Victoria & Albert
Art & Love

'To wed high art with mechanical skill': Prince Albert and the industry of art

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At the opening session of the Council of the Society of Arts in 1846, Prince Albert said that 'the department most likely to prove immediately beneficial to the public, would be that which encourages most efficiently the application of the Fine Arts to our manufactures'.[1] He believed that it was the role of the Society of Arts to 'wed high art with mechanical skill', and to bring examples of good taste applied to everyday objects to the masses. This paper focuses on Prince Albert's relationship with Elkington & Co., a company which embodied these ideals and whose products fulfilled all three requirements of Albert's taste – personal appeal, moderate price and wide availability to the public.

On 29 November 1843 Prince Albert made his first visit to Birmingham. Despite the fears of his advisers that the city was in the hands of the Chartists, the Prince was determined to go to one of the manufacturing hubs of the country. He wrote to Baron Stockmar of his warm welcome: 'I went to Birmingham to see its manufactures and I was received with indescribable enthusiasm.'[2] The visit comprised tours of the George Bacchus & Sons glassworks; the manufactory of Jennens & Bettridge, famed for their works in papier-mâché; the Edward Armfield button-makers; and Sargents, a sword-making business. This was followed by an extensive visit to the Elkington premises on New Hall Street.

As *The Times* noted the following day, the Prince spent over an hour examining all the processes that took place in the Elkingtons factory. It was reported that he 'manifested considerable acquaintance with the principles of the science on which this manufacture is based', and that 'he showed especial interest in the operations of the batteries in connexion with the solutions of various metals'.[3] He was particularly interested in electroplating and electroforming. Electroplating is the process whereby a work of art is created in a base metal such as copper, and then placed in a specific solution of chemicals, through which an electric current is passed, so that a layer of silver or gold is laid down evenly over the surface of the object. This would then be burnished to a polished finish. Electroforming, also known as electrotyping or galvanoplasty, is a process in which an object is almost literally 'grown' in a tank, likewise using a chemical solution and electric current. Each electrotype is exactly identical to the original object – be it a work of art in itself or a cast or mould of that object. Thus examples of 'high art' or 'good taste' could be reproduced an infinite number of times, in precise detail.

The Prince was given a demonstration of the processes of plating by electro-deposit and of 'manufacturing solid articles entirely from solutions' – or electroforming. Long explanations of these processes appeared in the contemporary press, attempting to demystify their apparent alchemy to the public. The *Birmingham Journal* reported that 'the manufacture of Messrs. Elkingtons will long remain unrivalled. The process goes forward with a most magical facility, and in the few minutes that his highness was looking on, toys of various kinds, buttons, chains, and other small articles, were silvered or gilt, and ready to be prepared and ticketted for the market.'[4]

Elkington, Mason & Co. was already by this date a success story. George Elkington (1801–65) had inherited a spectacle and toy manufactory from his father, and in the 1830s, with his cousin Henry (1810–52), he was experimenting with new gilding techniques. In 1840 a Birmingham surgeon, John Wright (1808–44), discovered a process for electroplating in either silver or gold, using a solution of potassium cyanide. Elkingtons had kept a close eye on his experiments and almost immediately bought the patent for this process. The cousins could see the potential for this new technique, which was a more satisfactory method of creating a 'cheap' version of silver than Sheffield plate (the rolling together of silver and copper in huge plates), and their manufacturing works expanded rapidly; at the time of the Prince's visit around four hundred workers were employed at the factory on New Hall Street . The firm was quick to develop and refine the process of electroplating, so that by the early 1840s it could claim to be far in advance of its competitors. Elkingtons' plating was recognised as the most consistent, their plate was laid down more thickly and more smoothly than at any rival institution, and through the addition of various chemicals to the process, the results had a suitably brilliant finish.[5]

Elkingtons also had a reputation for plating the smallest and most fragile objects. This success was attributed to Alexander Parkes (1813–90), a chemist and the chief metallurgist at the manufactory. He specialised in plating organic material such as flowers and leaves, patenting his own process for coating the objects first in a mixture of lead and phosphorous, so that the plate would adhere properly.[6] He is said to have presented the Prince Consort with a silver-plated cobweb during the visit.[7] Harriet Martineau (1802–76), who visited Elkingtons in 1851 and wrote up her experience in Dickens's *Household Words*,[8] asked for the truth of this story during her own visit. It was explained that in fact Parkes had electro-gilded a rosebud for the Prince and, on drawing it out of the gilding tank, it was found that a cobweb was perfectly preserved in gold plate between the petals.[9]

