

8.06 Ironmongery

- a. general ironmongery
- b. window & door fittings
- c. locks
- d. safes

a. general ironmongery

Ironmongery was overwhelmingly imported from Britain during the nineteenth century, with the exception of some varieties of nails, and some simpler blacksmith's items like strap hinges. It is impossible to deal with the full range of such imported goods, though some have been touched on already, and others, like grates and ventilators, will be considered in another place. So scarce was iron in the earliest years that its use was avoided wherever possible, and James Tucker described door and window panels hung on wooden pins.¹ Elsewhere solid window panels were hung from the top with strips of greenhide.² Later, however, many items were custom made by local smiths, rather than imported from British manufacturers.

A common element which might be made locally was the camber bar, a flat bar with a slight upward curve, used to support a flat brick arch over a door, window, or especially a fireplace opening. A specification of 1854 read 'Turn 14" [350 mm] arches over all external openings at the rear upon wrought iron camber bars 2½" x 5/8" [63 x 16 mm] with a bearing of 9" [230 mm] at either end.'³ The same specification calls for each king post in the roof to be connected with the tie beam below using 'wrought iron strap ties 2½ x 5/8 secured with ... and dog nails', and a similar strap tie at the head and foot of principals is to be fixed with nut headed screw bolts.⁴

Another iron building component was a form of stair tread, designed to resist both wear and fire. One of the entrants to the Brisbane Treasury competition in 1883 announced that he proposed to build all the staircases on 'Hawksley's patent system'.⁵ These 'patent treads' are mentioned in Gwilt's *Encyclopaedia* as being used in railway stations, warehouses and other heavily trafficked buildings, but they are not really explained.⁶ The probability

¹ Tucker, *Ralph Rashleigh*, p 113.

² Judith Wright, *The Generations of Men* (Melbourne 1959), p 20.

³ Russell, Watts & Pritchard, 'Specification of the works to be executed in the erection of Two of a row of eight Dwelling houses and offices at North Elwood near St Kilda for Joseph Docker Esqr ... December 13th 1854' (Melbourne 1854), p 5.

⁴ Russell, Watts & Pritchard, 'Specification of Dwelling houses at North Elwood', p 9.

⁵ 'New Public Offices: Brisbane: Report Accompanying Plans: Bearing Motto', 30 November 1883 (held by Historic Buildings Branch, Brisbane), p 6.

⁶ Joseph Gwilt [ed Wyatt Papworth], *An Encyclopædia of Architecture* (London 1899 [1842]), §2180 p 668.

is that the metal framed treads used in the major staircases of the Treasury building as erected are in fact of the Hawksley type. So were those of the now demolished Australian Property and Investment Co [APA] building in Melbourne, of 1889.⁷ Also in 1889 the Yencken Building in Melbourne had a main staircase with treads of bluestone and risers consisting of glass lights framed in cast iron, doubtless carried on an iron structural frame.⁸ By 1904 Hawksley treads were apparently manufactured by the St Pancras Ironwork Company, of London.⁹

In 1853-4 'cast iron fluted plates' $\frac{3}{4}$ inch [19 mm] thick were imported from England, probably from the Horsley Company, to cover the floor of a number of heavily trafficked areas in the Sydney Mint.¹⁰ Cast iron floor tiles became were to become common in industrial buildings, such as the malt house of Haussen and Catchlove's Brewery, Adelaide, of 1868.¹¹ By the mid-twentieth century the Cheka Industrial Tile Co made 'Cheka' steel tiles for laying into a screed on a concrete floor, protecting it from impact and erosion,¹² and soon after Ogden Industries were making 'Stelcon' industrial flooring, of a similar nature.¹³ In a linked area of activity, Gatic (Australia) was the most prominent maker of manhole covers and gratings.¹⁴

Cast iron chimneypieces are found only occasionally. One is in the house at 399 Coventry Street, South Melbourne, made by Robertson & Lister of Glasgow, and imported in 1853. It consists of a small fireplace, grate and mantelshelf made up from a number of cast iron sections, and doubtless all part of the imported package. A much larger cast iron chimneypiece is found in the cellar kitchen aof 'Eildon', 51 Grey St, St Kilda. The mantelpiece is 2.4 m wide, the lintel below 1.8 m, and the side pilasters.¹⁵

b. window & door fittings

An elegant form of casement window stay appears at 'Coryule', Drysdale, Victoria, of 1849-50, and seems to have been made locally, for there is no contrary indication in the drawings of the architect, Charles Laing. At the base of the sash is a quadrant consisting of two flat bars, one on top of the other. The lower bar marks the limit to which the sash can swing, but the upper one is slightly shorter and is sprung so as to pop up on a low angle when the pressure of the sash is removed from above. When the sash is as far open

⁷ *Australasian Builder and Contractor's News*, 20 April 1889, p 379.

⁸ Hyndman & Bates, 'Warehouse for E L Yencken', p 20.

⁹ J T Rea, *How to Estimate: being the Analysis of Builders' Prices* (London 1904 [1902]), p i.

¹⁰ Archives Office of New South Wales 2/763, p 4, cited in Fiona Starr et al, *The Royal Mint, Sydney (1853-1926): a Survey of the Documents Associated with the Mint* (Sydney 2001), p 17.

¹¹ E & R Jensen, *Colonial Architecture in South Australia* (Adelaide 1980), p 380, citing *South Australian Register*, 20 June 1868.

¹² *Ramsay's Catalogue* [1949], § 28/7.

¹³ *Ramsay's Catalogue* [1949], § 28/7.

¹⁴ F W Ware & W L Richardson [eds], *Ramsay's Architectural and Engineering Catalogue* (Melbourne 1949), § 28/14; *Ramsay's Catalogue* [1954], § 28/24.

¹⁵ Reported by John Matthews, 2007.

as the lower bar permits, it has passed the end of the upper bar, which is released and rises up to prevent the sash from swinging back again, in the manner of a ratchet. However a little pressure on the lower bar will allow the sash to pass over it again and to be closed.

By about the 1870s various brands of stays for transom lights had appeared, as has been discussed above. We do not know the nature of the window fasteners being promoted at the beginning of the twentieth century, though there was active competition between them. Jame Cartland & Sons' 'Grappler' sash fastener was being advertised locally in 1906.¹⁶ In 1901 Lascelles & Co managed to exhibit their 'Patent Safety Window Attachment' at a meeting of the Royal Victorian Institute of Architects. H C Crouch, the Borough Engineer of Kew, had his own patent on 'Improvements in Window Fasteners' and possibly demanded equal treatment, because members were now invited to the Institute's rooms to inspect his invention.¹⁷ By the 1950s Arens window controls, an English product, were on sale in Australia. They were typically operated by turning a handle distant from the window and in a location convenient for the user. The turning motion was transmitted to 'a tightly compressed galvanised inner spring coiled round a tinned steel cable' which moved within a square or round casing and connected to the operating mechanism of the window.¹⁸

Some larger hinges for industrial or farm purposes were made locally, but most were imported. The traditional pintle, a pin projecting vertically the top and/or bottom of the door stile, and moving in a socket in the the door head or lintel, is rarely seen in Australia. However a 'Watford Villa', Avoca, a German prefabricated house of about 1854, has unusual hinges working on the pintle principle, with domed ends.¹⁹ There were two traditional ways of making conventional hinges, the wrought iron and the pressed rivetted, both of which were made early in the century by (for example) James Thornton.²⁰ In the welded wrought iron hinge a piece of wrought iron would be bent over at the knuckle and welded together to create each hinge flap. In the pressed rivetted hinge the knuckle was formed by rivetting rather than welding. The newer development from 1840 was the patent wrought iron hinge, which was first developed in America, though it is possible that it was independently reinvented in Britain. The iron was cut with the pieces to form the knuckle projecting as tongues, and these were then forced into appropriately shaped dies to bend them over. Thus the hinge relied neither upon welding or rivetting, but upon the strength of the bent-over iron.²¹

¹⁶ *The Australasian Handbook* (London 1906), advertisements, p xvii.

¹⁷ Royal Victorian Institute of Architects, Records, Box 8, scrapbook, MS 9454, Manuscripts Collection, State Library of Victoria.

¹⁸ *Ramsay's Catalogue* [1954], § 33/.2.

¹⁹ Used for doors and casement window sashes: inspected February 2007.

