



Old Repairs of China and Glass

• ISABELLE GARACHON •

In 2002 the Rijksmuseum acquired a large delftware jar and cover dating from around 1665 (fig. 1). This acquisition was unusual not just in its impressive dimensions and its fine blue decoration in Chinese style, but because of the conspicuous old repairs with iron rivets (fig. 2) and a label inside the cover reading 'Mrs Bernard's in the care of A.N. Teos [?], 11th of April 1850' (fig. 21).¹ The seller of the jar said that this note referred to the itinerant repairer who had mended the cover and rim in England in the mid-nineteenth century.²

Although the prominent repairs with rivets and brown filler are unsightly to modern eyes, the curators and restorers decided after some discussion not to remove them: repairs like this are part of the history of the object and evidence of the restoration techniques used in the past. This decision clearly illustrates how ideas about old restorations have changed in recent times. Thirty years ago, these old-fashioned rivets and glued joins would have been removed without a second thought and replaced with a less obtrusive repair.

Since the nineteen-eighties restorers have become increasingly interested in the history of their profession and the changes in techniques and in the ethics of the job. This is most evident in the

Fig. 1
Jar and cover,
Delft, c. 1665.
China, h. 61 cm.
Rijksmuseum,
Amsterdam
(inv. no. BK-2002-11).

fields of paintings, sculpture and buildings,³ but there has also been more research into the history of ceramic restoration in recent years.⁴

Old restorations are common in a collection of historic ceramics like the Rijksmuseum's and most of the objects the museum deals with have been repaired before, often several times. As a rule there is little if any information about when, by whom and for whom these repairs were done. Always assuming that the information is correct, the reference to a possible repairer, client and date of repair consequently makes the delftware jar and cover extremely interesting. The piece sparked a desire to find out

Fig. 2
Detail of the repair
with iron rivets (fig. 1).



more about old repair techniques and products and about the background and history of the professional repair and restoration of ceramics in the last few centuries in Western Europe, particularly in the Netherlands, France and Great Britain.

Repairing Ceramics

Until the eighteenth century, information about the development of repair techniques and about the professional restoration of ceramics is scarce and fragmentary. Archeological finds are the most important source of datable information. It is difficult to say when people first started to mend pottery, but it would seem self-evident that the practice is almost as old as the use of the objects. Excavations at sites in the Middle East and Europe that date from around 7000 BC have turned up earthenware objects that show traces of repairs with bitumen, animal glues, plaster, lead and iron rivets, or sometimes just the holes through which cord, sinew or metal wire was threaded to mend cracks or breaks.⁵ The chief aim of these early forms of repair was to make the object usable again. It was extremely difficult to achieve a strong, durable bond with the natural glues that were available, and so since antiquity people have used mechanical repair techniques involving metal to make cracked or broken pottery watertight and heat resistant again.

In the Rijksmuseum's ceramics collection, which covers a period from around AD 1500 to the first half of the twentieth century, there are a great many pieces with metal rivets. This mechanical joining technique was used very widely to repair china and porcelain in the eighteenth, nineteenth and twentieth centuries, and is actually still in use in China today. In their 1963 book *China Mending and Restoration*, Parsons and Curl devoted no fewer than 170 pages to describing all the variations of the riveting method,

which had meanwhile developed into a complex art.⁶ Thanks to this standard work and a number of other nineteenth- and twentieth-century publications, the technique of riveting is very well documented. The principle is simple: holes are drilled on either side of the break, and the two pieces are then pressed together and secured with metal links. Little equipment is required for the job. In 1899, Hasluck explained that 'a drill, some diamond bits, a pair of combined cutting and holding nippers, some brass wire and a little plaster of Paris are all that is necessary' (fig. 3).⁷

Drilling holes in porcelain and china is the trickiest step in the riveting process, and various nineteenth- and twentieth-century 'DIY' books provide lengthy instructions about how to use different types of hand-drills (fig. 3) or even a simple, well-sharpened awl.⁸ The rivets were often made of brass, but other metals were sometimes preferred – iron, tin-plated brass or silver were all used on occasion.⁹ There were two main riveting methods: the 'through and through' rivet and

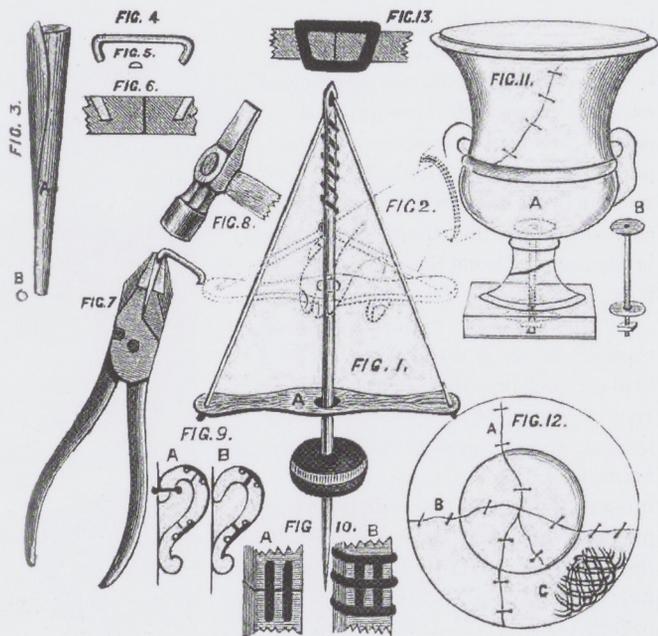


Fig. 3
J. HOWORTH,
*The Art of Repairing
and Riveting Glass,
China and Earthen-
ware*, London.
Office of the Pottery
Gazette, London 1900.

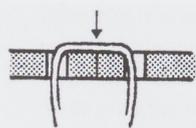


Fig. 4
Through and through rivet: the metal wire is threaded through the holes on either side of the break (after C.S.M. Parsons, F.H. Curl, *China Mending and Restoration*. Faber and Faber, London 1963, fig. 19, p. 107).



Fig. 5
The handle of a teapot repaired with brass wire. Teapot, Nieuwer-Amstel, 1808, porcelain. Rijksmuseum, Amsterdam (inv. no. BK-KOG-318-A-1).

the U-shaped rivet. In the through and through method, a metal wire is threaded through the drilled holes. Descriptions of this method usually recommend fine binding wire, of the kind used by florists. The wire is laced in and out through the holes, and finished off by twisting the ends together (fig. 4). It can then be cleaned, polished and soldered over.¹⁰ The drawback to this technique is that the holes are drilled all the way through and the repair can be seen on both sides. It achieves an extremely strong join, however, which makes it ideal for mending breaks in awkward places such as handles (fig. 5) and knobs, and in areas with a great deal of decoration in relief (fig. 6).¹¹

U-shaped rivets produce a less visible repair. This method also involves drilling into the object, but not all the way through. A rivet is inserted into the two holes on either side of the break. It has to be of such a length that it is at full stretch when pulled into position with its legs constantly exerting pressure on the walls of the two holes, so that it clamps the two pieces together (fig. 7).¹² The advantage of

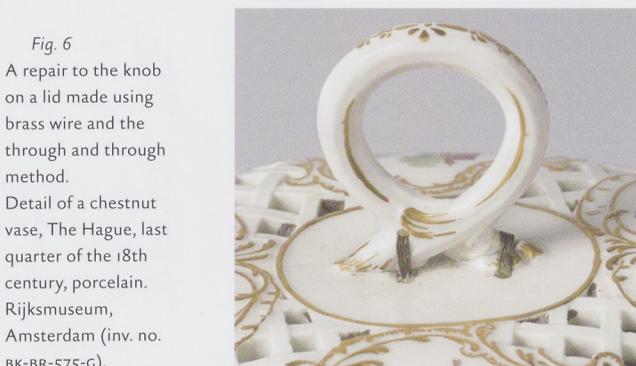


Fig. 6
A repair to the knob on a lid made using brass wire and the through and through method. Detail of a chestnut vase, The Hague, last quarter of the 18th century, porcelain. Rijksmuseum, Amsterdam (inv. no. BK-BR-575-G).