Later historians such as Shirley Bury have noted that Prince Albert tried his own hand at electroplating, and even set aside a room in Buckingham Palace in which to conduct his experiments.[10] Whilst no direct evidence for this exists, it would certainly be characteristic of the Prince. In his dialogue with Lady Bloomfield, Albert had explained that his reason for gaining artistic or musical expertise was not 'with a view of doing anything worth looking at or hearing, but simply to enable me to judge and

appreciate the works of others'.[11] Kits for creating electroplate were easily obtained. From 1840 Edward Palmer of London, for example, sold 6- and 12-cell batteries, with prices starting at 2 guineas, as well as 'electrotype apparatus', including a modified Daniell cell from 5 shillings.[12]

Numerous manuals on the process were produced at this period, including Alfred Smee's 'how to' guide, *Elements of Electrometallurgy*, first published in 1842 with helpful illustrations. It was dedicated to Prince Albert, and his personal copy remains in the Royal Library (**fig. 1**).[13] The first edition included an appendix by Edward Palmer – effectively a catalogue listing various chemical solutions that could be bought for a few shillings each.

To the art world, to George Elkington, and indeed to Prince Albert himself, however, the more important process was electrotyping. An undated document in the Elkington Archive written by George Elkington describes his own fascination with the process: 'facsimiles of the antique and the various works of art which are at present confined to the collections of the amateur may be now produced in the noble metals'. To him the process was 'the most efficient means of spreading fine taste, and of educating the public mind to a due appreciation of the really beautiful'.[14] Moreover, electroforming meant that each reproduction was an exact re-creation of the original, thereby preserving the workmanship of the artist himself, whether a Roman potter or Benvenuto Cellini himself.

Although Elkingtons were not the inventors of this new technique, they were again quick to draw on its potential, patenting a number of refinements to the process from 1840 onwards and gathering source material from which to create their electrotypes. Henry Elkington lent a number of pieces from his personal art collection to be copied by the factory, including a wooden carving entitled *The Passage of the Israelites through the Red Sea* by Antoine Mélotte.[15] But it was to various foreigners that the company turned for inspiration. The first of these was Benjamin Schlick (1796–1872), a somewhat eccentric Dane who studied architecture and archaeology in Copenhagen and Paris and counted among his patrons Frederick VI of Denmark, Charles X of France, Leopold, Grand Duke of Baden, Prince Torlonia in Rome and Prince Nicolai of Russia.[16] He became Chamberlain to the Dukes of Lucca, and whilst in Italy he observed in detail the excavations at Pompeii and patented a form of pantograph to make reproductions of works discovered in the ruins. In 1843 he first appeared at the English court, as a guest at one of the royal balls.

Schlick first met George Elkington the same year, when he agreed to work with him in obtaining and creating suitable designs. He immediately saw the potential of electroforming to reproduce important works of art for the masses, and in early 1844 his first models were patented by the firm. Among these was an inkwell in the form of a sandalled foot, closely based on a number of sketches made

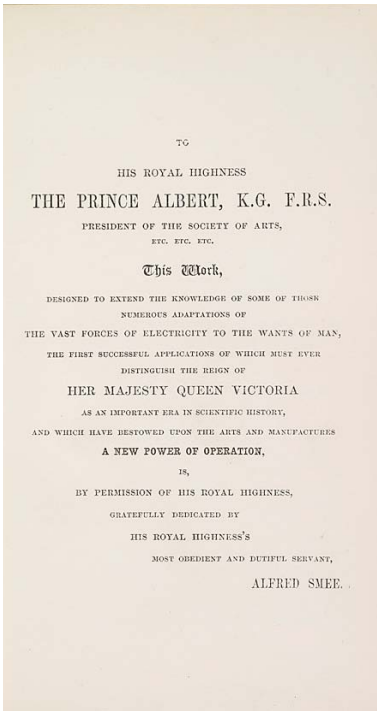

TO
HIS ROYAL HIGHNESS
THE PRINCE ALBERT, K.G. F.R.S.
PRESIDENT OF THE SOCIETY OF ARTS,
ETC. ETC. ETC.
This Work,
DESIGNED TO EXTEND THE KNOWLEDGE OF SOME OF THOSE
NUMEROUS ADAPTATIONS OF
THE VAST FORCES OF ELECTRICITY TO THE WANTS OF MAN,
THE FIRST SUCCESSFUL APPLICATIONS OF WHICH MUST EVER
DISTINGUISH THE REIGN OF
HER MAJESTY QUEEN VICTORIA
AS AN IMPORTANT ERA IN SCIENTIFIC HISTORY,
AND WHICH HAVE BESTOWED UPON THE ARTS AND MANUFACTURES
A NEW POWER OF OPERATION,
IS,
BY PERMISSION OF HIS ROYAL HIGHNESS,
GRATEFULLY DEDICATED BY
HIS ROYAL HIGHNESS'S
MOST OBEDIENT AND DUTIFUL SERVANT,
ALFRED SMEE.

