

Additional Technical Information concerning Joubert's 'Long Head' as used for the Great Britain Revenue Stamps of 1855

Malcolm J. Givans

Joubert family

Ferdinand Joubert's son Charles, inherited the family name Joubert de la Ferté but shared his father's desire to use the simplified name the Charles published his application to change his name by deed poll in *The Times* on 12 April, 1869 . Thus, records concerning Ferdinand and his son Charles are found in various ways. Charles' son Philip, who became an RAF Air Chief Marshall, and died as recently as 1965 retained the full family name.

Confederate States of America Stamps

Whilst the Williams brothers attribute the Davis head to Joubert, in their otherwise excellent *Fundamentals of Philately*, they give no substantiation to the claim (Ref. 1). Augustus Dietz stated that 'There is no record of the name of the engraver ' but he said that the engraving of Davis was copied from a photograph made in Richmond for the purpose. Dietz states that he got his information as a result of corresponding with A.J Hughes, a director of De La Rue in London and also from Mr. F. G. Montgomery, a Vice President of the American branch (Ref. 2). What remains of the De La Rue records that escaped the blitz of WWII show no details of who engraved the dies. What is certain is that De La Rue produced the stamps, and the die for the Davis stamp is held by the British Library. Joubert was probably far too busy to have even entertained the idea of engraving the Confederate issue because at that time, as will be shown later, he was preparing to open a commercial photographic studio (Ref. 3).

Joubert was a freelance engraver and photographer, never an employee of De La Rue & Co. This is borne out by the numerous press reports that can be found in the newspaper libraries available online. Philatelic writers, quoting each other without checking the facts about Joubert's 'employment' status go back at least as far back as 1907. In that year C S F Crofton stated

“ . . . From the next year, [1853 implied] however, the firm employed as their chief engraver M. Joubert de la Ferté, a gentleman who was apparently of their own nationality. . . .” (Ref. 4).

Mr Crofton made multiple errors in those statements. (a) Joubert was never 'on payroll' (b) The De La Rue family were British. Thomas, the founder, was born in the Channel Islands, a hot-bed of anti French activities long before the Napoleonic wars. Warren, his elder son was also born there, but his brother William was born in London Joubert later became naturalised British but at that time was still a French citizen (Ref. 5). Mr Crofton went on to say

“His work has recently come to light through the discovery of a remarkable series of die-proofs of all the more important De La Rue stamps from 1855 to 1865 in various stages of completion. . . . The die-proofs as originally found were in a book bearing the engraver's name

and they stopped in 1866 although the book was by no means full. It seems probable, and it is corroborated by evidence from the stamps themselves, that whether by death or otherwise, M. de la Ferte's connexion with the firm was severed in the latter year. . .”

Admittedly Mr Crofton did not have the ability to ‘word-search’ digitised newspapers, but there were other ways in which he should have been aware that Joubert was alive and well, until 1884. Mr Crofton made a dangerous assumption by implying that the ‘book’ belonged to Joubert, and thereby attribute the proofs to Joubert as the engraver. For example he diadem on the First and Second India Heads, which Mr Crofton describes as being in the ‘book’ are now known to have been engraved by Russell and Pound respectively (Ref. 6)

Background information on the ‘long Head’

The BPMA ‘Long Head’ was probably bought from the sale of Joubert’s studio collection that was auctioned by his executors, following his death. It is therefore possible that further copies of this complete print may emerge in the future.

Chine-collé printing

Very shallow etched plates, with sharp detail, had to be printed on very thin paper. However, if the paper were not supported the pressure involved would have, at worst, damaged the paper during printing or at best it would have been almost impossible to handle the print without damaging it. The Chine-collé processes overcame the risk of damage. This process, from the 19th century is still in common use today by creative artists. It uses and techniques have changed and expanded, as can be seen by the number of web-sites relating to the process as well as in printed texts (Ref. 7). The original 19th century method was roughly as follows. The plate is inked, the thin paper pre-damped, is placed on the inked plate and trimmed to size. Paste is applied to the thin paper, and then placed paste side down onto a dampened backing sheet. This ‘sandwich’ is then run through a recess printing press. The pressure of the press causes the ink to be transferred to the thin paper, and the thinner paper is simultaneously adhered to the backing paper. There are numerous prints done by the Chine-collé processes by both Joubert and other artists that can be seen in the British Museum.