Fig. 7
U-shaped rivet (after S. Buys, V. Oakley, *The Conservation and Restoration of Ceramics*. Butterworth-Heinemann, Oxford 1993, figure 5.1).

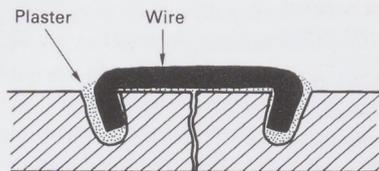




Fig. 8

Drilling holes at an angle of 15 degrees with the aid of a Chinese string drill (after C.S.M. Parsons, F.H. Curl, *China Mending and Restoration*. Faber and Faber, London 1963).

using U-shaped rivets is that it is not necessary to drill holes all the way through, and this means that objects with a reasonably flat surface, such as plates, saucers and bowls, can be riveted on the least visible side. Precision in drilling the holes is crucial, perhaps even more than with the through and through rivet. Authors stressed that the holes had to be exactly opposite each other and the rivets had to cross the crack at right angles, as otherwise their action would tend to pull the broken edges out of true.¹³ To take full advantage of the tensile strength of the rivet, the holes should be drilled at an angle of 15 to 20 degrees towards the fracture (figs. 7, 8), so that the rivets would not come out.¹⁴ If the rivets were put in properly there was actually no need to use any



Fig. 9

Porcelain plate repaired with brass rivets. Plate, Meissen, third quarter of the 18th century. Porcelain, diameter 34.5 cm. Rijksmuseum, Amsterdam (inv. no. BK-17474-54).

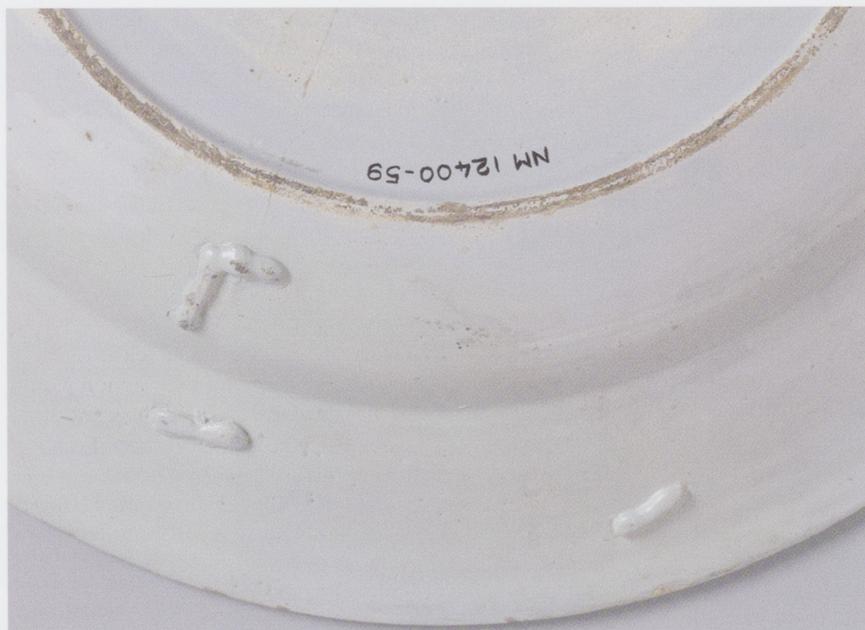
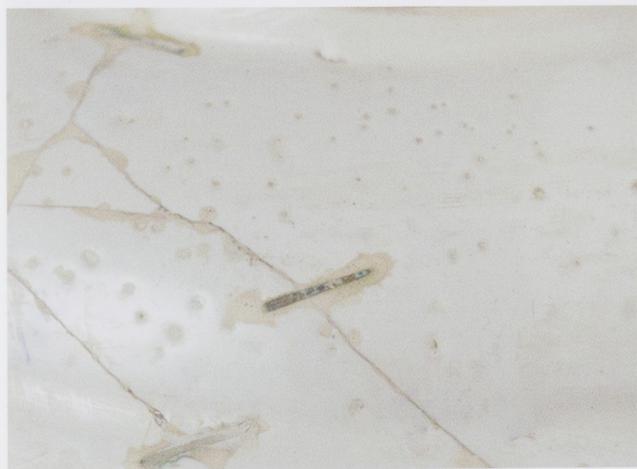


Fig. 10
Rivets on the back of a plate concealed with paint.
Plate with a scene from the Prodigal Son, Delft, second quarter of the 18th century.
China, diameter 18 cm.
Rijksmuseum, Amsterdam (inv. no. BK-NM-12400-59).

Fig. 11
Countersunk brass rivets on the back of a dish.
Dish with a design of the Last Judgment, Delft, second quarter of the 17th century.
China, diameter 42 cm.
Rijksmuseum, Amsterdam (inv. no. BK-NM-12400-151).

glue.¹⁵ The wire used to make the rivets was D-shaped, usually brass (fig. 9) or iron (fig. 3)¹⁶ and sometimes even silver. It was shaped and cut to size with nippers.¹⁷ The rivets could be made less conspicuous by touching them up with enamel paint (fig. 10)¹⁸ or countersinking them in a groove filed between the drilled holes. Once the rivets had been inserted, they were filed smooth and flush to the surface of the object (fig. 11).¹⁹



Rivets were probably originally used to repair wooden objects. An account of occupations in Paris in the thirteenth century describes travelling repairers who mended wooden bowls with brass and silver wire.²⁰ One of the earliest specific descriptions of repairing ceramics with metal wire comes from China. At the end of the sixteenth century, Matteo Ricci, a Portuguese Jesuit living in China, wrote about the extraordinary properties of porcelain. 'This porcelain, too, will bear the heat of hot food without cracking and, what is more to be wondered at, if it is broken and sewed with a brass wire it will hold liquids without any leakage.'²¹ The same technique was described by the Jesuit missionary Martin Martinius in his account of Kangsi Province in 1664.²² He reported on the occupation of porcelain mender and the sophisticated way these artisans were able to make holes in the thin, fragile porcelain with a diamond drill similar to the tools used in Europe to engrave glass and decorate rock crystal. Later in the eighteenth and nineteenth centuries, the professional repair of ceramics was quite often described and

sometimes even illustrated in western books about China (fig. 12). The remarkable similarity between the repair techniques and the trade of china mender in China in the sixteenth and seventeenth centuries and in western countries a century later led some authors to believe that the technique of riveting had its origins in China.²³

The irreversible traces that have been left on so many objects in collections as a result of mechanical joining with rivets might almost lead one to overlook the fact that glues were also used in previous centuries. Recipes for glues and fillers based on egg whites, natural resins, waxes and oils abound in books from the eighteenth century onwards, and were widely used by individuals and professional repairers.²⁴ The last vestiges of these old natural glues have often disappeared, however, or are very difficult to detect.