²⁰ Jas. Thornton & Son, *Jas. Thornton & Son ... Manufacturers of Wrought Iron Hinges, &c* [single sheet flier, no date [?c1810]].

²¹ F E Martineau, 'Patent Wrought-Iron Hinges', in Samuel Timmins [ed], *The Resources, Products and Industrial History of the Birmingham and Midland Hardware District* (London 1866), pp 610-611.

T & C Clark appear to have been the major, if not the only manufacturers under this patent. A small Singapore-made house of the early 1850s²² had casement sashes carried on two inch [50 mm] butt hinges inscribed in script - and, oddly enough, on the face in contact with the timber -

T & C Clark & C^o Patent
N^o 200 2 in

It is possible either that the hinges came from Singapore with the house, or that they were bought in Melbourne. A hinge on a small stone building at Barkers Creek, Victoria, probably about 1870 in date, is:

CLARK & CO BEST PATENT
N^o 333

In 1879 they showed their products at the Sydney Exhibition,²³ and in 1887 at the Adelaide Jubilee Exhibition where, oddly, they included a wide range of hollowware &c, but there is no mention of hinges.²⁴ In 1890 Clark's butt hinges were specified for 'Benvenuta', an expensive Melbourne house.²⁵ Clark hinges have also been found in the United States,²⁶ as have one marked 'M.T.M.' and a number of 'Baldwin' or 'Baldwin / Patent'.²⁷ Baldwin, Son, & Co was another London manufacturer of hinges, as well as hollow ware, which exhibited at Sydney.²⁸ James Cartland & Sons' products, including their polished brass hinges with steel ballbearings, were advertised in Australia in 1906.²⁹

Parliament, H- and H-L hinges require no special consideration, but other special hinges in Britain included brass rising skew butts and (perhaps the same?) Redmund's patent, with rising butts (that is, the hinge divisions are not horizontal but slightly sloping, so that the door rises slightly as it opens and, and when released tends to close again). There were also spring hinges, Collinge's patent spherical hinge; and Smith's, Redmund's and Gerish's two-way hinges for swing doors.³⁰ Smith's are most commonly found in Australia, but the York Hotel, Kalgoorlie, of 1901, has springs branded:³¹

[upward arc:
JAMES HILL & C^o
]

²² The cottage was one of four which were put up as outbuildings behind a row of prefabricated iron houses in Brunswick Road, Brunswick, and the sash is now held by Andrew Muir: inspected 2001.

²³ Sydney Exhibition 1879, *Catalogue of British Section*, p 109.

²⁴ *Australasian Ironmonger*, 1 October 1887, p 264.

²⁵ W S Law, 'Specifications of Residence Drummond St. Carlton for Mrs. L. Abrahams' (Melbourne 1890), p 30.

²⁶ Donald Streeter, 'Early American Wrought Iron Hardware: H and HL Hinges, together with Mention of Dovetail and Cast Iron Butt Hinges', *APT Bulletin*, V, 1 (1979), p 44.

²⁷ Streeter, 'American Wrought Iron Hardware', p 46.

²⁸ Sydney Exhibition 1879, *British Section*, p 107.

²⁹ *Australasian Handboo*, advertisements, p xvii.

³⁰ *Kelly's Practical Builder's Price Book*, &c (Thomas Kelly, London 1853), pp 65-72; John Gwilt [revised Wyatt Papworth], *An Encyclopaedia of Architecture* (London 1899 [1842]), p 721, §§ 2258b - 2258d.

³¹ Inspected 2008.

100A
QUEEN VICTORIA ST
LONDON

Items such as sprung sash balances have already been dealt with in the context of joinery, and any number of other components could be arbitrarily named, but it is worth mentioning an improvement on the standard Victorian sash fastener which became available in 1887 - Crosse's Patent Sash Fastener, manufactured by Thomas Sanders of Birmingham, and shown at the Adelaide Jubilee Exhibition. It swung across in the same way as the ordinary fastener but locked automatically. Visually it was all metal, rather than having the typical white porcelain knob, and it had sort of metal spur projecting upwards from the mechanism.³² The 'Whitco' window fittings and 'Whitfast' fasteners were especially prominent after World War II. The Whitco fitting was attached to the top and bottom of a casement sash, and took the place of both hinges and stays. An equivalent fitting was supplied for hopper sashes. These were manufactured by the company in Brisbane, which had agencies in all the Australian states, as well as New Zealand and South Africa.³³ By 1954 it was stated that the fittings were manufactured in Australia for sterling currency areas, under licence from the Vincent Whitney Co of California.³⁴ It is unclear whether the Whitfast window fittings of New Zealand, referred to above, are attributable to the same source. A rival casement stay was the Agco, made in Australia by A F Agnew Pty Ltd.³⁵

Door furniture, like so much else, was predominantly British in origin. However the German house 'Watford Villa', already mentioned, has very distinctive lever handles of a material resembling black bakelite in appearance,³⁶ and the same type is apparently found in the 'Chalet', Sydney, another German house of the period.³⁷ Amongst the more conventional British products, Whitehouse's door furniture as listed in Mayes's price book of 1862, included knobs, finger plates and other items which came in:

china, white or black
ivory tint
gold scroll
gilt and flowers
plain gold lined
ebony
brass
imitation oak
fancy crystal glass
ditto amber cut³⁸

³² *Australasian Ironmonger*, 1 October 1887, p 262.

³³ F Wentworth & S L Richardson [eds], *Ramsay's Architectural and Engineering Catalogue* (Melbourne 1949), § 33/6.

³⁴ *Ramsay's Catalogue* [1954], § 33.8.

³⁵ *Ramsay's Catalogue* [1954], § 33.10.

³⁶ Inspected February 2007.

³⁷ Information from Lyndal Jones, February 2007.

³⁸ *Mayes Price-Book* [1862], p 110.

The top of the range was the furniture of the E S & A Bank head office in Melbourne, of 1883-7, which came from Pugin's favourite suppliers, Hardman & Co of Birmingham.³⁹

At the National Mutual Life Association building of 1890-3 'Hills Patent Flush Bolts'; were specified for the swing doors, and 'Hills Patent Bolts' for the office windows⁴⁰ - presumably made by the same Hill as the transom light fasteners in the specification. The *espagnolette* or *espagnolet* is a closing device dating back at least to the seventeenth century, consisting of a single rod which rotates on its axis to lock in two catches, one at the top and one at the bottom of the door.⁴¹ It was well-known in France before it became popular in Britain.⁴² In 1815 espagnolets were being sold by the London ironmonger W Farlar for use on the then fashionable French windows; 'By means of this fastning [*sic*], the possibility of the rain driving in is completely prevented; and is not only useful but ornamental when affixed to those windows'.⁴³ Gwilt mentions the espagnolette as being French in origin, but 'much improved in its manufacture here'⁴⁴ and they were still being advertised in London in about 1900.⁴⁵ Espagnolets are rarely found in Australia, but they are used on casement windows throughout 'Watford Villa', the prefabricated German house of about 1854,⁴⁶ and were presumably part of the package brought from Germany.

The *espagnolet* came to be generally replaced by the *crémone*, in which the rotation of a central handle, instead of operating a single rod which turned catches at the top and bottom, operated two rods which extended as bolts at top and bottom, pulling one of them up and one of them down simultaneously. The mechanism is described as 'bascule', 'swipe' or 'seesaw'.⁴⁷ They were exhibited in 1851 by Jaquemart Brothers of Charleville, France, as 'cremons [*sic*] a new shutting piece for windows'.⁴⁸ Chabat describes them as 'remplaçant aujourd'hui l'*espagnolette*',⁴⁹ and they came to be widely used on the Continent for securing ordinary domestic doors, appearing as standard

³⁹ Robyn Riddett, 'A Building "Worthy of the City"', in U M de Jong [ed], *W W Wardell: the Architect and his Era* (Geelong [Victoria] 2000), p 114.

⁴⁰ Wright, Reed & Beaver, 'Specification for National Mutual Life', pp 20, 25.

⁴¹ Papworth, 'Espagnolette Bolt'; also Carlos Moreno, *De las Viejas Tapias y Ladrillos 4* (Buenos Aires 1995), p 202. Confusingly, as reported by Papworth, espagnolettes were shown at the Paris Exposition of 1855 under the name *crémones*.

⁴² Jean-Baptiste Rondelet, *Traité Théorique et Pratique de l'Art de Bâtir* (6 vols, Paris 1812-17 [1812, 1814, 1814, nd, 1817, nd]), V, pp 201-2 & pl C.