Technical advances in the photographic, engraving and printing field prior to 1855

The engraving of the “Long Head” occurred in a period of tremendous technical advances. It was an era dominated by both older scientists such as Michael Faraday, the father of electricity in Britain, and Charles Babbage, who originated the concept of a programmable computer but also included comparatively young men such as Charles Darwin (born the year before Joubert). There were many avid inventor “patentees”, such as the litigious William Henry Fox Talbot, but there were also many who, contrary to much current popular belief, published sound research without resorting to patenting. One such was Warren De La Rue, as shown in the main paper. That situation would have encouraged discussion and interaction between many experts working in fields of engraving, photography and printing.

Time Line relating to Photography, Engraving and Printing

The following time-line of activities in Britain pertinent to engraving and printing, following the adoption of the electrotpe shows many significant facts:

- 1839 Engravings of produced on wood blocks sensitised with silver nitrate had appeared in print but were not generally of a high standard).
- 1839 Thomas Spencer publishes details of how to make electrotpe plates, and shows an example in print.
- 1840 Thomas Spencer and John Wilson patent the first method of ‘Engraving on metals by means

- of voltaic electricity.' This enabled an image drawn through the etching ground of a metal plate which was then 'engraved' by electronically exciting an appropriate chemical solution. The patent identifies the various modifications required to the method to electronically 'engrave' the image onto copper, steel, silver, or gold.
- 1841 W.H.F. Talbot patents the 'calotype', a process for printing of photographic images from negative on silver coated paper. This process should not to be confused with collotype)
- 1841 William Grove, FRS, publishes a process for electro-etching Daguerreotype plates.
- 1844 Joseph Woods patent No 10,214 was the English patent for anastatic printing. Registered by Woods on behalf of Wilhelm Siemens.
- 1850 in France, Fermin Gillot patent No 9679 for Paneiconographie (Printed as patent No 4713 in 1852) a process for making a letterpress printing surface from a previously printed image.
- 1851 Rudolf Appel won a prize at the Great Exhibition for a perfect facsimile of a previously printed line illustration using his improvement to Woods anastatic patent..
- 1851 Paul Pretsch, (later an exponent of a photo-engraving technique) exhibited ten photographs at the Great Exhibition. One was the largest photograph produced at that time, 16 inches x 21 inches (406mm x 533mm).
- 1851 Frederick Scott Archer made public, without patent, the "wet collodion" process, making the production of photographs very easy and cheap.
- 1852 W.H.F. Talbot registered patent No 565, a method of transferring a photographic image to a conventional printing plate. Effectively, a form of 'photoengraving'.
- 1852 Rudolf Appel's patent No 1058 showed how to transfer a printed image to a metal plate, creating a printing surface similar to a lithographic surface. It was a further 'improvement' on the Woods anastatic patent.
- 1852 in France, Barreswill, Lemrecier, Lerebours & Davanne produce direct photolithography using bitumen as a medium, which was also a good "acid resist" medium. Joubert would undoubtedly have picked up this valuable information.
- 1853 J.B. Dancer, of Manchester, produced the first micro-photographs. An example was a page of The Times longitudinally reduced to 1.5mm (1/16th inch) in height and photographically printed onto a microscope slide. The tiny image was able be read perfectly clearly using a powerful microscope.
- 1853 Warren De La Rue, (already a proven chemist, inventor, and a fellow of the Royal Society at age thirty-five) was taking astronomical photographs of the Moon, and recorded in the Monthly Notices of the Royal Astronomical Society.
- 1853 Talbot gave a paper to The Athenaeum giving details of "photo- engraving" The paper was published in The Journal of the Photographic Society of London, published by Taylor and Francis.
- 1854 Warren De La Rue was approached by the Royal Observatory at Kew to design a special telescope produce daily photographs of the sun. He completed the project dubbed the "photoheliograph" in 1858.
- 1854 Paul Pretsch registered patent No 2373 'To obtain either a raised or sunken design on glass or other suitable material from a photographic image'.
- 1854 Devincenzi, Guiseppe, registered patent No 868 It showed a 'Method or methods of producing engraved figures and typographic surfaces for printing and embossing from ornaments etc. Impressions are produced on metallic surfaces with some greasy matters. By means of a photographic process either direct or on a lithographic stone to transfer afterwards an impression on any bituminous or resinous substance.'
- "To grave these 'impressions' they are varnished on the surface by a process similar to that of inking and then engraved by chemical or electro-chemical action."
- 1854 Paul Pretsch introduces the 'swelled gelatine process,' which enabled a wax mould to be made from the emulsion on photographic plates. The moulds were then used to make electrotypes to print the photographic image by letterpress. A fine example of Pretsch's photogavanography,

which was perfected later than the 'Long Head' can be found in The Royal Society's Bakerian Lecture (Ref. 8). The illustration of De La Rue's lodging therein was printed from a Pretsche photogavanograph. It can be matched to a photograph held by the Royal Astronomical Society. There is an album of Warren De La Rue's photographs from that expedition, with Warren's Book plate in the front of it, in the library of the Royal Astronomical Society in London. One of the photographs is an albumen print of Warren's lodging at Rivabellosa. Scans of the print in the Bakerian lecture and the RAS photograph proves that they are both from the same glass photographic plate.