And lastly, missing pieces were not infrequently replaced wholly or in part with non-ceramic materials like metal and wood. Restorations of this kind were probably entrusted to other craftsmen – silversmiths, wood turners and clockmakers.²⁵ In the Rijksmuseum collection, for instance, there are a number of glasses with a replacement foot made of wood or silver (fig. 13), and porcelain objects with ormolu handles or knobs (fig. 14).

Mending China and Porcelain for a Living

China menders were probably an everyday sight from the fifteenth century onwards. Their occupation was often portrayed in songs and farces, like this passage from a Dutch farce of 1405 in which one of the characters explains how he earns his living: ‘... and I can mend your stoneware jugs and your

Fig. 12
Plate with a design of a man ‘lacing’ ceramics, after a print from *The Costume of China*, G.H. Mason, London: W. Miller, 1800.
Plate, England, c. 1805-10.
© v&A Images/
Victoria and Albert Museum, London (inv. no. C.1-1970).



Fig. 13

Wine glass, Netherlands, *façon de Venise*, h. 17.2 cm. Rijksmuseum, Amsterdam (inv. no. BK-KOG-1698).
Wine glass, Netherlands or England, h. 18 cm. Rijksmuseum, Amsterdam (inv. no. BK-BR-294).



Fig. 14

A lid and a teapot with a replacement part made in bronze. Lid of a tureen, Netherlands, c. 1780 to c. 1820. Porcelain, l. 24.7 cm. Rijksmuseum Amsterdam, (inv. no. BK-15974-142);
Teapot, Netherlands. Porcelain, h. 16.5 cm. Rijksmuseum Amsterdam, (inv. no. BK-1977-261-A).



Fig. 15
Detail of a print
featuring 17 hawkers:
'Cries of London',
17th century.
Engraving (Hamburg
Collection).
British Museum ©
Trustees of the
British Museum,
London.

milk pails made of clay ...'²⁶ In the words of a fourteenth- or fifteenth-century Dutch song, we hear the street cries that hawkers used to advertise their wares, among them the man who repaired bowls and lamps, and the china mender: 'If you break a bowl, I'll mend a bowl ... I mend lanterns, lanterns, lanterns, I rivet dishes and saucers.'²⁷

A set of seventeenth-century English prints about street trades in London features one of the earliest illustrations of a 'mender of P[it]chers or pots?' and glasses' (fig. 15). Equally interesting is a drawing of a woman in a set of street traders made by Caspar Luyken in 1708. An inscription on the back reads 'Breekje wat, Breekje wat' ('china to mend') (fig. 16). Here, unlike the print of the English china mender, there is nothing to indicate that the woman in the picture repairs ceramics or glass. Fortunately, however, it is

Fig. 16
CASPAR LUYKEN,
Breekje wat,
breekje wat, 1708.
Drawing, 12.6 x 9.7 cm.
Amsterdams
Historisch Museum,
Amsterdam (signature:
TA14282).



possible to link this print to a caption under a picture of an alley in Leiden in a book published in 1682: 'China-to-Mend ... Here lives a woman who earns her living by making any broken pots whole again.'²⁸

The connection between the expression 'Breek je wat' and the cry or the name of a china mender also occurs in a 1721 tale in which an unfortunate 'damsel' who has just broken a 'porcelain' basin in two hears the street cry of the itinerant mender, 'china to mend? china to mend?'. The story continues, 'China-to-Mend appeared with her basket full of ingredients and machines to mend the bowl, one piece of which she [the young lady] had already coated with quicklime mixed with the white of a fresh hen's egg.'²⁹ There are numerous references in eighteenth-century writings to the use of a mixture of quicklime and egg white as an adhesive for mending pottery; it is described, for instance, in the 'Volmaakte Hollandse Keuken-meid', a manual for kitchen maids published in 1759.³⁰ Other illustrations of 'China-to-Mend' can be found in sets of prints of eighteenth-century trades

and occupations, among them a figure holding a jug, with the caption 'Breek je wat' beneath (fig.17).

It is clear that mending china became a trade in its own right in western countries as the eighteenth century progressed. By the end of the century there were even different types of repairers and a greater range of repair techniques. These developments were without doubt related to the growing supply and popularity of ceramic products – glazed earthenware, Oriental porcelain and European bone china – which could be found in ever more households. In English-speaking countries these artisans were called 'china menders' or 'china riveters', in France they were 'recouseurs' or 'raccommodeurs de faiences et de porcelaine', in Holland 'porseleinkrammers' and in Germany 'Porzellan-flicker' or 'Porzellannieter'.

There is a quite detailed early description of the trade in a French encyclopedia of 1760, where the term 'raccommodeur de faiences et de porcelaine' is defined as 'a person who can make broken china and earthenware usable again'. This is followed by a technical explanation of how the 'raccommodeur' uses the through and through method to rivet broken china and makes the holes good with a mixture of olive oil, egg white, ground glaze and chalk. The technique described for porcelain is different: the pieces are glued with a mixture of egg white and white lead or quicklime and egg white. The author, Abbé Jaubert, asserted that the discovery of riveting dated from the early eighteenth century and could be attributed to one Delisle of Normandy. The occupation, which was not an official trade or craft but nonetheless required skill, supposedly spread rapidly throughout the kingdom. This did not please the manufacturers of china, who went to court in an attempt to have the occupation of china mender banned. But, continued the encyclopedist, the

'raccommodeurs' – supported by the citizens, who recognized their usefulness – were granted the right to repair china and porcelain.³¹ The attribution of the discovery of riveting to Delisle did not go uncontested, and as early as 1877 it was described in a French history book as the rediscovery of an old technique.³² A few years later, Abbé Jaubert's thesis was gently mocked in Leland's *Manual of Mending and Repairing Antiques*: 'But the archaeologist will say of his claim, as the English judge did of a similar one, that the plaintiff might as well apply for the patent for having discovered the art of mixing brandy with water.'³³

The China Mender

One form of the trade that was common in several European countries was the itinerant china mender – a figure comparable to the travelling knife-grinder and the tinker. Riveting

Fig. 17
Detail of a popular print showing 36 different trades. Woodcut, published by the heirs of Hendrik van der Putte, Amsterdam, first quarter of the 19th century. Rijksmuseum, Amsterdam (inv. no. RP-P-OB-102.077).



is obviously an ideal way of repairing broken china on the spot, requiring as it does little in the way of tools and materials. The trade was not difficult or expensive to learn, but it was not very lucrative or highly esteemed either.³⁴ Despite this humble reputation, in France the 'raccorreur de faïence et de porcelaine' was one of the most popular hawkers portrayed in prints, figurines (fig. 18) and postcards (figs. 19, 20) and one that frequently appears in stories and songs, and even in films and documentaries.³⁵ The skill of this picturesque tradesman was sometimes linked in ballads or comic prints with mending broken hearts or patching up a failing marriage.³⁶

At the end of the nineteenth century Barthelet drew a lively portrait of a French 'raccorreur' who carried his workshop with him. 'Anyone who has visited the wonderful city of Paris could not help noticing the china mender With a square box strapped on his back, brightly painted and ornamented ... he walks about the streets, enters each house-yard, and causes the air to resound with his guttural and most compound yell....