Fig. 1
Title page of Alfred Smee, Elements of Electrometallurgy, London 1842, dedicated to Prince Albert

Fig. 2
Elkington & Co. (1842–61), manufacturers;
Benjamin Schlick (1796–1872), designer;
Inkwell/taper stick in the form of a Roman lamp, 1846
Silver, partly gilt, with glass liner; 6.0 x 14.3 x 3.5cm
Royal Collection, RCIN 34067

by Schlick at Pompeii (**fig. 2**). Various examples of lamps of this type exist in the collections of Roman antiquities in, for example, the British Museum, and at least one, by an unknown Italian artist, was included in Cassiano dal Pozzo's paper museum (**fig. 3**).[17] The inkwell was one of Elkington's enduringly popular designs, and was the gift chosen by Queen Victoria for Prince Albert to mark their wedding anniversary in 1850.

In 1846 Dr Emil Braun (1809–56) wrote a letter of introduction to George Elkington, asking about the galvanoplastic process and whether he might procure a machine himself, together with a competent workman to help set it up for him.[18] George Elkington responded by asking Braun to become a designer for the company and to provide source material for their electrotypes, these being most commonly reproduced in bronze and including an array of sculptures, friezes and other works from Rome. A ledger in the Archive of Art and Design in South Kensington lists an extensive group of Braun's models to be used by Elkingtons, dating from the period 1846–51.[19] Prince Albert purchased a number of these bronzes for the Royal Collection, including figures of *Aristides*[20] and *Sophocles*,[21] both acquired in 1847, as well as *Ariadne*[22] and *Pericles*,[23] which were gifts to the Queen in 1849.

Fig. 3
Italian school, Roman, *Roman lamp*, seventeenth century
Black chalk, red chalk, ink and wash, 21.4 x 17.2cm
Royal Collection, RCIN 910252

It is clear from Braun's letters that Elkingtons' showroom was both saleroom and museum. It was considered an unofficial School of Art, and visitors were encouraged to make it part of their tour of the city. Henry Howell Horton's poem 'Birmingham' included in the revised 1853 edition the following footnote:

No visitor to Birmingham or passing stranger should omit visiting this attractive place, which vies with the oldest and most wealthy establishments of its class, in the perfection of its models and designs and the well-earned excellence of its workmanship, this being clearly made manifest by the truly magnificent display of articles, solely of their own manufacture, exhibited in their beautiful show rooms.[24]

In a similar vein, by 1868 Elihu Burrett could write in his *Walks in the Black Country* that 'The establishment is, in itself, a school of art, in which genius is trained to the finest conceptions of taste and beauty. No one can estimate the force and extent of influence it puts forth for the culture of a nation.'[25]

Fig. 4
Bingley House, Birmingham, 1830
From Robert K. Dent,
The Making of Birmingham, London 1894

In November 1849 Prince Albert returned to Birmingham, this time to Bingley House to visit the *Exhibition of Industrial Manufactures*, an initiative funded entirely by private enterprise and designed to coincide with a meeting of the British Society in the city. The leading members of the committee who had set up the exhibition included George and Henry Elkington, as well as the porcelain manufacturer Herbert Minton, the glass manufacturer Follett Osler, and furniture and papier mâché manufacturer Aaron Jennens. It is clear from Schlick's correspondence with George Elkington that the exhibition was being planned as early as 1845, inspired by contemporary exhibitions held in France since the early 1800s showing works of art and manufactured items. Similar experiments had taken place in England in the 1840s – at Covent Garden in 1845, in Manchester in 1846, and in London in 1847, the last being an exhibition of British manufactures organised by the Royal Society of Arts. But the 1849 Birmingham exhibition was more comprehensive and may be seen as the first real forerunner of the Great Exhibition of 1851. It was held in a wooden structure built at the front of Bingley House, and covered over 10,000 square ft (**fig. 4**). The grounds were large enough to exhibit machinery such as steam engines, and samples from the nearby Cadbury's chocolate factory were also on display. The interior housed 130 stands or tables, including manufactured items, from stockings to microscopes, from all over the country. Elkington, Mason & Co. dominated the internal exhibition space, occupying four tables in the centre of the hall. Among their wares was a table of bronzes, which included three busts loaned by Prince Albert, all electro-deposited by Emil Braun.[26] There were three further tables of electroplate and silverware of hugely varying styles, from the antique to the fifteenth century.[27]