- 1855 Frederick Scott Archer's registered patent No 1914, titled 'Photography - Producing flexible pictures, removing the film [emulsion] from the glass, affixing the film upon another surface'. This showed how to remove the image from a glass photographic plate and affix it onto other surfaces such as paper or metal. Its first commercial application was to assist in the reduction of storage space required for bulky glass photographic plates. Its secondary application was to transfer photographic film [emulsion] to paper or other materials.
- 1855 Excellent examples of photographic portrait images transferred onto wood and printed there-from appeared in the February issue of The Photographic and Fine Art Journal. (earlier, photographic line illustrations were able to be transferred to a printing surface, but the focus of interest to photographers was the reproduction of portraits, not line drawings or engravings)
- 1855 The Ordnance Survey was commercially using photography for scaling maps, transferring the image photographically to metal. The uptake of this was delayed due to a member of parliament demanding a scientific enquiry into the accuracy of enlargement and reduction, notwithstanding Dancer having proved such accuracy in 1853.
- 1855 Paul Pretsche patent No 1824 on 11 August 1855 provided for 'Obtaining cylindrical and other engraved ornamental surfaces from photography'.

The preceding list shows that a wealth of pertinent knowledge was in the public domain, both requiring patent fees and material free from fees. These photographic advances also dispel another popular belief that Talbot was the only significant developer of photographic techniques in Britain. His reputation as the dominant photographer was aided by his name regularly appearing in the press for taking people to court, claiming that they were stealing his ideas. The 'Talbot' papers are available in the National Media Museum in Bradford and available using the De Montfort University Leicester's project web-site. It can be found at <http://foxtalbot.dmu.ac.uk/index.html>. The web-site gives access to nearly 10,000 letters to and from W. H. F. Talbot. There it can be seen that Archer and Pretsche, neither as well connected as Joubert, were just two of his major legal targets. Warren De La Rue took up support of Pretsche and his activities with Talbot, 'persuading' Talbot to stop pursuing Pretsche. The correspondence also shows that in the following decade Joubert wrote to Talbot offering advice to him about improving his photoengraving method. Talbot's response was terse, at best.

Joubert and photography

Joubert became a life-long friend of Warren De La Rue, a Fellow of the Royal Society who was also a skilled photographer at that time. De La Rue's astronomical photography work is well documented in the records of the Royal Astronomical Society. De La Rue and Joubert had a number of other photographic acquaintances including Colonel James (also a FRS), who was experimenting with photography for map work in the Ordnance Survey at that time. Paul Pretsche, an Austrian living in London was also a friend of Warren De La Rue and doubtless had contact with Joubert. Pretsche's patents are shown above. The potential for conversations between Joubert and these contacts would have undoubtedly aided Joubert developing his own techniques enabling him to photograph the print to transfer the image onto steel, for deep etch acid etching.

Two notable examples of Joubert's broad range of photographic competence occurred only a few years later than the work under discussion. The Times 5 December 1859 told of Joubert's inventive

photographic capabilities with the Court Circular report stating

‘Windsor Castle, Saturday, Dec 3 Mr. F. Joubert had the honour of submitting for inspection to his Royal Highness The Prince Consort some specimens of his new mode of printing photographs in permanent ink.’

At this time Joubert also patented a method of applying photographs to glass, in a permanent way. The patent summary read ‘This invention has for its object improvements in reproducing photographic and other pictures, engravings, prints, devices and designs on the surfaces of glass, ceramic and other substances requiring to be fired to fix the same thereon’ (Ref. 9). Within days of registering the patent Joubert was back at Court showing this process to Her Majesty and the Prince Consort, which was stated in *The Times Court Circular* report of 7 February 1860.