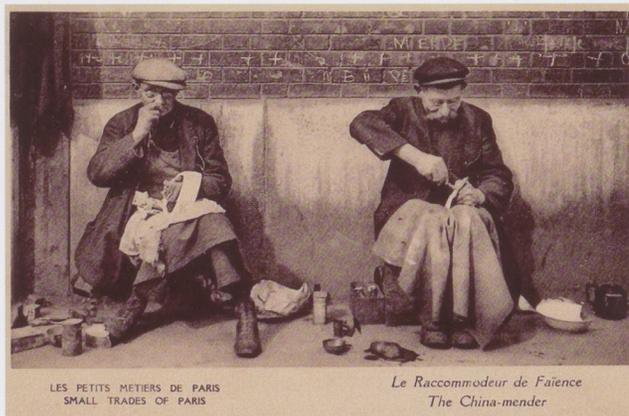


Fig. 18
*Le raccorreur
de faïence*, Niderviller.
Porcelain, h. 14.7 cm.
Sèvres, Musée
national de Céramique
© RMN / Martine

Beck-Coppola
(inv. no. MNC18703).

Fig. 19
Postcard, France,
around 1900.
Private collection.

Fig. 20
Postcard, France,
around 1900.
Private collection.



At the first chance of a job, he accepts it. Seated on his box in an alley-way, at a corner, in a yard or sometimes on the street, one may see him handling the broken portions of a dish or the lid of a pitcher.³⁷

Itinerant china menders were active in the United Kingdom, too, from the eighteenth century onwards. The family archives held in Panmure House in Edinburgh include records of the sums paid to one David Spalding between 1761 and 1765 for repairing various objects.³⁸

The label in the delftware jar described at the start of this article may well refer to just such an itinerant china mender (fig. 21). So far, regrettably, it has not proved possible to find any leads for the names Bernard and A.N. Teos, nor have any other objects been found with similar references – objects that might have been in English collections, perhaps around Oxford.³⁹ The provisional interpretation is that Mrs Bernard either owned the jar or was responsible for it – perhaps as a housekeeper – and that A.N. Teos (?) was the china mender.⁴⁰ Although many women worked as china menders, in this case the fact that there is no title before the name suggests it was probably a man.

As well as these travelling menders, who were certainly not associated with high degrees of reliability and skill, there were also more qualified tradesmen, particularly in Britain and America. 'In some cases work can be entrusted to the local china repairer, who is well known and who has through good workmanship proved his ability. It frequently happens, however, that dependence must be placed on itinerant repairers. Most of our readers will no doubt have had experience with their sham rivets, their bogus secret bolting or their alleged process of burning and fusing On account of their many despicable and dishonest deeds, all confidence in them is lost'⁴¹ These English and American menders are also known for their

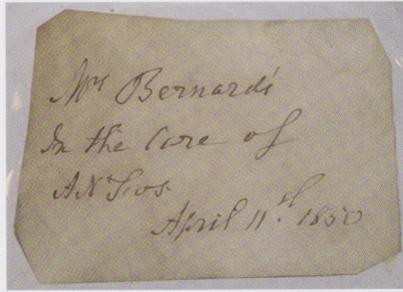


Fig. 21
Detail of the label inside the cover of the jar in fig. 1. Jar and cover, Delft, c. 1665. China, h. 61 cm. Rijksmuseum, Amsterdam (inv. no. BK-2002-11).

advertisements, which are an important source of information about their charges and methods (fig. 22).⁴²

The image of the china-mender in the Low Countries corresponds pretty closely to that of his French counterpart, as the example of Jan de Krammer (John the Riveter) of Delft and Overschie illustrates. He lived in Trompetstraat in Delft and in the early part of the last century he tramped around the villages and farms in the area mending pottery and china. He has become

Fig. 22
Advertising handbill for Edmund Morris, 'China rivetter', c. 1770. British Museum, Bank 37.11, © Trustees of the British Museum London.



a legend thanks to the slogan he painted on the simple wooden toolbox he carried on his back. It read 'Staying for dinner, Jan?' If one of his customers, curious, read it aloud, the retort came quick as a flash: 'Don't mind if I do, guv!'⁴³ The picture of the itinerant china-mender with his tools on his back is also found in other, less innocent circumstances, such as the description in an 1857 police gazette of a man called Bakker who was wanted for arson.⁴⁴ Records of china-menders are found in Dutch archives from the eighteenth century onwards, and the occupation is listed separately in trade directories up to 1889.⁴⁵ In his analysis of the population of Rotterdam around 1830, Kersbergen describes the occupation of china-mender as 'typically Jewish'.⁴⁶

The presence of china-riveters in the Netherlands is confirmed by finds of objects made of earthenware, china and even glass that have been repaired with brass wire and strips. These items were found in excavations of houses dating from 1760 to 1840 in Zutphen, Dordrecht, Noordwijk, Nijmegen and elsewhere.⁴⁷ 'Riveted china' is also mentioned in several eighteenth-century inventories.⁴⁸

Various newspaper advertisements relating to repairing ceramics that appeared at the end of the eighteenth century bring to light other aspects of the china-mender's trade. The story of a certain Sieur Rupano reveals that the wanderings of some itinerant menders were not confined to a single country: in the Den Bosch Dinsdagse Courant of 13 August 1771, this 'Sieur Rupano' announced his impending arrival during fair week. As well as selling pens, curing corns and possessing the secret of reading ancient writings, he could 'mend broken china in a manner never before seen'.⁴⁹ Rupano was also recorded in Paris during this period.⁵⁰

We also find china-mending combined with other skills in the intriguing story of Timotheus and Jaques Pastres. Between 1724 and 1758 their advertisements appeared in both French and Dutch newspapers, puffing off a 'large clock without equal' and the technique they had perfected for making paper porcelain of a whiteness and shine that surpassed Japanese porcelain. From this material they made all sorts of items – tea sets, dishes and more. They could also mend broken china and insert new pieces invisibly.⁵¹

Fig. 23
Advertisement from the Blathwayt papers, reproduced by kind permission of Gloucester Archives (reference number D1799/A390).

COOMBS,
CHINA Burner and Mender
In general,
QUEEN - STREET, BRISTOL.

BURNS all Sorts of Foreign China, such as Dishes, Plates, Bowls, Basons, Tea-Pots, Boats, Coffee Pots, Mugs, &c. Likewise, Rivets and Rims China Bowls and Glasses in the neatest Manner.

N. B. Tea Pots that pours indifferently, may be made to pour smoothly by tipping them neatly with Silver, otherwise by taking off their own Spouts and substituting new ones of Silver or any other Metal.

Neat work'd basket Handles for Tea-Pots, Coffee Pots, Sauce-Boats, Cream-Jugs, &c. &c.

Letters directed to him Post paid will be duly attended to.

Bills this size (and Paper) PRINTED for 4s. 6d. per 1000, at No. 50, Bishopgate within.



Fig. 24

Remnants of a failed attempt to reattach broken pieces by fusing them with glaze.
Tulip vase, Delft, c. 1680 to c. 1700. China, h. 83 cm. Rijksmuseum Amsterdam (inv. no. BK-1978-13).

