorn Reliquary , now in the British

Museum . The young king Charles had been forced to remove his uncle from governorships after the latter 's rapacious conduct had led to unrest , and the meeting in 1391 marked their reconciliation after a period of bad relations . Lavish gifts among the Valois court circle were routine , and on this occasion Berry had special reason to be generous .

The cup appears in another inventory of Charles V in 1400 , and then is not recorded until it appears as the property of another royal uncle , and collector , John of Lancaster , 1st Duke of Bedford (1389 ? 1435) , son of Henry IV , who was briefly Regent of both France and England for his infant nephew Henry VI . How he acquired the cup is not known , but he would have received many gifts from Charles VI , and had both lent the king money and bought from him things such as the library of the Palais du Louvre , in the uneasy period when Charles had made peace with the English and made Henry V his heir . After the death of his brother Henry V , Bedford struggled to stem the resurgent French resistance , which was energised by Joan of Arc . He died in Normandy in 1435 , leaving Henry VI as his heir . The cup is more briefly described as the first item in a list of valuables received from Bedford 's estate prepared for Henry VI 's minister Cardinal Henry Beaufort , but the tripod is not mentioned , some of the jewels are missing , and the subject is misidentified as the life of Saint Suzanna not Saint Agnes . For some reason it does not appear in a royal inventory of 1441 ; Jenny Stratford suggests that this was because Beaufort still had it at this point . Another possibility is that it had been pawned , as it was in 1449 and again in 1451 , on both occasions to finance England 's increasingly unsuccessful efforts to hold on to French territory ;

The cup first appears in the records of the new Tudor dynasty under Henry VIII in 1521 . By now the cover had lost the finial " garnished with four sapphires , three balas rubies and fifteen pearls " described in Charles VI 's inventory and had a new one of gold in the form of a closed , or " imperial " crown . This matches a propaganda drive at this time by Henry to assert England as an " empire " , a contemporary sense meaning a state recognising no superior , though the Great Seal of England had already used a closed crown since 1471 . Other uses had probably been found for the jewels of the old finial ; it is assumed that the lower band with the Tudor roses was added in Henry 's reign , as part of a programme of adding Tudor badges to possessions inherited from earlier dynasties , which covered tapestries , illuminated manuscripts and buildings such as King 's College Chapel in Cambridge . The cup is described in inventories in 1532 and after Henry 's death in 1547 , and then under Elizabeth I it was inventoried in 1574 and 1596 .

When James I succeeded to the English throne in 1603 , one of his first priorities was to end the Anglo @-@ Spanish War , which had been dragging on since 1585 . A Spanish delegation arrived for the Somerset House Conference , which concluded with a treaty signed in 1604 . The leader of the Habsburg diplomats was Juan Fernández de Velasco , 5th Duke of Frías and Constable of Castile . The upper extension to the stem of the cup has a Latin inscription that translates as :

This cup of solid gold , a relic of the sacred treasure of England and a memorial to the peace made between the kings , the Constable Juan de Velasco , returning thence after successfully accomplishing his mission , presented as an offering to Christ the Peacemaker .

The gift of " some 70 items of silver and gold plate " by James to the Constable , of which the cup was the most notable item , is documented on both the English and Spanish sides ; the Constable wrote an account of his mission on his return , which mentions the gift from James . The Constable had previously presented both James and the queen with elaborate cups , among other valuable gifts . According to Pauline Croft , " With his usual over @-@ generosity the king gave the departing envoys around half the large gold vessels from the royal possessions he had inherited from Elizabeth . The Constable himself received a stupendous gift of plate , including possibly the most venerable item in the collection , known as " the Royal Gold Cup of the Kings of France and England . " In 1610 the Constable gave the cup to a convent in Medina de Pomar , near Burgos , as the inscription describes . His deed of gift survives , and records that the gift was on condition that the cup was never alienated by the convent . A marginal note on the deed , in the Constable 's own handwriting , records that he had obtained the permission of the Archbishop of Toledo , Bernardo de Sandoval y Rojas , for the cup to be used as a ciborium , or container for consecrated hosts . By this period a rule of the church normally forbade the use of vessels decorated on their inner surface as ciboria .