Joubert’s photographic patent is very easy to understand, and examples produced by Joubert using his process can be found in Edinburgh, at the National Museums Scotland. These examples have been in store there since 1862 but their Joubert connection had been lost until recently when the author found the necessary information for them to be identified. The author saw a report in *The Caledonian Mercury* of Monday, August 18, 1862. The report gave details of Joubert’s donation of nine examples to the Industry and science Museum in Edinburgh. The author sent this information to the National Museum of Scotland, and asked that records be checked to see if the material had survived. After some searching Museum Scotland confirmed that six ‘possible painted glass pieces were in store’. The details from *The Caledonian Mercury* were followed up by the Museum and the accession details found, confirming that the six in store were the survivors from the original nine donated by Joubert. The Example shown is T.1861.740.8 - Group of Workmen Paris 1858. The Image is 270mm (h) x 203mm (w). The whole framed piece is 540mm x 365mm. That of the ‘Musicians’ (T.1861.740.6) is a view of the outside of No 36 Porchester Terrace, London. That was Camille Silvy’s address, next door to Joubert’s home, which was later his photographic studio. The scene is identified, by a private collector, who also has a copy of this on glass, as being the one that Joubert showed to Prince Albert which was reported in *The Times* 30 November, 1861. That fact was deduced from the description of the photograph and the event that Silvy wrote to his mother about. The letter was verified by the private collector, who wishes his identity to be kept confidential.

Photographic Conversion of the “Long Head”?

Since the ‘Long Head’ was engraved no later than the end of 1854 it is unlikely that Joubert had sufficient advance knowledge of, and practice in using Scott Archer’s new method (listed above) of transferring a photographic image to any suitable surface such as metal. There are numerous examples of Joubert’s photographic work in the National Portrait Gallery, including photographic portraits of many high society people such as the then Prince of Wales. This expertise, if well advanced in the early 1850s together with his inventiveness would have enabled him to utilise Archer’s new process (listed above) if he had advance knowledge of Archer’s work. Alternatively Joubert may have used ‘conventional’ photography to transfer the image to steel. An adaptation of Talbot’s 1841 calotype process (mentioned above) is another likely candidate. The photographic image of the fine-line print would be reversed and printed onto photosensitised silvered steel. Once hardened onto the metal the black lines that were to be retained would be standing slightly proud of the steel and could have been roller-coated over the with an acid-resist compound. The steel bearing the image could then be placed in an acid bath to etch away the ‘white areas’. Thus the lines necessary for letterpress printing would be standing in relief on the steel.

Chemical transfer to Steel? The Anastatic Method

This process was used mainly to make facsimile reproductions of old prints. The essential features of the early process, in simple terms, are as follows. A print was made transferable by damping the back of the paper with dilute nitric acid. The image side of the paper was then applied firmly onto a sheet of zinc, allowing the acid to etch the metal where the ink of the print did not prevent it. A proof could then be pulled and if necessary further etching could be done until image on the plate

was considered ready to be inked up with a roller. Then as many prints as required could be made.

Geoffrey Wakeman attribute the invention to A B Baldamus in 1841. Baldamus is said to have been the source that of information of the process to the Athenaeum (Ref. 10). The reports in the art press includes information that the Athenaeum was sufficiently worried about the potential for the process to be used for fraud that they referred the matter to Lord Monteaagle, a member of the Committee appointed to inquire into the Exchequer-bill forgeries. No action seems to have been taken by Lord Monteaagle.

The use of the process in Europe probably goes back to 1834. The inventor was probably Charles d'Aiguebelle who used a method for his 'transports sur pierre d'impression anciennes,' which earned a silver medal at the Paris Exposition of 1834, a year or so before Joubert came to England. The argument as to who was the originator of the process is, however, a subject for printing historians to resolve. Suffice it to say that the process had been in use and extensively written about since 1841. The 'anastatic process' was patented in England in 1844, by Joseph Woods, on behalf of Wilhelm Siemens, a German national (Ref.12). The details of the patent show that the first part of this process could have been successfully used to transfer a printed image such as the BPMA print. The company set up by Woods and Siemens failed. Woods died in a cholera outbreak in 1849 and Siemens closed the company in early 1850. The process was continued by Rudolph Appel, a German, who had worked in the Woods-Siemens factory. Appel was helped and encouraged to exploit the process by Siemens, and Appel exhibited his improved anastatic method, which he called "appelotypes" at the Great Exhibition in 1851.

The above information should be sufficient for philatelists to accept that the process was viable and that Joubert would have been familiar with its use long before 1854, when working on the 'Long Head' project.