‘The China Burner’

In the eighteenth and nineteenth centuries china was sometimes repaired by firing it again. In England this arcane and uncommon technique was the specialty of ‘china burners’ like Edward Coombes (fig. 23) and Philip Daniel, who worked around Bristol and Plymouth between 1785 and 1801 and were in the habit of marking their repairs.⁵² The Bristol City Museum collection includes a number of pieces of hard paste porcelain mended by this means and marked on the bottom with the name of one or other of these ‘burners’ and the date of the repair. The process involves coating the edges of the broken pieces with a glaze that has a low melting point and firing the object, probably supported in a clay

form, in a muffle kiln. Although the technique is described in a number of nineteenth-century books and is referred to in seventeenth-century Chinese manuscripts, there are few other examples of the use of this risky procedure for mending china.⁵³

The advertisement placed in a Dutch newspaper by the chemist Ferdinand Kumpff in 1770 may well refer to this method. He invited readers to witness a series of tests, so that they could see with their own eyes how ‘fine porcelain that is broken can be fused in the fire so that it is as good as new and usable straight away’.⁵⁴ In the Rijksmuseum collection there is just one delftware object that has been repaired – not very successfully as it happens – by firing (fig. 24).

From Repair to Restoration

Around 1850 a different sort of repairer started to emerge in western countries. We know about their working methods and ethics from the contemporary literature for china collectors and amateur repairers. In 1865 for instance, P. Thiaucourt, himself a 'peintre-sculpteur, réparateur d'objets d'art', published his 'Essai sur l'Art de restaurer les faïences, porcelaines etc.'⁵⁵ His book opens with an enthusiastic foreword written by a collector who recommends this useful little volume to all amateurs who, like him, had been gripped by the 'china collecting fever'.⁵⁶ Thiaucourt describes the different products and techniques that can be used to glue, fill and retouch ceramics, and provides even more useful information for collectors in the form of an index of manufacturers of porcelain and china.

This publication was followed in the second half of the nineteenth century by other books and articles written by repairers for ceramics collectors. The authors described themselves as 'artist-repairer of fine decorative wares' or 'céramiste réparateur'.⁵⁷ Some of them commended themselves as the authors of other interesting books on china who had long been associated with the 'Manufacture de Sevres'.⁵⁸ In his 'Art de restaurer soi-même les faïences et porcelaine' Ris-Paquot was clearly addressing himself to collectors with instructions on how to maintain a collection properly. He added that men could readily be assisted in this delightful pastime by their wives, whose sensitive natures and delicate white hands were perfectly suited to handling *objets d'art* and arranging them to best effect.⁵⁹

It is evident from these books that the means and methods of repair had developed and diversified. From this time on, the aim was to restore the appearance of objects that were intended solely for decoration and as part of a collection. The different steps



required to make an object complete and beautiful again are described with particular emphasis on recreating missing pieces and retouching damaged areas. Rivets were still being used, but some authors, Thiaucourt among them, were at pains to distance themselves from the riveters and other 'raccommodeurs'. When it came to drilling the holes that were sometimes necessary, he advised the amateur repairer to have this 'coarse and thankless work' done by a china-riveter or, better yet, by a firm that specialized in mechanical drilling.⁶⁰

Fig. 25
Replacing a missing handle with the aid of a supporting armature of metal wire (after O.E. Ris-Paquot, *L'art de restaurer soi-même les faïences, porcelaines, cristaux, etc.* Henri Laurens, Paris 1893, fig. 10, p. 33).



A German stoneware jug in the Rijksmuseum collection is a good example of a collector's item that has been restored. The handle and part of the top have been painstakingly reconstructed – in all probability in the second half of the nineteenth century when the object was in the collection of Jan Pieter Six, one of the leading stoneware collectors in the Netherlands. Although the shape of the handle and the lion's head are not entirely correct, when the piece was restored in 1996 it was decided to retain this old addition in view of its historic value (figs. 25, 26).

These nineteenth-century repairers can be seen as the forefathers of modern ceramic restoration, which underwent its last major development with the advent of synthetic polymers in the nineteen-fifties. Some techniques and considerations are still very recognizable – keeping objects upright when gluing, for instance, the problems caused by discolouration of the retouches and the concern that unscrupulous antique dealers could take advantage of a restoration that is too perfect.⁶¹ Some comments are surprisingly modern. In 1888, for example,

Fig. 26
Jug with a design of the seven liberal arts and the seven virtues, Germany, last quarter of the 16th century. Stoneware, h. 42 cm. Rijksmuseum, Amsterdam (inv. no. BK-NM-9431).

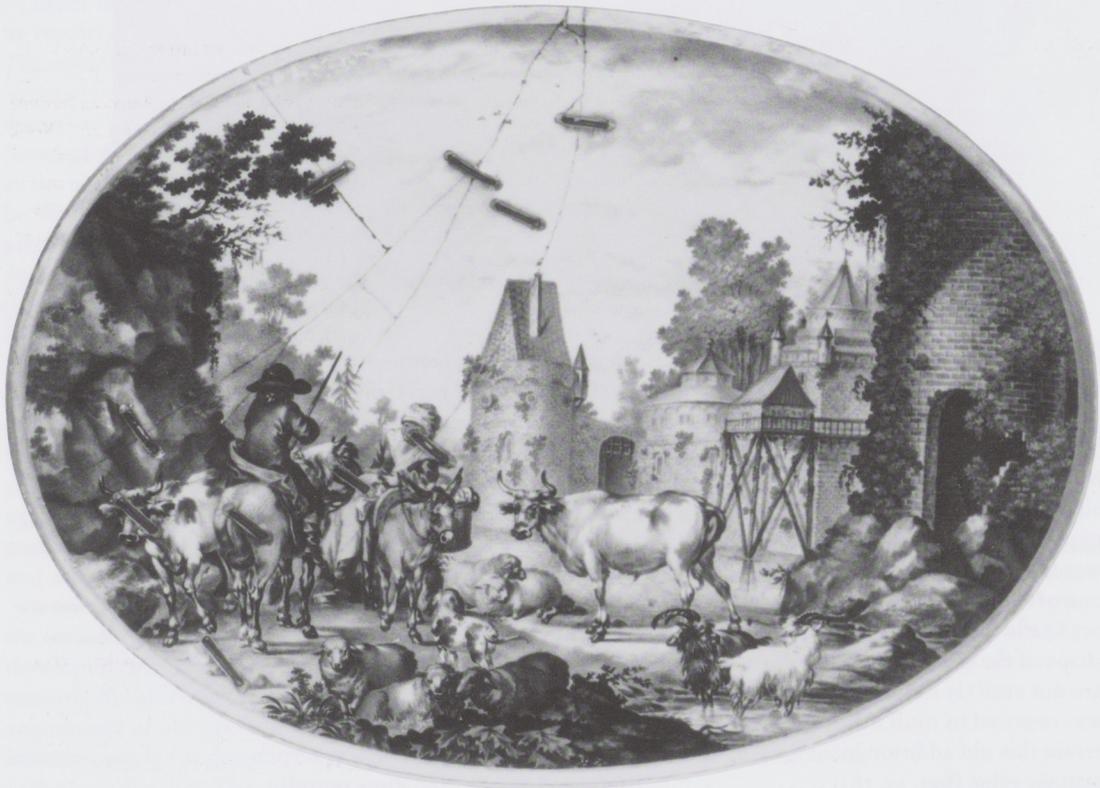
Garnier wrote of the unnecessary retouches carried out by some restorers and their endeavour to achieve an invisible result: 'When the piece leaves the restorer's hands it appears to be absolutely intact ... the practitioners of whom we speak do not scruple to cover the china as much as possible, even the intact areas ... In general we have abandoned this manner of restoration, at least in museums and most study collections, where damaged pieces are restored as well as possible without trying to mask the lines of the break and render them invisible; missing pieces are often filled in with plaster, tinted to temper the harshness of the white, without repainting the decoration.'⁶²

During the nineteenth century the dividing line between repairing and restoring ceramics was often rather vague and the two approaches existed

alongside each other – and sometimes even together. A good illustration of this is a Dutch china plaque that was repaired with rivets even though it is an ornamental object. Worse still, the rivets were inserted on both sides and some of the holes were drilled in very unfortunate places, including the face of the female figure (fig. 27).