The cup stayed in the convent until 1882 when the nuns were short of funds and wanted to sell it . It was at some point during this period that the pearl border to the cover and the Tudor finial were removed . The nuns decided they would get a better price in Paris than in Spain , and the cup was entrusted to Simon Campo , a priest , who took it to Paris and approached several leading dealers and collectors . There had been a spate of forgeries of medieval objects , and the Parisians were suspicious , until one , Baron Jerome Pichon , researched the second added cylinder and was sufficiently convinced that this was the cup documented in 1604 to make a rather low offer , which was accepted . In the course of his researches the baron had contacted the current Duke of Frías , who had supplied useful information , and then initially congratulated the buyer on his purchase . However , on looking further into the matter the duke realized that the sale was contrary to the 1610 deed of gift he had discovered in the family archives , and sued in the French courts to recover the cup .

The duke eventually lost his case in 1891 , enabling a further sale that had been set up by Baron Pichon to proceed . This was to the leading firm of Messrs. Wertheimer of Bond Street in London , where the cup was seen by Augustus Wollaston Franks , who had been Keeper of British and Mediaeval Antiquities and Ethnography at the British Museum since 1866 , and was president of the Society of Antiquaries . Samson Wertheimer agreed " with much public spirit " to sell the cup to the British Museum for the £ 8 @, @ 000 (£ 790 @, @ 000 in 2016) it had cost the firm . Franks was worried by the new American collectors such as J. P. Morgan , and in 1891 wrote to Sir Henry Tate , of Tate Gallery fame : " A very wonderful gold cup has appeared returned to this country after an absence of 287 years , and I am anxious to see it placed in the National Museum and not removed to America . " He tried to get wealthy individuals to subscribe £ 500 (£ 49 @, @ 000 in 2016) each , but even with a grant of £ 2 @, @ 000 from HM Treasury could not raise the price . He was forced to put up £ 5 @, @ 000 of his own money temporarily while he continued to try to get smaller amounts from others , and succeeded in 1892 when the Treasury agreed to contribute the final £ 830 ; " to Franks this was his greatest acquisition , and the one of which he was most proud . " Apart from the Treasury , the £ 500 contributors were Franks and Wertheimer , the Worshipful Company of Goldsmiths , Charles Drury Edward Fortnum , the Duke of Northumberland , Lord Savile , Lord Iveagh and the Earl of Crawford . In 1901 Morgan succeeded in buying the Lindau Gospels in London , which the museum had also wanted .

= = Creation , context and survival = =

Much the most prominent decoration on the cup is the cycle of scenes from the life of Saint Agnes , which is rarely depicted in such detail in art . However , there was one outstanding devotee of the saint in the period : King Charles V of France , Berry 's older brother and Charles VI 's father . Charles V was born in 1338 on Saint Agnes ' feast day , January 21 , and is recorded as owning at least 13 works of art featuring her , including a different gold cup enamelled with scenes from her life (both are recorded in the 1391 inventory) . Until recent decades the generally accepted hypothesis was that Berry ordered the cup as a present for his brother in 1380 , to be ready for his birthday in January 1381 . When the king died in September 1380 , Berry had retained it for a decade before presenting it to Charles VI .

However , in 1978 Ronald Lightbown , Keeper of Metalwork at the V & A Museum , rejected this theory on stylistic grounds , considering that the cup must have been created only shortly before it appeared in Charles VI 's inventory in 1391 . He says that " in 1380 figure @-@ style was a softly undulating , flowing style , with slender elongated figures and much use of serpentine or curving folds in the drapery , and with trailing dresses ending in sinuous Gothic hem @-@ lines " ? a style that can be seen in the miniature of the coronation of Charles VI in 1380 illustrated above . In contrast , Lightbown says " the figures on the cup are broad , some might even be called stocky , with soft drapery of cylindrical form , or of smooth , tight outlines . The folds are tubular and the hems of the robes are straight with no waving , trailing outlines . The style in fact is the ' Italianate ' manner which developed in France as a result of contact with ' trecento ' art , and not the purely Northern Gothic International manner . " This view was rejected in 1981 by Neil Stratford , former

Keeper of Medieval and Later Antiquities at the British Museum , who pointed to a number of manuscript illuminations in a similar style that date from earlier than 1390 . John Cherry , another former Keeper of the medieval collections at the British Museum , still presents the older dating in a work of 2010 , and the British Museum website dates the cup to " about 1370 ? 1380 " .