⁴³ W Farlar, 'Farlar's New Steam Kitchen Range, Improved Oven, and Self-Oiling Smoke Jack; together with an Improved Warm Bath, &c' [sheets extracted from a publication] (London 1815), p 4.

⁴⁴ Gwilt, *Encyclopaedia of Architecture*, [1899] p 721, § 2259.

⁴⁵ Pryke & Palmer, *Illustrated Catalogue* [c 1900], p 364.

⁴⁶ Inspected February 2007. There are two versions, one with a decorative openwork handle and one with a simpler solid one.

⁴⁷ Wyatt Papworth [ed], *The Dictionary of Architecture* (6 vols, London 1853-1892), sv 'Espagnolette Bolt'.

⁴⁸ Great Exhibition, 1851, *Catalogue*, III, pp 1189-1190.

⁴⁹ Chabat, *Dictionnaire des Termes*, p 380, with illustration.

items in a French catalogue of the 1890s.⁵⁰ A text of the time illustrates those made by Charles Dény.⁵¹ An improved type was invented in France by one Maury, who called them *serrures-crémones*, which shared the characteristics of a *crémone* and a lock. This version had the rod or bolt within a tube, so that its movement was not visible.⁵²

In Britain the name *crémone* was sometimes anglicised to 'cremorne',⁵³ and in about 1900 Pryke & Palmer called them simply 'French casement bolts'.⁵⁴ Not only is the spelling of both items widely varied, but even worse, the leading steel window makers, Henry Hope & Sons of Birmingham, lamentably called their *cremones* 'espagnolette bolts'.⁵⁵ *Cremones* are not uncommon in Australia in the late nineteenth century. At 'Cloyne', 12 Chapel Street, St Kilda, of about 1887, is one which can be identified as produced by Robert Adams of London.⁵⁶

At the National Agricultural Show in Melbourne in 1887 the ironmongers Cozens & Harvey exhibited what is clearly the same device, for which they held the patent: an easily turned handle at a convenient height would simultaneously withdraw the bolts at the bottom and top of the door. According to Cozens & Harvey, these were now specified by the [Victorian] government for use in all public buildings.⁵⁷ An even simpler version, the 'Scapex' automatic panic bolt, was on sale in Australia in 1917, and had a horizontal bar which, when pressed, would release the bolts at top and bottom,⁵⁸ and this is still in use for emergency exits today.

Remote control mechanisms for opening skylight, awning and other windows beyond normal reach, especially in banks of two or more simultaneously, are largely unexplored, but seem to have been developed first for greenhouse and factory applications and later to have come into use more generally. The fundamental was the same as that of the transom light opener, but by 1909 Henry Hope and Sons of Birmingham were advertising examples which might go through at two cranks to change their direction before reaching a

⁵⁰ Comptoire de l'Industrie, L Laurent, Carrée & Binoche (successors to L Laurent & Carrée), *Extrait du Tarif Articles du Bâtiment (No 14)*, bound with Comptoire de l'Industrie, L Laurent & Carrée, *Tarif des Fournitures Générales pour l'Industrie* (Reims, no date [c 1890]). Although this price list is undated it has an item to be completed, 'Le ... 189...'

⁵¹ L A Barré, *Petite Encyclopédie Pratique du Batiment: Serrurie et Menuiserie en Fer* (Paris 1898), p 19.

⁵² F Monmory, 'Serrure', in E-O Lami, *Dictionnaire Encyclopédique et Biographique de l'Industrie et des Arts Industriels* (8 vols, Paris 1881-1891), pp 180-81.

⁵³ Henry Hope & Sons Ltd, *Henry Hope & Sons Ltd* (Birmingham 1912), p 62.

⁵⁴ Pryke & Palmer, *Illustrated Catalogue* [c 1900], p 364.

⁵⁵ H. Hope & Sons Ltd., *Casement & Steel Window Catalogue* (H Hope & Sons, Birmingham 1909), p 59.

⁵⁶ J E Sears [ed], *The Contractors' Compendium and Complete Catalogue* (8th ed, Compendium Publishing, London, 1894), p 199 (left side): identified by Renee Muratore 2009.

⁵⁷ *Australasian Builder & Contractor's News*, 7 September 1887, p 268.

⁵⁸ Colton, Palmer & Preston, *You are Secure with Us for Builders Hardware* (Adelaide 1917), p 106.!!

monitor window,⁵⁹ move three awning windows at once,⁶⁰ or simultaneualy move a column of four pivotrng sashes in the manner of louvres.⁶¹

The main types of door springs were Cartland's⁶² and Smith's,⁶³ both Patent Double-Action, from the 1860s on, and Climax and Whitehouse's, somewhat later.⁶⁴ The Climax brand appears at 'Mount Rothwell' homestead of 1872, as:

[crest]
[upward arc:
CLIMAX
]
TRADE [very small 'CL' monogram] MARK
PATENT

At Government House, Melbourne, of 1872-6, most of the springs are Smith's, but at the south entry of the ballroom they are:

WHITEHOUSE'S PATENT
EXTRA STRONG.

At 'Bon Accord', Dawson Street, Sale,⁶⁵ probably of the 1870s, they are simply:

WHITEHOUSE'S
PATENT

At 'Rupertswood', Victoria, of 1875, there are springs enigmatically branded

W & SON
IMPROVED
N1350

which seem to be original to the house, and may also be those of Whitehouse. The National Mutual Life headquarters in Melbourne, of 1890-3, was specified to have thirty "Norton" check door springs, No 1'.⁶⁶ In 1954 William Newman & Sons of Melbourne were marketing the 'Monarch', 'Britannic', No. 600' and 'Avon' floor springs, of which only the last appears to have been made in Australia.⁶⁷

⁵⁹ Hope, *Casement & Steel Window Catalogue*, p 64.

⁶⁰ Hope, *Casement & Steel Window Catalogue*, p 63.

⁶¹ Hope, *Casement & Steel Window Catalogue*, p 101.

⁶² C B Mayes, *The Australian Builders' Price-Book* (Melbourne 1862), p 110. Cartlands still advertised in *The Australasian Handbook* (London 1906), pp xvi-xvii.

⁶³ Laxton, *Builder's Price Book for 1863*, advertisements, no page. As late as 1892 'Smith's patent double action spring hinges and pivots' were specified at 'Boisdale', Victoria: Purchas, 'Estimate for Boisdale', p 12.

⁶⁴ Charles Mayes, *The Australian Builders' Price-Book* (4th ed, Melbourne 1883), advertisements p xvii. For a diagram of the inner workings of a Climax, see G L Sutcliffe [ed], *The Modern Carpenter Joiner and Cabinet-Maker* (8 vols, London 1903), II, p 341.

⁶⁵ Inspected 2005.

⁶⁶ Wright, Reed & Beaver, 'Specification for National Mutual Life', p 21.

⁶⁷ Ramsay's *Catalogue* [1954], § 33/7.

The pneumatic door closer, located at the top of the door, is a later development, but by 1880 Frederick Braby of London was selling the patent 'Lancaster' pneumatic closer. A closer at 'Wiridgil', Camperdown, which may be original to the renovations of 1902, is labelled

THE NORTON DOOR CLOSER AND SPRING

In 1917 the Russwin Patent Door Check and Spring (presumably by Russell & Erwin of the USA), which has rather the appearance of a pneumatic closer, was available in Adelaide.⁶⁸ By about 1930 Chandler's of Melbourne were selling the Briton and the Yale.⁶⁹ By the 1950s the 'Briton' patent liquid door check and spring was being manufactured locally by William Newman & Sons at their factory in Footscray, Melbourne.⁷⁰ In about 1900 Frederick Ogle of Melbourne was advertising Irving & Hanlon's 'Great "Grippe" Door Fastener', which was the type in which a lever pressed down with the foot would engage with the floor and prevent the door from closing. It had apparently been used already in a number of town halls and public buildings.⁷¹ This idea relates to that of the London ironmonger W Farlar, who in 1811 was selling a 'Rack, or self-Acting Bolt for Folding Doors.' 'By means of this fastening, Doors, of any dimensions, may be momentarily thrown open, and in shutting, instantly fasten themselves.'⁷²

Stable fittings formed a complete category on their own. As early as 1862 the St Pancras Iron Work Company of Old St Pancras Road, London, was advertising in Mayes's *Australian Builders Price-Book* a range of products from iron houses to fireproof safes, but giving prominence to stable fittings, enamelled mangers and patent racks.⁷³ The firm showed its fittings at Sydney in 1879,⁷⁴ and this was the brand normally used in Australian stables of quality,⁷⁵ but T & C Clark of Wolverhampton (mentioned above as makers of hinges) and Musgrave & Co of Belfast, also produced stable fittings, which were exhibited at Sydney.⁷⁶

c. locks

Locks and latches underwent extensive change during the late eighteenth and early nineteenth century, but Australia would have seen many of the more

⁶⁸ Colton, Palmer & Preston, *You are Secure with Us*, p 106.