Both forms of ceramic repair continued to exist until the nineteen-sixties and a clear distinction was made between repairing china and pottery for everyday use and restoring decorative and historic objects.⁶³ In his 1983 book, *Porcelain Repair and Restoration*, Nigel Williams of the British Museum consigns riveting, with a few qualifications, to the chapter 'History of Porcelain Repair': 'It may not be considered correct to place riveting in this historical section, since to class it as an old technique might be thought

Fig. 27
Plaque with a design of figures and cattle in a river landscape, Loosdrecht, last quarter of the 18th century. Porcelain, h. 18.8 cm. Rijksmuseum, Amsterdam (inv. no. BK-1977-15-A).



an insult to those who still use the method. Many modern restorers, however, consider it unnecessary, ugly, destructive and also corrosive since rivets may stain the porcelain. I dislike riveting but can understand, though I am not entirely convinced by the arguments put forward by these restorers who believe that domestic china repaired by resins and used every day is subject to weakening by both cold and hot water, detergents and grease, whereas rivets are not affected by any of these factors.⁶⁴ One of the first articles to suggest that rivets in museum pieces should be seen as part of the history of the object appeared at the end of the nineteen-eighties. The author proposed removing rivets with care, treating them against corrosion and replacing them in the object.⁶⁵

The Rijksmuseum's restoration workshop deals with old restorations of

ceramics and glass in different ways, depending on the condition and stability of the repair, its historical background and its appearance. In some cases, where its historical value weighs heaviest, the old restoration is retained and, if necessary, conserved. This is the case with the delftware earthenware jar with rivets (figs. 1, 2, 21) and the stoneware jug that belonged to the collector Jan Pieter Six (fig. 26). In these instances, the fact that the old restoration does not live up to our present-day ethical or aesthetic standards is accepted because it gives us a unique view of the technical and ethical aspects of earlier china restorations.

NOTES

* With thanks to Nel Klaversma (Amsterdam Historical Museum, Amsterdam), Alexandra van Gaba-van Dongen (Museum Boijmans Van Beuningen, Rotterdam), Harm Nijboer (Meertens Instituut, Amsterdam), Martijn Rus (University of Utrecht), Joseph Estié (Messrs Stodel, Amsterdam), Frits Scholten (Rijksmuseum, Amsterdam), Els Verhaak (Rijksmuseum, Amsterdam), Margot van Schinkel (Rijksmuseum, Amsterdam), Robert Parthesius, Hanneke Ramakers (Victoria & Albert Museum), Mark Norman (Ashmolean Museum of Art and Archaeology, Oxford).

- 1 *Bulletin van het Rijksmuseum* 50 (2002), no. 4, p. 529.
- 2 The art dealer J. Estié of Messrs Stodel of Amsterdam.
- 3 S. Bergeon Langle, 'Histoire de la restauration', *La restauration des œuvres d'Art. Éléments d'une histoire oubliée, XVIIIe-XIXe siècle*, *Techné* no. 27-28, 2008, pp. 7-10.
- 4 N. Williams, 'Ancient methods of repairing pottery and porcelain', *Early Advances in Conservation*, British Museum Occasional Papers 65, London, 1988, pp. 147-50;

J. Thornton, 'A brief history and review of the early practice and materials of gap-filling in the west', *Journal of the American Institute of Conservation*, 1998, 37-1, pp. 3-22; S. Koob, 'Obsolete materials found on ceramics', *Journal of the American Institute of Conservation*, 1998, 37-1, p. 49-67; R. Dooijes, O.P. Nieuwenhuysse, 'Ancient repairs: techniques and social meaning', *Konservieren oder restaurieren. Restaurierung griechischer Vasen von der Antike bis Heute*, Berlin, 17-19 November 2006, pp. 16-20; A. Schöne-Denkinger, 'Reparaturen, antik oder nicht antik? Beobachtungen an rotfigurigen Kratern der Berliner Antikensammlung und Anmerkungen zur Verwendung geflickter Gefäße in der Antike', *Konservieren oder restaurieren. Restaurierung griechischer Vasen von der Antike bis Heute*, Berlin, 17-19 November 2006, pp. 22-28; F. Matz, 'Jean-Jacques Lagrenée (1739-1821) et le vase grec', *Éléments d'une histoire oubliée, XVIIIe-XIXe siècle*, *Techné* no. 27-28 (2008), pp. 47-52; M.A. Bernard, 'Francesco Depoletti (1779-1854), artiste et restaurateur de vases antiques à Rome vers 1825-1854', *Éléments d'une histoire oubliée, XVIIIe-XIXe siècle*, *Techné* no. 27-28 (2008), pp. 79-84; R. Dooijes, 'Keeping alive the history of