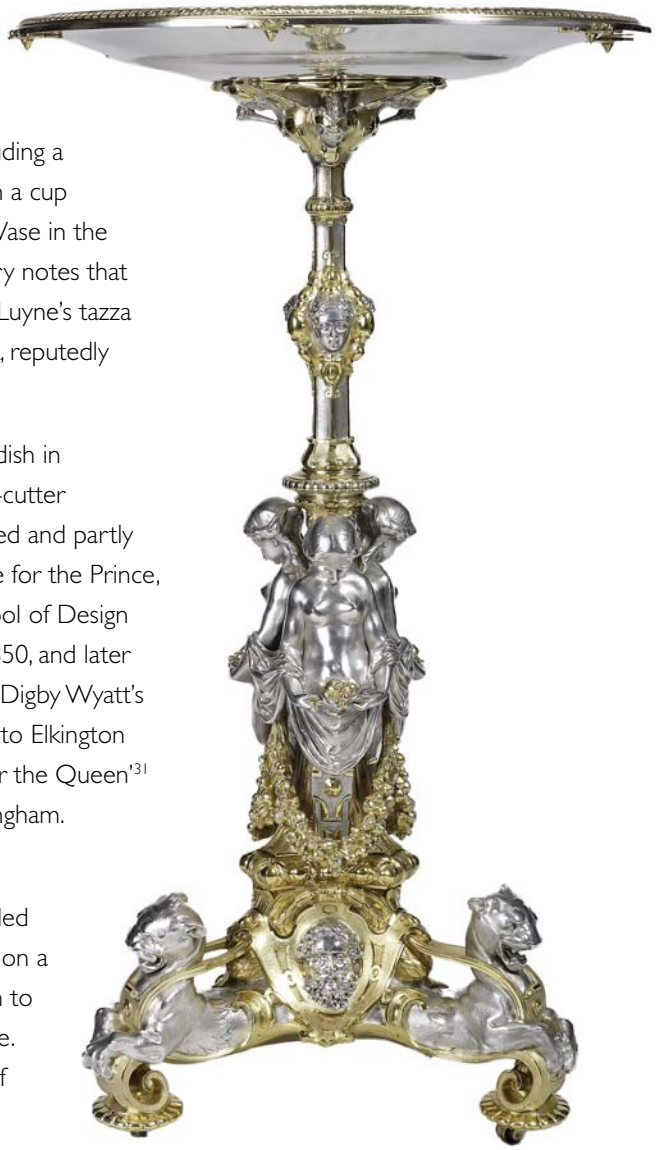
Prince Albert's visit to the exhibition lasted over three hours. He spent time viewing humble items such as buttons, hinges and guns, but then went on to make a detailed examination of Elkingtons' display, aided, as the *Art Journal* reported, by the lucid

Fig. 5 (far left)
Elkington, Mason & Co. (1842–61),
Two-handled cup, 1848/9
Oxidised silver, 14.7 x 12. 5cm
Royal Collection, RCIN 41368

Fig. 6 (left)
Elkington, Mason & Co. (1842–61),
Vase, 1849
Oxidised silver, 19 x 11 x 11cm
Royal Collection, RCIN 41369

Fig. 7 (below)
Elkington, Mason & Co. (1842–61), manufacturers;
Benjamin Schlick (1796–1872) and George C.
Stanton (1832–94), designers, *Table*, 1849
Silver (partly gilt) and steel, 84.5 x 49 x 49cm
Royal Collection, RCIN 41227

explanations of Henry Elkington. In particular the *Journal* picked out the 'copies from Pompeian vessels which have been so successfully accomplished by this firm and which were much praised'.[28] Indeed, at Christmas that year the Prince presented Queen Victoria with several purchases made at the exhibition, including a pair of oxidised vases after the antique, one of which was based on a cup found in Pompeii (fig. 5), and another being a copy of the Townley Vase in the British Museum (fig. 6). That same Christmas the Osborne inventory notes that he presented the Queen with a bronze electrotype of the duc de Luyne's tazza representing the days of the week and a silver chamber candlestick, reputedly after a design by Cellini.[29]