Another traditional assumption , based on the language of the inventories and shared by almost all writers , was that the cup was a piece of secular plate , for use at table , or display on a buffet beside it . The buffet of the period was more like a modern Welsh dresser or shop display unit , with receding shelves for displaying on important occasions all the plate of the household that was not in use . Neil Stratford suggests that the cup was only used to drink from on special occasions , including St Agnes ' feast day , while Lightbown remarks that at over four pounds in weight the cup is much too heavy to drink from conveniently . However John Cherry , noting the exclusively religious subjects depicted (including that on the lost tripod stand) considers that the cup may have been intended as a ciborium from the start . It might have been used either to accompany in its carrying case the duke on his tours of his many castles and palaces , or perhaps for his foundation of the Saint Chapelle at his capital of Bourges , intended to rival the king 's Sainte @-@ Chapelle in Paris and his brother 's foundation at Champmol in Dijon .

The four sons of King John II of France ? Charles V , Louis I , Duke of Anjou (1339 ? 1384) , Berry and Philip the Bold , Duke of Burgundy (1342 ? 1404) ? all spent huge sums on works in gold and silver , as well as on other works of art . Although it is Berry who is especially remembered as a patron , partly because he specialized in illuminated manuscripts which have little value in their materials , it was his brother Louis of Anjou who was the " most passionately interested in the goldsmith 's art " ; he had over 3 @, @ 000 pieces of plate at one point . These included wholly secular pieces with sculptures in enamel that can only be imagined by comparison : in terms of technique to the handful of reliquaries , like the British Museum 's Holy Thorn Reliquary , that have survived from the period , and in terms of subject matter to tapestries and illuminations . However , in 1381 Anjou melted down almost all his plate to finance a war to pursue his claim to the Kingdom of Naples . According to the sculptor and goldsmith Lorenzo Ghiberti , writing seventy years later , one of Anjou 's goldsmiths , called Gusmin and " a most skillful sculptor , of great talent " , was so affected by the destruction of his life 's work that he joined an eremitic monastic order and lived out his days in silence . The Royal Gold Cup was " probably not exceptional as to size or decoration " in this milieu ; once " but one member of a class , it now stands alone " . An inventory of Charles V records 25 gold cups weighing between five and fifteen marcs ; this is slightly over nine without its stand . Smaller gold cups are recorded in sets of a dozen , of which Charles V had three . The largest items were the great table ornaments , in the shape of ships , called nefs , of which Charles V had five , the heaviest weighing over 53 marcs .

Berry died in 1416 with no male heir , and deeply in debt . Those of his works in precious metal and jewels that had not already gone to his creditors were mostly seized by the English when they took Paris in July 1417 . This was the first of a number of periods that saw the large @-@ scale destruction of goldsmiths ' work that the cup escaped , but thousands of other pieces did not , a survival that Brigitte Buettner finds " almost miraculous " . In particular , the move to Spain in 1604 enabled it to avoid the dispersal and destruction of the English Crown Jewels and royal collection of plate under the English Commonwealth .

As a secular piece the cup would be an almost unique survival at this level of quality , " the one representative left to us of medieval secular plate in its most sumptuous development " . Although French plate in silver and gold was made in great quantities , and at a high level of quality , " French silver made prior to the early 19th century is probably scarcer than that of any other European country . " The cost of even very skilled labour was low compared to that of the materials , and in the absence of any reliable way of either depositing or investing money , it was turned into lavish objects , in the knowledge that it might well need to be sold or melted down to finance some future project . If it survived long enough to become old @-@ fashioned it was likely to be melted down and remodelled in a new style .

There are only four other known survivals , secular or religious , of basse taille enamel on gold , one the small Salting Reliquary , also in the British Museum , and none as fine as the cup . The " King

John Cup " in King 's Lynn , of ca . 1340 , silver @-@ gilt with transparent enamel , is the best example of basse @-@ taille work probably made in England ; the metalwork expert Herbert Maryon describes this and the Royal Gold Cup as the " two examples of outstanding merit , unsurpassed in any collection . " However it is unclear if most of the enamel at King 's Lynn is original . The closest comparison to the Royal Gold Cup is perhaps the silver @-@ gilt Mérode Cup of about 1400 , which is the only surviving medieval example of plique á jour enamel , a difficult technique which creates a see @-@ through effect like stained glass . A silver @-@ gilt cup in the Rijksmuseum , Amsterdam of before 1376 has no enamels or gems , and a different shape , but offers an interesting comparison as it has a tripod stand with winged grotesques as legs , a short stem , and the cover has both an elaborate finial and a raised decorated strip around the rim , so that all the altered aspects of the Royal Gold Cup are present .