⁶⁹ D & W Ltd, Chandler, [catalogue], (no date [c 1930]), p 106..

⁷⁰ *Ramsay's Catalogue* [1954], § 33/7.

⁷¹ Ogle's broadside is reproduced in New Century Antiquarian Books, *Catalogue no 5, Aspects of Australia* (Melbourne 2003), pp 2-3.

⁷² W Farlar, 'Farlar's New Steam Kitchen Range, Improved Oven, and Self-Oiling Smoke Jack; together with an Improved Warm Bath, &c' [4 pp single folded sheet, removed from a publication], (London 1815), pp 2-3.

⁷³ Mayes, *Australian Builders' Price-Book* (1862), p 154.

⁷⁴ Sydney Exhibition 1879, *Catalogue of British Section*, p 315.

⁷⁵ *Australasian Builder and Contractor's News*, 21 May 1887, p 31; 2 July 1887, p 125.

⁷⁶ Sydney Exhibition 1879, *Catalogue of British Section*, pp 302, 313.

primitive forms before the improvements of Bramah, Chubb and others made themselves widely felt. Locks with fixed wards, quite easily picked, were in use even in banks, up to the mid-nineteenth century.⁷⁷ Such descriptions and references as survive are rarely sufficient to indicate the precise lock type, but they convey a general impression. In 1790 the prefabricated hospital sent to Sydney included '3 Brass plate copper-warded Spring Locks, 2 do. Latches, 4 Brass plate Spring Bolts and 1 Brass copper-warded Padlock with 6 keys'.⁷⁸ A local specification for a schoolhouse in 1839 calls for a 'ten inch [250 mm] rim lock with Scotch springs complete' for the main door, and eight inch [200 mm] locks of the same sort for the other doors.⁷⁹ These were probably locks of the older generation. Early rim locks tend to be large, in heavy iron cases, unbranded, or with relatively unknown brands such as.⁸⁰

[upper half of circle:
 MORETON & LAIDLEY
]
 [lower half"
 WOLVERHAMPTON
]

The evolution of the newer locks began with Barron's patent of 1774, in which two tumblers were kept in place with a spring, and a key cut in steps of the two appropriate radii would raise them to the precise height to bring the studs in line and allow the key to turn. The upper edge of the bolt was notched so that a picklock would be unable to tell whether either tumbler was lifted too high.⁸¹ The principle of the overlift, whereby the lock would not open unless the tumbler was raised to the exact height,⁸² was a vast improvement, and was retained in Bramah's and Chubb's subsequent locks. In 1784 Joseph Bramah patented his more famous lock, in which the key was given what was described as a combination of 'endway pushing and revolving motion' instead of the simple rotatory action used in Barron's lock.⁸³ In 1790 Thomas Rowntree patented a much more elaborate version of the tumbler lock,⁸⁴ but it seems to have had little impact.

⁷⁷ John Chubb, *On the Construction of Locks and Keys* [offprint from the *Proceedings* of the Institution of Civil Engineers, vol X] (London 1850), pp 9-10.

⁷⁸ Robert Irving, 'The First Australian Architecture', (MArch, University of Sydney 1975), p 487, and Peter Bridges, *Foundations of Identity* (Sydney 1995), p 16, quoting Colonial Office 201/4, f 60 (meaning Colonial Office series 201 at the Public Record Office, London: despatches from New South Wales, book or box 1, folio or page 60).

⁷⁹ [Joseph Burns], 'Specification of sundry works required to erect and complete a Schoolhouse, in connection with the Presbyterian Church, Melbourne, according to the accompanying plans', in Michael Cannon [ed], *Historical Records of Victoria*, III (Melbourne 1984), pp 517.

⁸⁰ At 'Stratford Lodge',. Metcalfe, Victoria, inspected 2004

⁸¹ Chubb, *Locks and Keys*, p 11. See also J C Tildesley, 'Locks and Lock-Making', in Samuel Timmins [ed] *The Resources, Products and Industrial History of the Birmingham and Midland Hardware District* (London 1866), p 82

⁸² Charles Tomlinson, *Rudimentary Treatise on the Construction of Locks* (London 1853), p 68.

⁸³ Chubb, *Locks and Keys*, pp 11-13; Tildesley, 'Locks and Lock-Making', p 83.

⁸⁴ Tomlinson, *Construction of Locks*, pp 50-52.

In 1818 Jeremiah Chubb patented what became known as the 'detector lock', which recorded any attempt to pick it, and which evolved through at least five successive patents by Jeremiah Chubb, Charles Chubb, Ebenezer Hunter and John Chubb, between 1818 and 1847.⁸⁵ In its last patented form it had six distinct double-acting tumblers, and a very distinctive detector mechanism. It also had the advantage that an almost infinite number of distinctively keyed locks could be produced, and grouped with master keys as required.⁸⁶ By 1851 their rim locks were available in Norman, Gothic and Elizabethan styles.⁸⁷ Chubbs were later to establish a company in Australia, but it was more concerned with safes than with locks, as will appear below.

In Australia, however, most of these improvements counted for little. All locks were imported, at first from Britain, but some from America towards the end of the century. For some reason at least four examples of the primitive 'bow latch', with its mechanism exposed, are found in buildings of the 1850s at Port Fairy, though none has been reported elsewhere in Australia.⁸⁸ Stock locks, in which the mechanism is set into a timber plate rather than a metal case, are found occasionally up to the 1860s. One at 'Coryule', Drysdale, Victoria (of 1849-50),⁸⁹ is almost identical to a published example made in Pittsburgh, USA.⁹⁰ Others at 'Murndal, Western Victoria', possibly of the 1860s,⁹¹ are more pretentious, with metal strapwork attached to the timber stock to evoke a medieval character, and they resemble examples in a London catalogue as late as 1903.⁹²

The locks used in domestic work were overwhelmingly the products of London firm of James Carpenter, or his imitators H & T Vaughan. Carpenter's first patent was taken out with John Young of Wolverhampton, in 1830, for a lock in which the action of the latch was vertical rather than horizontal, but the patent subsequently became the sole property of Carpenter so far as rim locks were concerned, while Young retained the rights for mortice locks. Carpenter later made various improvements which made for smoother operation and greater durability.⁹³ The Carpenter locks were soon known in Australia, and in fact they were manufactured mainly for the export trade, as the British market continued to favour rim locks with the older horizontal

⁸⁵ Chubb, *Locks and Keys*, pp 13-16; Tildesley, 'Locks and Lock-Making', pp 83-4.

⁸⁶ Tildesley, 'Locks and Lock-Making', pp 83-4.

⁸⁷ Great Exhibition, *Catalogue*, II, p 663.

⁸⁸ Two are in a building at the rear of 'Seafield', 16 Wishart St (inspected 2009), and two are in Mills Cottage, 40 Gipps St (reported by Leisa Clements 2009). For a catalogue illustration see R. Melhuish, Sons & Co., *Ironmongery and Electrical Supplies* (R. Melhuish, Sons & Co., London 1903), p 77.

⁸⁹ Inspected 2009.

⁹⁰ Donald Streeter, 'A Signed American Stock Lock from the Manufactory of J. & J Patterson', *APT Bulletin*, VIII, 2 (1976), p 77.

⁹¹ Inspected 2009, one in the stables and one in the shearing shed.

⁹² Melhuish, *Ironmongery and Electrical Supplies*, p 86.