Albert was clearly also struck by Schlick's copy of a famed pewter dish in the collection in the Louvre, originally by the sixteenth-century die-cutter François Briot, re-cast by Caspar Enderlein and then copied, restored and partly re-composed by Schlick for Elkingtons. This was formed into a table for the Prince, with a stand by George Stanton, a student of the Birmingham School of Design (**fig. 7**). Albert presented it to Queen Victoria on her birthday in 1850, and later loaned it to the Great Exhibition where it was illustrated Matthew Digby Wyatt's *Industrial Arts of the Nineteenth Century*.[30] A letter by Braun written to Elkington in 1850 claims that he, too, had made a copy of the Louvre dish 'for the Queen'[31] a year after Schlick's design had appeared in tangible form in Birmingham. Of Braun's version no trace remains in the Royal Collection.

Elkington & Co. was by no means the only manufacturer that wedded high art with mechanical skill, nor were all the firm's reproductions on a small scale. Albert fully embraced the potential of the new medium to recreate works of sculpture in both miniature versions and full scale. The ground floor of Osborne House was filled with electrotypes of

antique works reproduced by Barbedienne of Paris, whilst the terrace outside was scattered with electrotypes by Miroy Frères.

Both Herbert Minton (1793–1858) and William Taylor Copeland (1797–1868) were keen exponents of the newly developed statuary porcelain – or 'Parian ware', as it became known – which came to dominate the mid century and which had strong royal support. As Queen Victoria wrote in her Journal on her visit to the Dublin exhibition in 1853, she spent time both watching the process of creating porcelain, 'which was interesting to see', and learning about the new developments in the production of what she called 'eggshell' porcelain, particularly the details in the process which had changed since the Great Exhibition.[32] Both Copelands and Mintons, two of the larger producers of Parian ware, were able to build on this interest and, turning to their royal patrons for loans, were able to re-create numerous works of art from the Royal Collection. Among the letters in the Royal Archive are several from Herbert Minton to the Queen's trusted servant Miss Marianne Skerrett, asking for permission to copy Baron Carlo Marochetti's model of Prince Arthur with a pony, and a bust of Prince Albert.[33] The figures of the Royal children by Mary Thornycroft were likewise extensively copied by both Minton and Copelands, and were particularly popular. The royal family owned a complete set of the figures in Parian ware, as well as the original versions in plaster and marble (**fig. 8**).

Fig. 8
Mary Thornycroft (1809–95), *Prince Alfred as Autumn*, 1848
Marble, height 95cm
Royal Collection, RCIN 41286

Contemporary literature waxed lyrical about the potential of Parian ware to allow everyone to own their own marble figures in miniature. As Matthew Digby Wyatt wrote in *The Industrial Arts of the Nineteenth Century*, 'Few among the many novelties in art-manufacture introduced within the last ten years have been more pleasing or interesting than the ceramic material … parian.'[34] The new material, designed to resemble white marble but relatively inexpensive, was aimed at the wealthier middle classes who could stock their private villas with figures after the antique, or with miniature versions of celebrated contemporary works of art. In 1849 the *Art Journal* commented on Parian ware as a solution to 'the necessities of a progressively improving taste and the demands made by the growing desire for those luxuries which mark the advance of civilisation'.[35] Prince Albert and Queen Victoria took to the art form wholeheartedly and their private apartments contained many figures of this type. Victoria purchased two Parian groups at the Dublin exhibition in 1853 – the so-called *Golden Age* (**fig. 9**) and *Burns and Highland Mary* (**fig. 10**), both of which were modelled by William Beattie and produced by the Copeland factory.

The 1876 inventory of Osborne is littered with references to Parian works by both Minton and Copelands. At the *Second Exhibition of Select British Manufacturers* held at the Royal Academy in 1848, for example, Prince Albert purchased a bust of *Flora*[36] and an *Apollo as a Shepherd Boy*. His collection favoured in particular figures after Bertel Thorwaldsen (1789–1838), including a Ganymede, a Lord Byron figure and a bust of Christ. An inventory of the Prince's rooms at Windsor, undertaken shortly after his death, reveals six Parian figures in the Writing Room alone.[37]

Fig. 9
W.T. Copeland & Sons Ltd,
The Golden Age, 1851
Unglazed porcelain (Parian ware),
46 x 34.5 x 24.5 cm
Royal Collection, RCIN 41334