- restoration: nineteenth century repairs on Greek ceramics from the National Museum of Antiquities in Leiden', *Glass and Ceramics Conservation* 2007, *Interim Meetings of the Icom-CC Working Group*, August 27-30, 2007, Nova Gorica, Slovenia, pp. 103-11; O. Omnès, 'Du raccommodeur au conservateur-restaurateur, une approche de l'histoire de la restauration de la céramique', *Techné* no. 15 (2002), pp. 109-12.
- 5 O. Nieuwenhuysse, 'The prehistory of pottery restoration', *Newsletter of the ICOM Committee for Conservation*, issue 17 (winter 2008-09), pp. 11-13; Williams 1988, op. cit. (note 4), pp. 147-48.
 - 6 C.S.M. Parsons, F.H. Curl, *China Mending and Restoration*, London 1963.
 - 7 P.H. Hasluck, *Traditional Glass Working Techniques*, Corning 1988, (originally published as *Glass Working by Heat and by Abrasion*, London 1899), p. 107.
 - 8 A. Barthelet, *The Works of Art and Bric-à-Brac Doctor*, Philadelphia 1889, pp. 47-53; O.E. Ris-Paquot, *L'art de restaurer soi-même les faïences, porcelaines, cristaux, etc.*, Paris 1872, pp. 22-26; Hasluck 1988, op. cit. (note 7), p. 106; Abbé Jaubert, P. Macquer, *Dictionnaire raisonné universel des arts et métiers*, IV, Paris 1773, pp. 1-2; J. Lamboursain, *Traité de la fabrication et de la réparation des faïences et objets d'art*, Paris 1897, p. 57.
 - 9 Hasluck 1988, op. cit. (note 7) p. 109.
 - 10 Hasluck 1988, op. cit. (note 7) p. 111.
 - 11 In their book on restoring china Parsons and Curl also devote considerable attention to the different ways of lacing and tying the brass wire to achieve a strong repair of complicated breaks of knobs and handles. The techniques they describe have acquired individual names, among them figure of eight ties and cat's whiskers lacing; in Parsons 1963, op. cit. (note 6) pp. 100-26.
 - 12 Parsons 1963, op. cit. (note 6) pp. 27-28.
 - 13 J. Howorth, *The Art of Repairing and Riveting Glass, China and Earthenware*, London 1900, p. 10.
 - 14 N. Williams, *Porcelain Repair and Restoration*, London 1983, p. 13.
 - 15 Parsons 1963, op. cit. (note 6) p. 20.
 - 16 Lamboursain 1897, op. cit. (note 8), p. 57.
 - 17 Williams 1983, op. cit. (note 14), p. 13.
 - 18 Howorth 1900, op. cit. (note 13) p. 13 and p. 19.
 - 19 Barthelet 1889, op. cit. (note 8), p. 48; Lamboursain 1897, op. cit. (note 8), p. 57; P. Thiaucourt, *L'art de restaurer les faïences, porcelaines, biscuits, terres-cuites, grès, émaux, laques, verreries, marbres, albâtres, etc.*, Paris 1868, p. 19.
 - 20 F. Lachaud, 'La première description des métiers de Paris : le Dictionarius de Jean de Garlande (vv. 1220-1230)', *Histoire urbaine* 2006/2, no. 16, p. 91-114; Massin, *Les cris de la ville, commerces ambulants et petits métiers de la rue*, Paris 1978, p. 114.
 - 21 L.J. Gallagher, *China in the Sixteenth Century: the Journals of Matthew Ricci. 1530-1610*, p. 15; D.F. Lach, E. J. van Kley, *Asia in the Making of Europe*, vol. III, A Century in Advance, Chicago 1993, p. 1602.
 - 22 M. Thévenot, T. Moette, *Relations de divers voyages curieux qui n'ont point été publiées*, part III, Paris 1666, p. 205.
 - 23 Parsons 1963, op. cit. (note 6), p. 20; Nigel Williams stressed the striking similarity between repair techniques described in seventeenth-century Chinese manuscripts (in G. Sayer, *T'ao-Lu or The Potteries of China*, London 1951) and those used in Europe in the nineteenth century, see Williams 1983, op. cit. (note 14) p. 11.
 - 24 J. Thornton 1998, op. cit. (note 4), p. 6; Koob 1998, op. cit. (note 4), pp. 5-22; S. Buys, V. Oakley, *The Conservation and Restoration of Ceramics*, Oxford 1993, pp. 64-65.
 - 25 D.P. Lanmon, 'Putting the pieces together: ceramics and glass repairing in the eighteenth and nineteenth centuries', *Delaware Antiques Show Catalogue*, 1969, p. 96.
 - 26 'Ende ic can binden steinen kruucken/Ende melksteilen van erden ghedrayd,' in Gerrit Komrij (ed.), *De Abele spelen*, The Hague 1989, pp. 186-89; S. Oostkamp, 'Middel-eeuwse beerputten', *Argl*, no. 4/5 (June 1995), p. 8.
 - 27 'Breken nap, maken nap tebroken!.../Lanternen maken, lanternen, lanternen, platelen cram ic,' in J.W. Muller, 'Brokstukken van middeleeuwse meerstemmige liederen', *Tijdschrift voor Nederlandsche taal en letterkunde te Leiden*, 1906, pp. 30-36.
 - 28 'Voor een gang van Breekje daar niet wat? te Leyden. Hier woont het vrouwtje die om aan de kost te raken, alle gebroken kruiken weet weder heel te maken.' J. Sweerts, *Koddige en ernstige opschriften op luiffens, wagens, glazen etc.*, IV, 1782, p. 14.
 - 29 'Breekje wat compareerde met haar mandje vol ingrediënten en machines ter lappinge van de schotel, waar zij het ene stuk reeds had bestreken met gemengde ongebluste kalk en wit van een versch hoender ei.' H. van Eyl, 'Amsterdamsche *Argus*', III, Amsterdam 1721, pp. 157-58.
 - 30 The following recipe for glue was kindly provided by Alexandra Gaba-van Dongen, Curator of Applied Art, Museum Boijmans Van Beuningen, Rotterdam. 'How to mend

- Porcelain or Pottery that is broken. Take the white of an egg and add to it quicklime the size of a nut, grind them together until it is as thin as water, it can also be beaten till thin; then take your broken porcelain and glue the pieces together with it; but do this carefully so as not to use too much or too little of this glue, otherwise it looks unsightly, or it does not hold fast enough, and if this be possible secure the glued piece with a wire, leave it to dry thus for a day, then it will be as strong as if it had never been broken. If you do this with coarse pottery, use rather more quicklime and make the glue a little thicker, then you will be able to cook in it again.' ('Porcelijn of Aarde werk dat gebroken is, hoe men dat wederom maken zal. Neem het wit van een Ey en doet 'er de groote van een Noot ongebluste kalk by, wryft dit daar mede dat het zo fyn als water is, ook kan men het fyn kloppen; neemt dan uw gebroken porcelijn en lynt daar de stukken mede aan malkan-deren; maar het moet voorzigtig geschieden dat men niet te veel of te weinig van die lym sel gebruikt, anders staat het lelyk, of het hout niet vast genoeg, en kan het zijn zo bind men het gelymde stukje met een draadje vast, laat het dan zo een dag staan droogen, dan zal het zo sterk houden of het nooit gebroken is geweest. Doet men dit aan grof aardewerk, zo neemt men wat meer ongebluste kalk, en men maakt de lym wat dikker, dan kan men 'er wederom in koken.') See *De Volmaakte Hollandse Keuken-meid*, Amsterdam 1759, p. 104.
- 31 Abbé Jaubert 1773, op. cit. (note 8), pp. 1-2. In 1841 the difficult start of the occupation of 'racccommodeur de faiences' was illustrated with descriptions of their fights with the china manufacturers, in which the combatants trampled pieces of broken china underfoot or threw them at one another, in *Les français peints par eux-mêmes: encyclopédie morale du dix-neuvième siècle*, Paris 1841, pp. 265-67.
- 32 E. Fournier, *Le Vieux-Neuf, histoire ancienne des inventions et découvertes modernes*, Paris 1877, pp. 329-30.
- 33 C.G. Leland, *A Manual of Mending and Repairing Antiques*, London 1896, p. 18.
- 34 'It seems however, that the profession of "China and Earthenware Mender and Rivetter" was neither highly lucrative nor difficult to enter. *The Complete Book of Trades* published in London in 1837 reported that the apprenticeship fee for this trade ranged from £5 to £20 and that only £10 to £20 was needed to become established in the business. In comparison with other trades, both fee and capital were low. For example the apprentice fee of a "Bacon Dealer and Smoker" or a basket or bellows-maker was about the same; the apprentice fee for a cabinetmaker and upholsterer was quoted as £30 to £70, with £150 to £500 capital necessary to set up an independent business.' See Lanmon 1969, op. cit. (note 25), p. 97.
- 35 The character of the china mender appears in stories in other European countries too; one features for instance in the libretto of the nineteenth-century Czech opera *De Dratenik* by F. Skroup.
- 36 'Le racccommodeur de faience', a 1929 song by A. Descoq and R. Soler, sung by Berthe Sylva.
- 37 Barthelet 1889, op. cit. (note 8), p. 44.
- 38 J.Thurnbull, 'China Repair in the 18th Century', *Scottish Pottery Society* no. 14 (1990-92), pp. 53-54.
- 39 According to the antique dealer J. Estié of Messrs Stodel, Amsterdam.
- 40 The only possible connection with one of the names on the label is a certain Patrick Bernard, china mender by trade, who lived in Liverpool around 1850 and is listed in the English census of 1881, *Census Returns of England and Wales, 1881*, England 1881.
- 41 Howorth 1900, op. cit. (note 13), pp. 5-6.
- 42 Lanmon 1969, op. cit. (note 25) pp. 96-97; J. Thornton 1998, op. cit. (note 4), p. 4.
- 43 P. Smeele and A. Van der Meulen, 'Krammen – geen huisvlijt maar vakwerk', *Westerheem* 55, no. 2 (April 2006), pp. 103-04.
- 44 '... one Bakker, residing in Achterstraat, Haarlem, by trade a dealer in medicines and china-riveter ... is average size ... has a lively appearance and speaks the French language very fast He is usually dressed in a brown summer-weight frock coat ...; he carries the tools of his trade in two small wooden chests, and he goes by the name of Bram.' ('... zekere Bakker, wonende in de Achterstraat, te Haarlem, van beroep koopman in medicijnen en porceleinkrammer ..., is middelmatig van grootte ... heeft een levendige voorkomen en spreekt zeer vlug de Fransche taal.... Hij is meestal gekleed in een bruin zomerstof rokje ...; wordende de gereedschappen van zijn beroep door hem gedragen in twee houten kistjes, en zijnde hij in de wandeling bekend onder de naam van Bram.') in: *Algemeen politiebld van het Koninkrijk der Nederlanden*, vi, The Hague 1857, pp. 49-50.
- 45 In these records the Dutch word is spelt in various different ways: porselein, porcelein, porseleijn, porcelijn; J.B. Grasbergen, *Beroepsnamenboek: beroepsaanduidingen voor*