⁹³ Chubb, *Locks and Keys*, p 20; Tildesley, 'Locks and Lock-Making', pp 84-5. According to Price Carpenter & Young's lock was intended to be more secure and more convenient to use, but no more expensive: George Price, *A Treatise on Fire & Thief-Proof Depositories and Locks and Keys* (London 1856), p 423.

action.⁹⁴ In Australia the Carpenter type continued in use into the twentieth century. They are branded with a circular brass seal on the face, a typical one reading:⁹⁵

WR
N^o 60
JAS CARPENTER
PATENTEE

The number 60 is one of the standard sizes, while the monogram WR, for William IV, continues to appear throughout the century, and presumably relates to the date of the patent rather than the manufacture of the specific lock. Rather surprisingly, some Carpenter locks have been found which are marked 'patent expired', and which seem to date from the 1890s.⁹⁶ In at least one example⁹⁷ this wording appears in an outer ring which appears to have been added to the standard Carpenter seal. thus:

[outermost ring with top rising arc:
REGISTERED TRADE MARK
bottom falling arc:
PATENT EXPIRED
]
[inner circle with
[coat of arms]
[boss]
[three falling arcs:
No. 60
JAMES CARPENTER
PATENTEE
]

Mayes's price book lists only two varieties of rim lock, 'Carpenter's Patent Rim Locks' and 'Imitation Ditto',⁹⁸ and there can be little doubt that H & T Vaughan were the principal imitators. Vaughan's locks were somewhat cheaper, but in sizes exactly corresponding to those of Carpenter. That there were some variations of their own is suggested by the appearance in the men's hut at 'Werribee Park', Victoria, of a lock branded 'H & T Vaughan No. 60A Real Patent'. In fact they claimed to be 'the only Firm in the world who make warded wrought-iron Locks by machinery, thus giving them an exactness and finish unobtainable by hand labour.'⁹⁹ In 1913 Carpenter's and Vaughan's were still being sold in parallel, at 4s.6d. and 2.6d. respectively for the six inch

⁹⁴ Tildesley, 'Locks and Lock-Making', p 87.

⁹⁵ There are innumerable examples, including two rim locks at 'Reedy Creek', Broadford, Victoria, and others at Blood's Cottage, Box Hill, near Melbourne.

⁹⁶ At 'Craigmoor', Hill End, New South Wales, possibly after 1890; 'Pastoria', near Kyneton, in an extension of the 1890s, inspected 2002; and 4 Seaby Street, Stawell, Victoria, on a door recycled from elsewhere.

⁹⁷ 'Watford Villa', Avoca, Victoria, inspected February 2007. This and another conventional Carpenter lock must be additions to the original house of 1854, which has what is possibly distinctive German ironmongery throughout. They may date from 1870, when the building was moved, though they could easily be later still.

⁹⁸ Mayes, *Price-Book* [1877], p 123.

⁹⁹ Sydney Exhibition 1879, *Catalogue of British Section*, p 192.

size.¹⁰⁰ An unusual Vaughan lock at 9 Tyers Street, Portland, possibly of the 1850s, has a seal in the form:¹⁰¹

[annulus reading
H. & T. VAUGHAN L^{TD}
MANUFACTURERS]
[within which is a hexagon star surrounded
in each of the re-entrant angles with four
more hexagons and two crescent moons
]

Another lock on display at Werribee Park is 'Starkey & Sons Makers No. 60A Real Patent',¹⁰² while at the Goornong police Station is a lock similarly branded

No 60 REAL PATENT
STARKEY & SON MAKERS

This suggests that Starkey's was a third company which fell into line with the Carpenter classifications (and probably the Vaughan variations as well). There even seems also to be a generic brand, two specimens of which have been identified:¹⁰³

[upward arc
SPECIAL
]
LOCK
[central knob]
60A

Another lock from Willenhall of a similar character, but undated, is branded:

[upward arc
ARTHUR SHAW & C^o
]
L^{TD}
[horizontal key with the letter 'S' on its side entwined in it]
[downward arc
WILLENHALL
]

This is at 'Tynemouth Villa', Wishart Street, Port Fairy, which dates from the 1850s, but the lock may have been recycled, because it is associated with a Carpenter striking case.¹⁰⁴ The Carpenter lock was also imitated in the United States, by J J Patterson & Co and Russell & Erwin, but of this more below.

The brand of Carpenter & Tildesley presents a problem, for it is not accurately dateable. James Carpenter died in 1844, and the business passed to his son-

¹⁰⁰ James Moore & Sons Pty. Ltd., *Price List 96 August 1913* (Melbourne 1913), p 4.

¹⁰¹ Reported by Helen Stitt, 2007.

¹⁰² Information from Paul Roser, 2000.

¹⁰³ One, inspected in 2004, is at 8 Glenelg Street, Portland, a somewhat primitive cottage believed to date from 1853: the lock, with its white porcelain handle, seems likely to be later. Another (like the Vaughan lock referred to) was on the Men's Hut, 'Werribee Park'.

¹⁰⁴ Inspected 2007.

in-law James Tildesley. It is known that a patent had been taken out by Tildesley & Sanders, of Willenhall and Wolverhampton, in 1841,¹⁰⁵ but after succeeding to Carpenter's business Tildesley is said to have continued to manufacture the same type of lock.¹⁰⁶ George Price reported that the firm of Carpenter & Tildesley succeeded to the business on Carpenter's death, and was in operation when he wrote in 1856.¹⁰⁷ This is consistent with the fact that Carpenter & Tildesley registered a new lock design in 1847.¹⁰⁸ However an American report describes a seal marked 'Carpenter's Patent J. Tildesley Licensee',¹⁰⁹ but that has not been found in Australia, and may be specific to the USA market. In fact for most of the century Carpenter's name keeps appearing with no reference to any partner or licensee. Tildesley's name does appear in some cases, but it is as an apparent partner, 'Carpenter & Tildesley', or in his own right. It is clear that in fact the brands overlap chronologically, and in 1851 the firm of Carpenter & Tildesley of Willenhall, near Wolverhampton, showed both Carpenter & Co and Tildesley locks, together with others for which they must have held rights or agencies - Sanders' and Baillies' patent locks, and Rock's patent Gothic Case locks.¹¹⁰ But the situation is by no means simple, for in an 1864 directory dozens of firms in Willenhall, other than Carpenter and Tildesley of New Road, are listed as makers of locks, keys and related products, and many Tildesleys are listed, including two firms of key stampers, one brass and iron founder, and an iron and steel merchant.¹¹¹

'Kolor' homestead in western Victoria, of 1868, has a Carpenter & Tildesley rim lock on the front door which appears to be original. In the same general area the house 'Gringegalgon', of 1872, carries locks by Carpenter, by Tildesley, and by the partnership. The original rim lock of the front door was labelled 'Carpenter & Tildesley / Manufacturers'. The mortice locks of the ground floor reception rooms are branded on the face plate (ie on the fore edge of the door)

JAMES
[in upward arc
TILDESLEY
]
[in downward arc
DOUBLE HAND
]
LOCK

¹⁰⁵ Chubb, *Locks and Keys*, p 20; Price, *Fire & Thief-Proof Depositories*, pp 465-6.

¹⁰⁶ D L Anderson, 'A Carpenter Lock from Minnesota's Historic Fort Snelling', *APT Bulletin*, IX, 4 (1977), pp 67-8, ref Robert T Trump, 'The Carpenter-Type Lock', *Antiques*, LXVI, 6 (1954).

¹⁰⁷ Price, *Fire & Thief-Proof Depositories*, \ p 423.

¹⁰⁸ *Practical Mechanic and Engineers; Magazine*, 20 March 1847 (second series, II, 6), p 144.

¹⁰⁹ D L Anderson, 'A Carpenter Lock from Minnesota's Historic Fort Snelling', *APT Bulletin*, IX, 4 (1977), pp 67-8, ref Robert T Trump, 'The Carpenter-Type Lock', *Antiques*, LXVI, 6 (1954).

¹¹⁰ Great Exhibition, *Catalogue*, II, p 664.