Fig. 10
W.T. Copeland & Sons Ltd,
Burns and Highland Mary, 1851
Unglazed porcelain (Parian ware),
47.8 x 37 x 24cm
Royal Collection, RCIN 34729

It is no coincidence that many of these works were reproduced by one or more of the Art Unions. The Art Union scheme was a form of lottery, with an annual ballot for prizes. Art Unions flourished throughout Britain, producing prizes that were often reductions of full-sized works of art – in electrotype, engraving or Parian ware. The London Art Union in particular was a champion of Parian. The *Journal* produced by the Art Unions commented in 1846 on the utility of Parian ware, noting that 'we attach great importance to this material, as offering a valuable medium for the multiplication of works of a very high order of art, at a price that will render them generally available'.[38] Queen Victoria was an early subscriber to the Crystal Palace Art Union, and in 1859 she purchased five examples of their Parian wares.[39] Ten years earlier Prince Albert had been offered a copy of each of the bronze reductions produced up to that date by the Art Unions, including the figure of the *Eagle Slayer* by John Bell which had been produced in 1845, of which the full-size version dominated the hall in the Great Exhibition (**fig. 11**). The *Art Journal* also featured engravings of many works in the Royal Collection – both Old Master paintings and works of art such as the nautilus cup acquired by George IV, believed to be by Cellini.[40]

The Prince's views on the dissemination of good taste and the important role of the industrial manufactories in bringing this about chimed closely with those of Henry Cole, and prompted the formation of Cole's pseudonymous 'Felix Summerly's Art Manufactures' which sought to apply 'high' art to objects in everyday use such as tea services, beer jugs and inkstands. Felix Summerly's was a short-lived venture of the late 1840s and early 1850s that nevertheless attracted designers of high calibre. These included several Royal Academicians, artists William Dyce, Daniel Maclise, Richard Redgrave, Henry Townsend and Richard Westmacott, as well as the important manufacturers Coalbookdale's, Minton, Wedgwood, Jennens & Bettridge and Holland & Sons. As Cole recounted in his autobiography, Prince Albert's

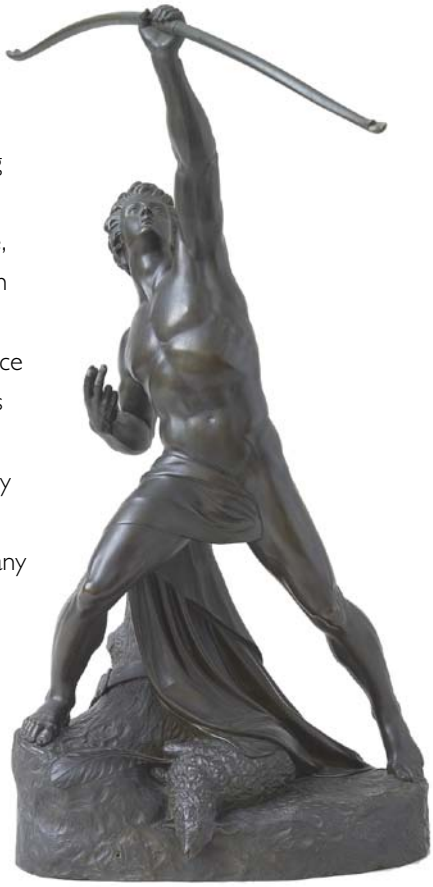


Fig. 11
John Bell (1811–95), sculptor;
Edward William Wyon (1811–85),
founder, *The Eagle Slayer*, 1845
Bronze, height 61cm
Royal Collection, RCIN 41551

patronage extended to acquiring a silver inkstand from Summerly's in December 1847,[41] and he owned two copies of the tinted Parian-ware inkstand, known as the Bride's Inkstand (fig. 12), designed by John Bell for the company. This was no mere token gesture, as the inkstand can be seen in use on his desk in the Writing Room at Osborne (fig. 13).