= = Iconography = =

The cycle of scenes from the life of Saint Agnes , and that of her foster @-@ sister Saint Emerentiana , follows the traditional story of Golden Legend of Jacobus de Voragine ; the most popular compilation of hagiographies of the age , whose wording corresponds to some of the inscriptions in banderoles or scrolls that explain the scenes . Other texts are quotations from the Latin Vulgate Bible , mostly derived from the liturgy for St Agnes ' feast day , and it has been suggested that the two rings of pearls also reflect the language of the chants for these services . It seems likely that clerical advice was taken , at least over the texts used in the inscriptions . It is tempting to relate the depiction of the story , with its " distinct and vivid tableaux , well suited to adaptation for performance " to medieval drama , often a source for iconography , but the fragmentary records mention no dramas on the life of St Agnes that are close in time or place to the origin of the cup .

Agnes and her sister were virgins of Rome in the time of the Emperor Constantine , though all figures are shown in contemporary 14th @-@ century dress . The story begins on the inside of the bowl , which has a round medallion showing St Agnes kneeling before a bearded figure , representing her teacher , wearing a chaperon . She holds a book inscribed *Miserere mei Deus sancte* (" Have pity on me , Holy God ") , while a banderole says *In corde meo abscondi eloquia tua ut non peccem tibi* (" Thy words have I hid in my heart that I might not sin against thee " . Psalms 119 : 11) . The top of the cover continues the story up to Agnes ' martyrdom in five scenes , shown with a continuous groundline from which small rocks rise up to demarcate the scenes ; on the base trees perform this function . Sunrays radiate from the centre of the cover above all the scenes ; the red enamel which once filled these is nearly all lost .

In the first scene the two girls are returning from school , Agnes accompanied by her punning attribute , a lamb with a cruciform halo , and carrying a martyr 's palm . They are accosted by Procopius , the young son of the Prefect of Rome , who has fallen in love with Agnes and shows her an open casket of jewels to persuade her to marry him . The inside of the casket is white , the only colour of opaque enamel in the original work , used only for a few highlights like the tiny area of the host held by Christ on the inside of the cover . Agnes rejects him , with the words *Illi sum desponsata cui angeli serviunt* (" I am betrothed to him who the angels serve ") in a banderole above . In the Caxton her rejection is unequivocal and not polite , and she points out that her heavenly fiancé has promised her much better jewels . The Prefect stands behind his son , and in the next scene has sentenced her to serve in a brothel for being a Christian who refuses to sacrifice to the goddess Vesta . Caxton 's Legend fills in the intervening action :

Then made she of the bordel her oratory , ... All they that entered made honour and reverence to the great clearness that they saw about St. Agnes , and came out more devout and more clean than they entered . At last came the son of the provost with a great company for to accomplish his foul desires and lusts . And when he saw his fellows come out and issue all abashed , he mocked them and called them cowards . And then he , all araged , entered for to accomplish his evil will . And when he came to the clearness , he advanced him for to take the virgin , and anon the devil took him by the throat and strangled him that he fell down dead .

In the next scene on the cup , Agnes stands outside the sentry box @-@ like brothel , looking down at the Prefect 's son who has been strangled to death by the devil crouched over him ; a banderole reads *Quo modo cecidisti qui mane oriebaris* (" How has thou fallen that risest in the morning " , Isaiah 14 : 12) , and the Prefect looks on sadly .

In the following scene Agnes has been moved by the Prefect 's grief , and prayed for the son to be restored to life , which an angel has done . The repentant Procopius kneels before her , while she leans down to tell him *Vade amplius noli peccare* (" Go forth and sin no more " ; from John 8 : 11) . However the result of the miracle was that (in William Caxton 's translation) " the bishops of the idols made a great discord among the people , so that all they cried : Take away this sorceress and witch that turned men 's minds and alieneth their wits " . The Prefect is now sympathetic to Agnes but fears he will lose his position if he does nothing , so leaves the matter in the hands of another official ; the two are seen talking together , with words from Luke 23 : 4 *Nihil invenio cause in eam* (" I find no cause against her ") above . The last scene shows her martyrdom ; she was sentenced to be burned but the flames part away from her so that finally the magistrate orders her killed by a spear . Her last words , from Luke 23 : 46 , are *In manus tuas domine commendo animam meam* (" Into your hands , O Lord , I commend my spirit ") .