¹¹¹ What is described as *Jones Iron District Directory 1864-5* is indexed on a web site, <http://freespace.virgin.net/m.harbach/1864indWill.html>, viewed 13 September 2001. Carpenter & Tildesley, oddly, appear as lock and curry comb manufacturers.

whereas the bedroom rim locks are of the conventional James Carpenter type. A 'Tildesley Double Hand Mortice Lock' is also found in the drawing room of 'Mount Rothwell', of about 1872-3. Other examples by Carpenter & Tildesley tend to be later than this,¹¹² though it is difficult to be sure, given that old stock may be used, or locks even recycled. However the Carpenter & Tildesley door lock of the court house at Bathurst, New South Wales, can reasonably be presumed to date from the origin of the building in 1880. The correlation between these major brands seems to have ceased by 1917, when Colton, Palmer & Preston of Adelaide offered a Carpenter No 47 'English Pattern Draw Back Lock' of a different form, and two Vaughan locks with elaborate arabesque decorative cases, and a 'Double Handed Drawback Lock and Night Latch'.¹¹³

Another brand of mortice lock, used at the Melbourne headquarters of the E S & A Bank in 1883-6, is

45

[upward arc of lettering:
GIBBONS
]
MAKER
[downward arc of lettering:
WOLVERHAMPTON

SECURE
4
LEVER

The locks of Geo Harley & Company, of the Diamond Lock Works Wolverhampton, established in 1830, have yet to be identified in Australia, but were exhibited in Sydney and Melbourne in 1879 and 1880 and bore the brand:¹¹⁴

TRADE MARK
[horizontal diamond containing:
G. H. & C^o
]

Another brand, on a simple cupboard lock of about 1890, is that of B & S H Thomson of Birmingham.¹¹⁵

By the 1870s Chubb, Hobbs and Yale locks were on sale in Australia.¹¹⁶ In 1875 the Bank of Australasia in Collins Street, Melbourne, had a safe or

¹¹² For example, the front door rim lock at 43 Mary St, Hawthorn, of 1896, and in the 1890s wing of 'Baroogah' homestead, New South Wales.

¹¹³ Colton, Palmer & Preston, *You are Secure with Us*, p 38.

¹¹⁴ Sydney Exhibition 1879, *Catalogue of British Section*.. p 184; Melbourne Exhibition 1880, *Catalogue*, II, p 318.

¹¹⁵ At 'Pastoria', inspected 2002.

¹¹⁶ Mayes, *Australian Builders' Price-Book* (1877), advertisements p vii.

strong closet fitted with two Chubb patent locks, each valued at thirty-five shillings, and strong room gates with "'Chubbs" very best patent protector locks' worth forty shillings, with case-hardened steel cover plates fixed over each face to protect them.¹¹⁷ In 1891 'Benvenuta' had Chubb six inch mortice locks throughout, except for Carpenter rim locks in the service areas, while the front door had a Yale latch plus an electroplated lock (for which the sum of 9 s 6 d was allowed).¹¹⁸ In 1893 'Boisdale', Victoria, had a Yale latch, for which a cost of 10s. 6d. was allowed, in addition to three rebated mortice locks with brass furniture, seven 'best brass bushed' six inch mortice locks, and twenty-three Vaughan six inch rim locks.¹¹⁹

In 1887 George Frederick Vaughan of the H T Vaughan company visited Melbourne, and when asked about the competition met by British locks in the local market said that this was mainly from the Americans:

No German locks are sent here: and in the American locks only five or six patterns sell here in sufficient numbers to make it worth anyone's while to manufacture them. The difference between the typical English and American locks, or course, is that the American is of cast iron, and the English of wrought iron. Casting is now done in England quite as well as in America, and we intend to make all the saleable American patterns.

The Americans had first penetrated the colonial market because of their fine illustrated catalogues - he must have been thinking here of Russell & Erwin - but he had now produced his own. Whilst firms like Chubb and Hobbs supplied many locks to Victoria, they were for the top end of the market, and Vaughans were now the only English firm supplying the everyday lock trade - which seems to suggest that Carpenters were defunct. He considered that there was not the slightest likelihood of a lock factory being established in Melbourne, as the market was too small.¹²⁰

It is true that American imports are far less prominent than British in Australia, but there had been significant developments in the United States, which Vaughan did not mention. Stansbury's lock, apparently developed in about 1810, was an effective modification of the traditional Egyptian type.¹²¹ Yale's, somewhat later, bore a generic resemblance to the Bramah lock, and had two concentric cylinders, one working within the other, held together by pins passing through to the keyhole. A pin at the back of the inner cylinder fits into the bolt and moves it, when turned.¹²² The American Yale lock did in due course reach Australia and became, as it remains today, a market staple. A

¹¹⁷ Reed & Barnes, 'Specification of Work to be done and Materials to be used in making and fixing wrot Iron shelves and standards, also wrot Iron Safe with shelves and divisions for the Bank of Australasia, in Collins St. West, Melbourne' (Melbourne 1875), pp 5, 3.

¹¹⁸ Law, 'Specifications for Mrs. L. Abrahams', p 30.

¹¹⁹ Guyon Purchas, 'Estimate for New Residence and Stabling Boisdale Estate near Maffra Gippsland for A.M. Foster Esqre' (Melbourne 1892), p 18.

¹²⁰ *Australasian Ironmonger*, 1 November 1887, pp 279-80.

¹²¹ Tomlinson, *Construction of Locks*, p 83.

¹²² Tomlinson, *Construction of Locks*, pp 83-4.

range of Yale night latches in the characteristically-shaped case, with an oval or circular knob, were available in Australia in 1917, together with a whole series of what seem to be imitations by Vaughan, branded 'H. & T.V'.¹²³

By the 1840s rim locks were being made in the USA by F T Stanley Co, North & Stanley, and the Russell & Erwin Co, all in New Britain, Connecticut; by the Lewis & Gaylord Co of Terryville, Connecticut, and by J J Patterson & Co of Birmingham, Pennsylvania, who by 1843 had opened another shop at Louisville, Kentucky. The Pattersons' rim locks are of some interest. They seem to deliberately mimic the appearance of the British Carpenter lock, but N O Hamonn has pointed out that there are significant differences in the mechanism. In particular, the latch moves in and out laterally, whereas in the Carpenter lock it lifts, which requires a more complicated and expensive keeper.¹²⁴ An American brand which is not otherwise known, Sargent & Co, has been found on locks throughout a house of the 1880s at 65 Wellington St, Kew, and this may be explained by the fact that Annie Smith, the speculative builder was herself a Californian.¹²⁵

American-type locks were introduced in Britain by Hobbs & Co, who took out various British patents in their own name. Hobbs's protector lock was related to the American locks of Day & Newell, but in 1852 he patented a lock of his own, would not open with the key in the hole. It was necessary to unscrew the stem of the key, leaving the business end within the mechanism, which could then be turned by a handle.¹²⁶ At the London exhibition of 1862 Hobbs offered three hundred guineas to anyone who could pick the lock, and nobody succeeded. Moreover he claimed that because the locks were made by machinery their prices were unprecedentedly low.¹²⁷ For the front door of a South Australian Bank in 1878 a prime cost of two shillings was allowed for 'one of Hobbs' patent night latch and 2 keys', and for the office drawers, five shillings each for '2 1/2 [?]inch] Hobbs' patent iron locks with 2 keys'. In the cellar of 'Trawalla', Toorak, Melbourne, are two rim locks in very simple pressed steel cases,¹²⁸ branded:

[coat of arms]
 BY APPOINTMENT
 HOBBS & CO
 CHEAPSIDE
 LONDON
 LEVER
 MACHINE MADE

For some reason, however, Hobbs's locks were never nearly so prominent in Australia as they were in Britain.

¹²³ Colton, Palmer & Preston, *You are Secure with Us*, p 36.

¹²⁴ Colton, Palmer & Preston, *You are Secure with Us*, p 36.

¹²⁵ Information from the owner, Rod Reynolds, 2006.

¹²⁶ Tomlinson, *Construction of Locks*, pp 99-102.

¹²⁷ F W Laxton, *Laxton's Price Book 1863* (London 1863) pp 99-102.

¹²⁸ Inspected April 2003.