Fig. 12 (above)
Felix Summerly Art Manufactory / Minton & Co.; John Bell (1811–95), modeller, *Bride's Inkstand,* 1847
Tinted unglazed porcelain (Parian ware), 16.3 x 34.8 x 17.5cm
Royal Collection, RCIN 34526.2s

Fig. 13
James Roberts (c.1800–1867), *Osborne: the Prince's Dressing and Writing Room,* 1851
Watercolour and bodycolour, 24.3 x 36.8cm
Royal Library, RL 26224

Albert's patronage was vital, as Cole recognised – in the dedication of his autobiography he acknowledged that 'the encouragement His Royal Highness gave me through many years, without which a great part of my work could not have been carried out'.[42] The Prince's interest went beyond the Felix Summerly venture and took in the Government Schools of Design, of which Cole was Secretary. Albert encouraged Cole to use the Schools to produce designs for manufacturers producing for the royal palaces – and included various items in chintz, carpets, paper-hangings and pieces of pottery for both Buckingham Palace and Osborne House. Cole wrote to various government departments stating the Prince's support for the scheme: 'His Royal Highness is decidedly of the opinion that the use of successful designs ought not to be restricted to the palaces, but that the public should enjoy all the advantages of being able to obtain them.'[43]

This was the driving philosophy behind the royal loans to the Marlborough House museum. At the close of the Great Exhibition a space was sought both for the collection of works of art which would eventually become the Victoria and Albert Museum, and to house the Department of Practical Art which aimed to train students in good design. The works of art were temporarily exhibited in Marlborough House, and the royal family lent freely to the collections on display

Fig. 14
C. Armytage, *The Museum of the Department of Practical Art, Marlborough House*, 1857 Watercolour
London, Victoria and Albert Museum

(**fig. 14**), including furniture, tapestries from Hampton Court, terracotta medallions, boxes of lacquerware, ancient ironwork and arms. On her first visit to the collection in May 1852 Queen Victoria felt that examples of fine lace were lacking, and sent a selection from the Royal Collection that same evening. The following year Henry Cole recorded in his autobiography that he was able to wander freely around Buckingham Palace selecting items of Sèvres porcelain for display.[44] Some of these works were subsequently loaned to provincial museums as a study collection. From 1853 the Department of Science and Art within the Cole's museum was involved in creating copies of items on loan. Large objects were photographed, but the smaller pieces were reproduced in relatively inexpensive materials such as plaster, wax, electrotype or 'fictive ivory' (a form of stearin).

Fig. 15
Attributed to Eliseus Libaerts (active 1557–72), *Parade Shield ('The Cellini Shield')*, c.1562–3
Blued iron overlaid with silver and gold, diameter 58.5cm
Royal Collection, RCIN 62978

A catalogue of these copies notes that they were intended for 'Schools of Art, for Prizes and for general purposes of public instruction in public museums',[45] but the general public could also purchase them. Elkingtons was closely involved in the scheme and produced many of the electrotype copies in metalwork. The royal family was keen to show its support for this scheme, offering to loan works of art such as the so-called Cellini Shield, a sixteenth-century German parade shield (fig. 15). Prince Albert also showed his support by purchasing the Moresque vase and cover,

a silver and gilt electrotype copy of a fourteenth-century piece from the collection of the ecclesiastical architect Rhode Hawkins (**fig. 16**). Albert's version was the most expensive of the type, costing as much as £2 11s, but Elkingtons also produced it in bronzed copper or oxidised silver for much less.

Contemporary critics – the jurors of the Great Exhibition, the journalists of the *Art Union* and men such as Henry Cole – were aware that while these new techniques provided the opportunity to spread high art, they could also destroy creativity. Wary notes were published in the literature of the day. The Jury reporting on the metalwork class of the Great Exhibition, for example, noted that they could only comment on 'the artistic application of the discovery'.[46] It should be remembered, therefore, that whilst Prince Albert delighted in the application of these new techniques to bring affordable examples of high art to the masses, he was also a patron of original works of art. He also combined these interests by purchasing original works of art produced through electrotype or in Parian ware for his personal pleasure. Two notable examples are the jewel casket produced to a design of Ludwig Grüner and shown at the Great Exhibition (fig. 17), and the Highlander candelabra of Parian and oxidised and gilded electroplate, produced by Minton and R.W. Winfield for Balmoral Castle (fig. 18).

Fig. 16 (above)
Elkington, Mason & Co. (1842–61),
Vase and cover, 1856
Silver, partly gilt, diameter 11.5cm
Royal Collection, RCIN 42202

Fig. 17 (left)
Elkington, Mason & Co. (1842–61), manufacturer; Ludwig Gruner (1801–82), designer, *Jewel casket*, 1851
Electro-plated white metal, gilt bronze, enamelled copper, porcelain and oak, 97 x 132 x 81cm
Royal Collection, RCIN 1562

Fig. 18
Edwin Landseer (1803–73),
Herbert Minton & Co. and R.W. Winfield & Co., manufacturers, *Candelabrum*, 1854
Unglazed porcelain (Parian ware), copper alloy, plated with silver and gold and partly patinated, 94 x 38 x 38cm
Royal Collection, RCIN 12142