Paniconographic process

Fermin Gillot was a Frenchman born in 1820 and although his father had been a cooper, Fermin trained as a lithographer. Clearly becoming a printer he considered a step up from making wine barrels. There is confusion as to when he patented his Paniconographic process in various some of his activities. Some writers state 1850 and others 1852. The confusion is understandable but simple to explain. The French patent indices in the British Library shows the 'brevet d'invention' as No 9679 and dated 1850. If a researcher is unaware of how the French patents were recorded a nasty shock awaits. Attempts to access that patent in full will not produce a satisfactory result. This is because the French system required a patentee to make a second registration after two years. It was only when the second registration was made, and the second fee paid, that the French patent office published the patent text. To add to the misery of modern researchers, unfamiliar with the French system, the printed patent would not be No 9679 in 1852. With true Gallic logic the French patent office issue new numbers, when a patent was printed in full. Hence, the full text of Gillot's patent is dated 1852 and numbered '4713'. Great care in interpreting the patent is necessary because of the archaic and flowery use of French in the mid 19th century compared to modern French. The patent, when studied with care is quite clear and includes some improvements Gillot made between 1850 and 1852. Fermin Gillot had one son (Charles) who carried on his patent business, improving the process when Fermin died at the comparatively young age of fifty-two, in 1872.

In the main text about the 'Long Head' the author refers to Paniconographic, an Anglicisation of the French 'Paniconographie' as used in the British Library entry for Gillot's 1852 'handbook'. It should be noted that the spelling in the printed French patent is Paneiconographie. The NEICO not NICO difference is noted, for accuracy.

The maps referred to in the main 'Long head' paper text as being in the British Library and produced by Gillot's process have the following bibliographic information. The full title is The Visitor's Map of London (Waistcoat Pocket Map). It was published by Willing & Co of 366 Grays Inn Road. The black and white version cost 6d and the coloured version 1/-. The BL material was printed in 1862, but from the bibliographic details this was clearly originally published a good deal

earlier. The map is 350mm x 515mm, (13 3/4 in X 20 1/4 in approx.) and are inscribed at the bottom left 'Panciconographie Gillot, Paris'. The bottom right is inscribed "John Dowler 108 Fleet Street" (the cartographer). Numerous examples of the 'Paniconographic process' can be found in France and the National Gallery of Art, Washington holds, in the René Huyghe Collection, a copy of 'The Stone Breaker' (painted by Gustave Courbet in 1849). It is catalogued as being reproduced as a Gillotype in black on wove paper. The print is 30.1 x 23.1 cm (11 7/8 x 9 1/8 in approx.) Although it is not on public view an image can be found on the Internet.

Conclusions

The documentation about Joubert's development of photographic skills prior to 1859 is not as extensive as information about the two chemical process candidates for transferring the BPMA print to steel. However, new information is, and will probably continue to come to light about Joubert's early photographic work. Thus, the current conclusion is that whilst photography was technically possible as the means of transferring the 'long head' to steel, the probability is that a chemical process was used. The simplicity of Gillot's process, as opposed to the much written about Anastatic process, suggests that the Gillot process, or a variation of it, was the way Joubert transferred his fine-line etched and Chine-collé printed 'Long Head' to steel. Given that Gillot's process was not covered by patent in England adds weight to its probable use. This is because Joubert, who was a champion of intellectual property protection, would not have been breaking his principles by using it.

References

1. Williams, L.N. and Williams, M, Fundamentals of Philately The American Philatelic Society, 1971
2. Dietz, A. The postal Service of the Confederate States of America, Diets, Richmond Virginia 1929
3. New The Times Wednesday, Dec 11, 1861 (Advertisement)
4. Crofton C F S, 'Queen's Heads' Philatelic Journal of India, Vol XI 1907
5. Houseman, L, The House that Thomas Built, Chatto & Windus, London 1968 (Official history and conformed by a De La Rue family member.)
6. De La Rue Die Book & Easton J, The De La Rue Years & annotated die proof held by the author.
7. Shure, Brian. Chine Colle: A Printer's Handbook. Crown Point Press, San Francisco 2000
8. De La Rue, Warren 'On the Total Solar Eclipse of July 18th, 1860 observed at Rivabellosa, near Miranda de Ebro in Spain'. Bakerian Lecture (Phil. Trans. vol. clii. pp. 333-416) Royal Society 1862
9. Joubert de la Ferté, Ferdinand Jean, Photographic Patent No 149, 20 January 1860.
10. Wakeman, G Aspects of Victorian Lithography - Anastatic Printing and Zincography Brewhouse Press Wymondham 1970
11. Pole W, The Life of Sir William Siemens, John Murray, London 1888.