In Australia, rather as the Carpenter lock far outsold the more famous and sophisticated British locks which we have discussed, so most of those from the United States came from Russell & Erwin of Connecticut, rather than from more innovative locksmiths.¹²⁹ In their 1865 catalogue Russell & Erwin actually offer what they call 'Carpenter pattern' rim locks, though the resemblance is only a loose one, as the elements on the face are quite differently arranged, especially the location of the seal (an eagle, rather than a coat of arms) towards the bottom left of the box.¹³⁰ Some of Russell & Erwin's more decorative handles and escutcheons¹³¹ must have appeared after 1865, for they do not appear in this catalogue, and examples in Australia may have escaped recognition for this reason. However these rather elaborately patterned rim locks, perhaps meant to evoke cut leather, have been identified at 59 Young Street, Fitzroy, 9 Tyers Street, Portland,¹³² and 108 Ballarat St, Yarraville, Victoria.¹³³ The brand appears with the initials 'R E' embraced between the giant 'C' and small 'O' of 'Co', thus:

[large letter C containing
RE O
]

Other Russell & Erwin rim locks have also been found locally with the brand

[circle containing in upper arc
R. & E. MFG. CO.
]
[diamond registration mark in centre]
[and in lower arc
NEW BRITAIN CONN. U.S.A.
]

The use of a British diamond registration mark suggests that this was a line specifically aimed at the British or the colonial market, and the date indicated by it is 9 May 1878, providing a *terminus ante quem* for these examples.¹³⁴

Confusingly, however, other and probably later examples have been found with the big C brand, but the addition of 'USA',¹³⁵ thus:

¹²⁹ For which see Russell & Erwin, *Illustrated Catalogue of American Hardware of the Russell and Erwin Manufacturing Company* (New Britain [Connecticut] 1875), facsimile with an introduction by L H Nelson, 1980.

¹³⁰ Russell & Erwin, *Illustrated Catalogue*, p 22.

¹³¹ A. J. Bicknell & Co, *Detail, Cottage and Constructive Architecture* (New York 1873), advertisements p ix.

¹³² Information from the owner, Bob Stone, in 2006, inspected 2007, but this is probably a later addition to the house, which dates from the 1850s.

¹³³ Information from Michael Galimany 2007.

¹³⁴ Three of these are in a house at 5 Bowden St, Castlemaine, built in about 1870 but extended at various dates (inspected 2005), and there is one on each of the front doors of two prefabricated houses of earlier date, one at 18 Douglas Street, Toorak, made by Robert Walker of Glasgow and put up in about 1853 (and recently restored); the other a house on the National Trust site at 399 Coventry Street, South Melbourne, attributed to Morewood & Rogers, and not original to the site (reported by Simon Reeves, 1997).

[horizontal diamond containing
 large letter C containing:
 RE O
]
 [horizontal rectangle containing:
 USA
]

A version of the same brand is found in the company's catalogue of 1897:¹³⁶

[horizontal diamond containing
 large letter C containing:
 RE O
]
 [underlapping horizontal diamond containing:
 U.S.A.
]

By now most of the handles and escutcheons were of an elaborately eclectic and rather disappointing nature, ranging from Renaissance to Rococo in style. However in 1917 a Russell & Erwin rim lock on the Australian market, the 'SSF', had an more pleasingly decorated bronzed iron case of a quasi-medieval character.¹³⁷

A British manufacturer of note was Archibald Kenrick & Sons of West Bromwich. The original Archibald Kenrick had manufactured cast iron from 1791 and hollow ware from 1805, but had not been involved in locks at all.¹³⁸ At the Sydney and Melbourne International Exhibitions of 1879 and 1880, the Adelaide Jubilee Exhibiton of 1887, and then the Centennial Exhibition, Kenrick & Sons had shown only tinned and enamelled ware, and household castings.¹³⁹ By the early twentieth century had become lock manufacturers. A rim lock with their distinctive brand is found at 'Oak Dene', Kyabram, Victoria, of 1910 [?]:

[upward arc of lettering:
 ARCHIBALD KENRICK & SONS LIMITED
]

¹³⁵ A rim lock in an outbuilding at 'Holey Plain', Victoria; another at 'Mount Rothwell', Victoria, not fixed in position (both inspected 2001), and a third on an internal door at 5 Bowden St, Castlemaine (inspected 2005).

¹³⁶ Russell & Erwin Mfg. Co., *Builders' Hardware made by Russell & Erwin Mfg. Co.* (New Britain [Connecticut] 1897), pp 124, 128 &c.

¹³⁷ Colton, Palmer & Preston, *You are Secure with Us*, p 36.

¹³⁸ William Kenrick, 'Cast Iron Hollow-Ware, Tinned and Enamelled, and Cast Ironmongery', in Samuel Timmins [ed], *The Resources, Products and Industrial History of the Birmingham and Midland Hardware District* (London 1866), p 107. At the Great Exhibition the firm showed a miscellany of cast iron tanks, pipes, pulleys, &c, but no locks: Great Exhibition, *Catalogue*, II, p 637.

¹³⁹ Sydney Exhibition 1879, *Catalogue of British Section..* p 112; *Australasian Ironmonger*, 1 October 1887, p 264; Melbourne Exhibition 1880, *Catalogue*, II, p 341; Centennial Exhibition, *Official Record*, pp 467, 735, 963. E G Robertson, *Adelaide Lace* (Adelaide 1975), p 193, illustrated a door knocker branded 'A Kenrick & Sons', with a diamond registration mark which he could not decipher with certainty, but thought to be of 12 January 1854. That date is possible, as the firm was founded in 1791.

[circle containing at the centre an isosceles triangle, against the faces of which are three
ogival triangles containing the letters 'A', 'K' and 'S'
[downward arc of lettering:
WEST BROMWICH
]

By 1917 Colton, Palmer & Preston were offering Cowell's patent mortice lock, which was ingeniously formed in a long cylinder, so that it could be fitted simply by boring a 7/8 inch [22.5 mm] hole horizontally into the leading edge of the door.¹⁴⁰ A lock of perhaps early twentieth century appearance is 'The Antipodean',¹⁴¹ and another of twentieth century brand as yet unsourced, is the 'Erebus Patent Lift-Up' found in a 1930 house in the Melbourne suburb of Coburg.¹⁴² By 1933 J Stratmann Pty Ltd of Melbourne were advertising 'Stratmann's New Plain Front Mortise [*sic*] Door Lock' and describing themselves as wholesale manufacturers to the trade. One infers, from the spelling, from a reference to 'Stratmann's English and American lock furniture' and from a reference to the lock as being patented, but without citing a local (or any) patent number, that this was the local branch of an overseas and probably an American company. A range of their locks and other products was displayed at Kelvin Hall in Melbourne, and their brand was 'J.S.' in a square.¹⁴³ In about 1936 they introduced a range of specially designed locks for narrow stile doors, both mortice and rebated.¹⁴⁴

d. safes

Few if any cast iron safes were made before the nineteenth century, and wrought iron ones came even later, but by the 1820s there were a number of makers in Wolverhampton and elsewhere in England. Thomas Milner of Sheffield, and later of Manchester, was a pioneer manufacturer of that decade, and was later to become a major supplier to Australia. Cast iron safes were brittle enough to fail under a hammer blow, a drill, or possibly the changes of temperature when water was played on a fire. Wrought iron safes, unless they were solidly insulated against the heat, were not much better.¹⁴⁵ Only steel produced reliable safes. In 1834 William Marr obtained a patent for fireproof safes, and other manufacturers soon turned to this requirement, including Milner in his patent of 1840.¹⁴⁶ When the Messrs Tann took out a British patent for a fireproof safe in 1843, Milners took their agent to

¹⁴⁰ Colton, Palmer & Preston, *You are Secure with Us*, p 36.

¹⁴¹ On a kitchen door at 'Pastoria', Kyneton, inspected 2002; and at 9 Tyers St, Portland, photographs provided by Bob Stone, 2005.

¹⁴² 123 Reynard St, Coburg, bearing the patent no 18,071: also reported by Simon Reeves, 1997.

¹⁴³ Royal Victorian Institute of Architects, *Journal*, XXXI, 3 (July 1933), advertisement p xxx.

¹⁴⁴ Royal Victorian Institute of Architects, *Journal*, XXXIV, 4 (1936), advertisement p xxii.

¹⁴⁵ Price, *Fire & Thief-Proof Depositories*, pp 25-6.