The scenes continue on the underside of the bowl , starting with Agnes ' burial . A pall is being laid over her sarcophagus , whose red enamel has significant losses , which reveal clearly the engraved lines beneath . A tonsured priest with an aspergil for sprinkling holy water and an acolyte with a cross attend , with Emerentiana with halo to the left , and Agnes ' mother to the right . The banderole above says *Ecce quod concupivi iam teneo* (" Behold what I have desired I now possess ") . In the next scene pagans have arrived to disrupt the burial , and only Emerentiana has stayed , kneeling in prayer as she is pelted with rocks . The inscription reads *Veni soror mea mecum in gloria* (" Come with me my sister into glory ") . She dies , and the following scene shows the two martyrs , accompanied by two other unnamed female martyrs (in the source " a great multitude of virgins clad in vestments of gold and silver ") , as they appear in a vision to Agnes ' friends eight days after her death , as they gather round her sarcophagus , into which Emerentiana 's body has also been placed .

The next scene shows the sarcophagus with Constantina , the daughter of the Emperor Constantine , asleep on top of it , wearing a crown . She has been afflicted with leprosy , and heard of the vision at Agnes ' tomb , and come to pray there . The presence at left of a young man on crutches , not in the source , suggests that others are doing the same . The sleeping woman beside the tomb is either another such , or an attendant on the princess . As Constantina sleeps , Agnes , holding her lamb , appears to her , saying *Si in xpm (Christum) credideris sanaberis* (" If you believe in Christ you will be healed " , an adaptation of the text in the source) . In the final scene , the cured , and baptized , Constantina tells her crowned father the story , with the inscription *Hec est virgo sapiens una de numero prudentium* (" This is a wise virgin , one of the number of the prudent ") .

The inside of the cover has a circular enamel medallion with worked gold borders , showing a half @-@ length Christ making a blessing gesture and holding a chalice with a host inside . Around him is a sun @-@ like aureole in red . Below the two added cylinders on the stem , the four traditional symbols of the Evangelists run round the sloping foot of the cup , in pairs facing each other , above a green ground area . Lightbown notes this as " another sign of care for naturalistic effect " .

= = Construction and techniques = =

Each of the cover , main body , and foot of the cup is made of an inner and outer plate , and the enamelled medallions inside the cover and bowl were made separately before attachment . The enamel areas may have been designed by the goldsmith , or an artist more used to painting on panels or in manuscripts may have produced drawings . A number of names of goldsmiths appear in records of the period , but in contrast to many contemporary manuscripts , the few surviving goldsmith 's pieces are not signed or marked and cannot be matched to any names . Not a single maker 's name is recorded for the more than 3 @, @ 000 items in precious metal in the inventory

mentioned above of the possessions of Berry 's brother Anjou . High quality courtly work like the cup is conventionally assigned to Paris in the absence of other stylistic evidence ; this is where other documentary sources locate the main concentration of goldsmiths .

The process for creating the basse @-@ taille enamel areas began by marking the outline of the design and the main internal outlines on the gold with a tool called a " tracer " . Then the interior area was worked with chasing tools , hammering and punching rather than cutting , to form a shallow recess to hold the enamel . The more important parts of the design were modelled by varying the depth of the surface to produce different intensities of colour when the translucent enamel was added ; the gold under folds of drapery often rises near the surface to create a paler highlight . In many of the recessed areas decoration was added by either engraving or punching which would show through the translucent enamel , or to facet the background so the reflections change as the viewing angle changes slightly . In these last @-@ mentioned areas cutting tools were used . Most of the background outside the enamelled areas was decorated in the same way . After the enamel was added and fired the surfaces were cleaned up , made good and polished , including removing by scraping any bumps showing through on the reverse of the metal .

The enamel lies flush with the gold surfaces ; it was a preparation of finely ground glass paste applied with great care to the prepared recessed areas , and then fired . Different colours of enamel meet each other with a neat boundary , which was achieved by firing one colour with a retaining border of gum tragacanth before adding the next . The difficulty was increased by the application of tints of a different colour to a base shade of enamel before firing , so that the added colour blends gradually into the background colour around the edges of the tinted area . This is especially used on " flux " , or colourless enamel , as in the ground areas , rocks and trees . Flux was also used for flesh areas as on a gold background it darkens slightly when fired to a suitable colour for skin . The rouge clair or " ruby glass " red , used so effectively here , was made by adding tiny particles of copper , silver and gold to the glass ; here scientific tests have shown that copper was used . After firing the enamel was polished flush with the surrounding metal . The technique had been known to the Ancient Romans (see the Lycurgus Cup , also in the British Museum) , but was lost at the end of the Middle Ages until the 17th century . The added cylinders use opaque enamel , except for the red on the Tudor roses , which is translucent rouge clair , of a similar composition to the original reds . Translucent enamel is more fragile than opaque , and medieval survivals in good condition are very rare .