- 1900 in Nederland en België, Amsterdam 2004, 'krammer' and 'kramster' p. 262, 'porseleinkrammer' on p. 367; Smeele 2006, op. cit. (note 41), p. 103.
- 46 A.C. Kersbergen, 'De bevolking van Rotterdam omstreeks 1830', *Rotterdamsch Jaarboekje*, Rotterdam 1935, p. 127.
- 47 M. Groothedde, H.E. Henkes, A. den Braven, 'Met zuinigheid en vlijt, gerepareerd serviesgoed uit een Zutphense beerkuil', *Westerheem* 54, June 2005, pp. 121-23; C. Lugtenburg, 'Huisvlijt of aardewerkklappers', *Westerheem* 54, October 2005, pp. 253-54; Smeele 2006, op. cit. (note 41), pp. 103-04; G. Groeneweg, 'Reactie op "Met zuinigheid en vlijt"' in *Westerheem* 55, no. 2 (April 2006), pp. 101-02; G. Groeneweg, 'Reactie op "Met zuinigheid en vlijt" slot', *Westerheem* 55, no. 6 (December 2007), pp. 347-49; J.R.A.M. Thijsen, *Een burgerfamilie in de Smidstraat 1760-1840*, Nijmegen 1984, p. 20.
- 48 Riveted objects are listed in three inventories dating from around 1800. These inventories, incidentally, list more glued than riveted objects, see the Meertens Instituut inventory database (information kindly supplied by H. Nijboer of the Meertens Instituut, Amsterdam).
- 49 '...gebroken porcelein herstellen op eene wijzen die tot hier toe onbekend is geweest.'
- 50 A. Van der Brandt, reactie op 'Met zuinigheid en vlijt', *Westerheem* 55, no. 4 (augustus 2006), p. 206; E. Fournier, *Histoire du Pont Neuf*, Paris 1862, p. 578.
- 51 '...grote orologie zonder weerga'. Van der Brandt 2006, op. cit. (note 49), p. 207; D. Kranen, *Advertentien van alternatieve genezers in de oprechte Haerlemse Courant van 1656 t/m 1732*, 2007, p. 147; *Mercur de France, dédié au Roi*, October 1724, reprints 1721-91, Geneva 1968-74, p.171; *De Navorscher*, Amsterdam 1857, pp. 232-33; J.C. Davillier, *Histoire des faïences et porcelaines de Moustiers et autres*, Paris 1863, p. 21; *Amsterdam: avec privilège de nos seigneurs, les Etats de Hollande et de West-Frise*, 20 June 1738, Amsterdam 1738.
- 52 W.J. Pountney, *Old Bristol Potteries*, Bristol 1920, pp. 116-17; H. Owen, *Two Centuries of Ceramic Art in Bristol*, London 1873, p. 239.
- 53 A.H. Boon Mesh, H.C. Hall, E. van Voorthuysen, *Tijdschrift ter bevordering van nijverheid*, second series, Haarlem 1855, p. 23; Lamboursain 1897, op. cit. (note 8), p. 67; Leland 1896, op. cit. (note 33), p. 17; Lanmon 1969, op. cit. (note 25), p. 99; Sayer 1951, op. cit. (note 23), pp. 93-94.
- 54 '...fyn porceleyn, dat gebrooken is, in 't vuur te soldeeren, het geen zo goed als nieuw, en aenstonds bruykbaer zal zijn.' Van der Brandt 2006, op. cit. (note 49), p. 206.
- 55 P. Thiaucourt, *Essai sur l'art de restaurer les faïences, porcelaines, terres-cuites, biscuits, verreries, émaux, laques, marbres, albâtres, plâtres, etc.*, Paris 1865; Thiaucourt 1868, op. cit. (note 19).
- 56 Baron J.H. Davillier, who also wrote books on china, see note 49.
- 57 Barthelet 1889, op. cit. (note 8); Lamboursain 1897, op. cit. (note 8).
- 58 E. Garnier, *Restauration des vieilles faïences*, *Magasin pittoresque*, 2nd series, part 6, Paris 1888, pp. 335-338.
- 59 Ris-Paquot 1872, op. cit. (note 8), pp. 12-13; Ris-Paquot also wrote several books about the history and collecting of china.
- 60 Thiaucourt 1868, op. cit. (note 19), p. 19.
- 61 Thiaucourt 1868, op. cit. (note 19), p. 5; Omnes 2002, op. cit. (note 4), p. 111; Lamboursain 1897, op. cit. (note 8), p. 53; Ris-Paquot 1872, op. cit. (note 8), pp. 8, 58; Garnier 1888, op. cit. (note 55), p. 337.
- 62 'Quand la pièce sort des mains du restaurateur elle paraît absolument intacte ... les praticiens dont nous parlons ne se gênent pour couvrir le plus possible la faïence, même sur les parties intactes ... Aussi a-t-on généralement abandonné, au moins dans les musées et dans la plupart des collections d'études, ce genre de restauration; quand une pièce est endommagée, on la restaure aussi bien que possible sans chercher à masquer les traces de cassure et sans vouloir la faire passer pour intacte; souvent même on se borne à refaire les morceaux qui manquent, en plâtre légèrement teinté, afin d'ôter la trop grande crudité du blanc, et sans refaire le décor.' Garnier 1888, op. cit. (note 55), p. 337.
- 63 Parsons 1963, op. cit. (note 6), p. 20: 'Of china and pottery coming for repair, there are two categories – that which is in daily use and that which is purely ornamental or historical. ... China in daily use comes in for the severest tests and handling, riveting has long been the traditional method of mending it ... Restoring is the popular name given to the repair of ornamental china. It is what its name implies: the restoring of china in appearance and form to its perfection.'
- 64 Williams 1983, op. cit. (note 14), p.13.
- 65 N. Lacoudre, M. Dubus, 'Nettoyage et dégagement des agrafes au Musée National de céramique de Sèvres', *Studies in Conservation* 33 (1988), pp. 23-28.