¹⁴⁶ Price, *Fire & Thief-Proof Depositories*, pp 9-12. Milners later tried to give the impression that they had been the first to produce a fireproof safe: Sydney Exhibition 1879, *Catalogue of British Section*, p 186.

court, and Tanns were forced to relinquish their claim. Tanns were nevertheless able to show their safes at the Great Exhibition of 1851.¹⁴⁷

Safes were generally imported to Australia, though their sources are not always clear. For example, the Bank of Australasia used Simpson's fireproof safe doors, the origin of which is not established.¹⁴⁸ The silver safe at Government House, Melbourne, of 1872-6, has a circular brand:

[outer annulus:
THOS PERRY & SONS
HIGHFIELD WORKS BLISTON
]
[inner annulus:
PATENT FIRE RESISTING
IMPROVED SAFE
]
[coat of arms at centre]

In Sydney H P Gregory & Co were the sole Australian agents for MacNeale & Urban's fire and burglar-proof safes.¹⁴⁹

Milner's were the most prominent. By 1851 Milner & Son, as they had become, could exhibit a range of fireproof safes from five hundredweight [250 kg] to three tonnes in weight,¹⁵⁰ and in 1858 Bright Brothers & Co of Melbourne were Milners' sole agents for the Australian colonies.¹⁵¹ The business seems to have become Thomas & William Milner, and later simply Milner's Company. Milner's Company mounted an extensive display at the Melbourne International Exhibition of 1880, winning both gold and silver medals,¹⁵² and were the source of individual safes in many major buildings, and installed the basement safe deposit of the APA Building in Melbourne.¹⁵³ The company also entirely fitted out the strongroom of the Melbourne Safe Deposit Company, using quantities of steel and a number of protection devices which it is unnecessary to describe here. Mechanics were sent out from England for the installation, under the supervision of the company's representative, R F Whiteside, and it was said that only five other such safe deposits had been constructed, three in London and one each in Manchester and Liverpool.¹⁵⁴ The other main British supplier was Chubb & Son, and both companies received gold medals at the Centennial Exhibition of 1888-9.¹⁵⁵ Fireproof doors and shutters were a conspicuous use of iron, usually

¹⁴⁷ Great Exhibition, 1851, *Catalogue*. II, p 651.

¹⁴⁸ They were used at the bank branch at Kooringa, South Australia, and as they were to be supplied by the proprietor, they were probably in regular use by this bank: Dunstan, 'Banking Premises, Kooringa', p [3].

¹⁴⁹ *Australasian Ironmonger*, I, 7 (1 October 1886), advertisement p ii.

¹⁵⁰ Great Exhibition, *Catalogue*, II, p 661.

¹⁵¹ *Facts and Figures*, II, 1 (31 March 1858), p 7.

¹⁵² Melbourne Exhibition 1880, *Catalogue*, p 613.

¹⁵³ *Australasian Builder and Contractor's News*, 20 April 1889, p 379; also 10 September 1887, p 291, reporting the use of Milner's patent safe doors in the Commercial Bank branch at West Maitland.

¹⁵⁴ *Australasian Builder and Contractor's News*, 7 June 1890, pp 1093-4, quoted in Allom Lovell & Associates Pty Ltd, *380 Collins St, &c* (Melbourne 1989), pp 36-8.

¹⁵⁵ Centennial Exhibition, *Official Record*, pp 466, 467, 734-5, 963.

fabricated locally from plate iron on some sort of frame, but occasionally imported. Hoffnung & Co's premises in Sydney, of 1870, had fireproof strongroom doors by Cotterell & Co of Birmingham, with 'double acme locks'.¹⁵⁶

George Price of the Cleveland Safe and Lock Works, Wolverhampton, was a prominent British safe manufacturer whose products reached Australia in quantity. In 1863 he was advertising his 'treble patent fire resisting (212°) & burglar proof prize medal champion safes', his strong room doors, and his 'ne-plus-ultra' bank lock.¹⁵⁷ A Price's fireproof safe was installed in an architect's house at Ballarat, probably in 1865.¹⁵⁸ In 1879 he exhibited at Sydney, and was selling through his agents, Edwards, Dunlop & Co of London and Sydney.¹⁵⁹

At the exhibition of 1866-7 Reaney & Roberts of Melbourne showed 'Fire and Drill Proof Safes', but were presumably not themselves the manufacturers.¹⁶⁰ However, there were also local safe-makers, J Brandwood of Launceston,¹⁶¹ Makutz & Burke of South Melbourne,¹⁶² and J Pitt & Co of North Melbourne.¹⁶³ A Makutz and Burke 'Fire Proof and Thief Resistant Safe' was installed in the prominent Melbourne house 'Bagatelle' in 1890.¹⁶⁴ Pitt had established his business in Elizabeth Street in about 1878, employing only two boys, but trade expanded until he moved to large premises in North Melbourne in 1885. Three years later he employed ten hands, produced 120 safes a year and 50 or 60 strong room doors, as well as other products. He obtained two successive three year contracts to supply the Victorian Government with safes, and had produced six hundred of them. In his safes he put a device to prevent the key being removed unless the door was locked.¹⁶⁵

In Britain Chubb & Son were known for their locks, and though they showed a patent fireproof safe at the Great Exhibition,¹⁶⁶ safes seem to have been a minor part of their business until later in the century. In 1895 Chubb Australia Ltd was established in Market Street, Sydney, though its headquarters were in England and the safes were imported until 1921, when they opened their own factory at Waterloo. During the 1920s the company manufactured safes and strongrooms for the major Sydney banks, and at the Government Savings Bank (later Commonwealth Bank), in Martin Place, Sydney, they installed

¹⁵⁶ H M Franklyn, *A Glance at Australia in 1880* (Melbourne 1881), pp 353-4.

¹⁵⁷ Laxton, *Builder's Price Book for 1863*, pp 206-7, and advertisement, unpaginated.

¹⁵⁸ The architect was Henry Caselli, and the safe was amongst the house contents offered for sale in 1893: Dorothy Anderson, *The Tradesmen of Gazelle* (South Yarra [Victoria] 2000), p 146.

¹⁵⁹ Sydney Exhibition 1879, *Catalogue of British Section*, p 189.

¹⁶⁰ Intercolonial Exhibition, Melbourne, 1866-7, *Official Record* (Melbourne 1867), p 31.

¹⁶¹ Centennial Exhibition, *Official Record*, p 737.

¹⁶² Centennial Exhibition, *Official Record*, pp 621, 734-5.

¹⁶³ Centennial Exhibition, *Official Record*, pp 737.

¹⁶⁴ Robert Trumble, 'Re "Bagatelle"' (manuscript, Melbourne), p 2.

¹⁶⁵ Alexander Sutherland [ed], *Victoria and its Metropolis* (2 vols, Melbourne 1888), II, p 617.

¹⁶⁶ Great Exhibition, *Catalogue*, II, p 663.

'Chubb's great door, as exhibited at Wembley'. These were circular, 3.07 m in diameter and 675 mm thick, and weighed thirty tonnes each. They still guard the safe deposit vault. The vaults had doors of 'Chubb's steel', which was to be nitro-glycerine flame proof, and four timer locks, so that even if three were to fail, one would open the door.¹⁶⁷ The company also manufactured secure office equipment, such as fire-resistant filing cabinets.¹⁶⁸ In 1949 there were two other local makers advertising in *Ramsay's Catalogue*, the Bulldog Safe Works of Sydney, and M G Dyke & Sons Pty Ltd of Melbourne. Both manufactured strong room doors and wall safes, and Dyke also produced large self-contained safes.¹⁶⁹

Although private safes were always unusual, the architect's safe at Ballarat and the silver safe at Government House were by no means unique. 'Benvenuta', Carlton, of 1891, had a complete strong room, doubtless necessitated by the peculiar business activities of the Abraham family, which will be referred to below. In about 1930 a secret built-in wall safe was provided as a standard item in a Melbourne display house.¹⁷⁰ At this time C J White & Sons of Melbourne were agents for John Tann's safes (referred to above), an English type said 'never to have been opened by a burglar', and in particular for 'special wall safes for money and jewels', which could be placed behind a picture,¹⁷¹ but Tann's safes seem not to have been common in Australia.

¹⁶⁷ *Building*, 12 December 1928, p 59, and illustrations, p 81.

¹⁶⁸ Jennifer O'Callaghan, *This Working Life* [exhibition catalogue] [Sydney 2002], pp 18-21.

¹⁶⁹ *Ramsay's Catalogue* [1949], §§ 23/1, 23/2.

¹⁷⁰ G C Dickson & Yorston (Builders) Pty Ltd, *The Exhibition Home, Redcourt Avenue, Armadale* (Melbourne, no date, ?pre-1930), no page.

¹⁷¹ *Australian Home Beautiful*, 1 July 1930, p 4. Tann had exhibited at Sydney in 1879: Sydney Exhibition 1879, *Catalogue of British Section*, p 191. In 1904 his safes were branded 'Anchor Reliance': J T Rea, *How to Estimate: being the Analysis of Builders' Prices* (London 1904 [1902]), p xxxviii.