Victoria & Albert
Art & Love

Notes

1. Quoted in Cole 1884, vol. 1, p. 106.
2. Jagow 1938, p. 87, letter of 17 December 1843.
3. *The Times*, 30 November 1843, p. 7.
4. *Birmingham Journal*, 2 December 1843, p. 6.
5. *Art Journal*, October 1849, p. 295: 'There is a very remarkable brilliancy in the precipitated silver which shows a considerable practical improvement in the working of the process'.
6. Patent no. 9807, 27 June 1843.
7. *Dictionary of National Biography*, R.B. Prosser, updated by T.I. Williams (online, 2004–11), entry for Alexander Parkes.
8. Martineau 1851, pp. 113–17. I am grateful to Alastair Grant for alerting me to this and other contemporary references to Elkingtons.
9. 'Having heard something of a cobweb having been gilded at this trough, in the service of Prince Albert, we made inquiry, and found that it was really so – that a cobweb had been gilt – but it was by accident. A rosebud was gilded in the Prince's presence, and when it came out of the trough, it was found to have been crossed by a delicate thread of cobweb'.
10. Bury 1971, p. 26.
11. Martin 1875–80, vol. 4, p. 16.
12. Included in the appendix to Smee 1842.
13. Royal Collection, RCIN 1090178. Prince Albert's copy is a 3rd edn, published in 1851.
14. Archive of Art & Design, AAD-3-1979 PL8: Elkington [n.d.].
15. Listed in the *Catalogue* (Birmingham) 1849, table 55.
16. Archive of Art & Design, AAD-3-1979 PL 8: Schlick's list of prestigious clients is included in a letter to George Elkington of December 1845.
17. Royal Collection, RCIN 910252.
18. Archive of Art & Design, AAD-3-1979 PL8: letter from Emil Braun, 18 May 1846.
19. Archive of Art & Design, AAD-3-1979 PL12.
20. Royal Collection, RCIN 41191.
21. Royal Collection, RCIN 41192.
22. Royal Collection, RCIN 41409.
23. Royal Collection, RCIN 41408.
24. Horton 1853, Appendix, p. 129.
25. Burrett 1868, p. 119.

26. *Catalogue* (Birmingham) 1849: the busts lent by Prince Albert were Brutus (Royal Collection, RCIN 41881), Sophocles (as above) and Corinna (Royal Collection, RCIN 42633), all shown on table 56 of the exhibition.

27. Tables 55 showed a 'part Elizabethan dinner service', as well as contemporary dining wares; table 57 showed the Temperantia Dish, as well as a number of pieces electroformed by Schlick after archaeological finds from Pompeii and Herculaneum, and table 58 showed testimonials and racing trophies, as well as pieces based on botanical forms.

28. *Art Journal*, December 1849, p. 378.

29. *Catalogue* (Osborne), 1876, vol. 2, p. 30, nos 106 and 107.

30. Wyatt 1851–3, pl. LXXIX.

31. Royal Archive, AAD-3-1979 PL12: letter from Emil Braun, 23 November 1850.

32. Royal Archive, QVJ, 1 September 1853.

33. Royal Archive, RA/PP/Vic/Addl/1507/letter no. 323 of 25 November 1855 and letter no. 327 of 30 November 1855.

34. Wyatt 1851–3, letterpress for pl. LVIII.

35. *Art Journal*, January 1849, p. 17.

36. Royal Collection, RCIN 34569.

37. *List* (Windsor) 1862, Royal Collection, RCIN 1114737.

38. *Art Union Monthly Journal*, 1846, bound in annual copies, p. 298. After 1849 the *Journal* was retitled *The Art Journal*.

39. Reported in the *Art Journal*, 1859, p. 159. The figures were a Nymph at the Bath, Ophelia, Miranda, and two vases.

40. Royal Collection, RCIN 50603. This appeared in the *Art Journal* of January 1851, p. 28, and the illustration was repeated in 1852 on p. 243. A mother-of-pearl cup in the Royal Collection (RCIN 51420) was illustrated in 1852, p. 116, and an ivory cup (Royal Collection, RCIN 50554) appeared on p. 276.

41. Cole 1884, vol. 2, p. 182.

42. Cole 1884, vol. 1, p. v.

43. Cole 1884, vol. 1, p. 113.

44. Cole 1884, vol. 1, p. 285.

45. *Inventory* 1870, title page.

46. *Reports* (Exhibition) 1852, p. 512.

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