



LOCKS & KEYS



Issue 32

The Newsletter for lock collectors

November 2006

A. W. N. Pugin

The Victorian era had no architectural style of its own. It borrowed others, mostly earlier styles. The two most popular and typical were 'Classical', and 'Gothic' (also known as

"Locks & Keys" needs more subscribers. If you know any other collectors, please ask them to subscribe to their own copies!

Pugin made a particular point of the mediaeval skill of suiting the design to the material, and having regard to fitness for purpose.

"Locks & Keys" welcomes contributions, preferably with uncoloured illustrations on separate sheets. Unfortunately, colour photographs tend to be too dark to reproduce well. PC disks with files in MSWord7, MSWorks4.5, Write, Wordpad, or saved as .rtf can be used. Articles may also be emailed to the Editor — see below right.

Gothic Revival, Mock Gothic, and sometimes as Romanesque.) Other styles were 'Arts and Crafts', which also looked back to a mixture of mediaeval and Tudor/Jacobin; Chinese (with some Japanese), Egyptian, and French Baroque. Even Celtic styles and decoration were used sometimes.

One man single-handedly created the Victorian era's Gothic Revival. He was in good company, however, both in religion and architecture.

Augustus Welby Northmore Pugin irrevocably altered the course of 19th century archi-

(Continued on page 6)

The Führer's last despatch

Fort George was Britain's biggest engineering project of the 18th century. Following the 1745 Jacobite rebellion, Fort George was built near Inverness to deter any future uprising, and as a base from which to suppress any which might occur. However, much like King Edward's castles in Wales, its purpose was fulfilled almost before construction was completed. Thoughts of any further rebellion rapidly succeeded, and Highlanders soon became an important and loyal element of the British Army.

Fort George then became the base of the Seaforth Highlanders, and other units, and remains officially an active army base — although there is now a modern barracks nearby.

There is a large regimental museum in Fort George. This is a combination of the former museums of the Seaforth Highlanders, The Queen's Own Cameron Highlanders and the Lovat Scouts. The museum owns a unique collection of regimental uniforms, medals, pictures, weapons, colours, pipes, banners and other items of interest. It is housed in the Old Lieutenant Governor's house at Fort George, which was extensively modernised during 1983-86.

I visited it during this summer. It is, indeed, much as many other regimental museum, with much the same sort of displays. However, deep inside, in an upstairs room, I

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Editor

Another sumptuous production from the Hanns Schell Collection! Written by Martina Pall, with text in German and English, and photography by Edmund Hofer this is similar in style to the museum's previous books.

The book runs to 161 pages, covering boxes from the Middle Ages to the 20th century, mainly from Europe, but with a section on Asia also. There is a glossary, some references cited, and a bibliography of 75 items. These are mostly modern works in German, and most are books. There are also a few English language items, mostly American. Many of these items should be obtainable through interlibrary loan, at least if your library does international loans.

Once again, the strength of this book is the clear pictures, (all in colour) and the concise yet detailed descriptions. Measurements and materials are given. Most of the items shown are of high quality, and there are many close-ups of intricate decoration. An interesting feature of the book is that most items shown also have exact references to other literature, concerning the same or similar items. The books quoted are those gathered into the bibliography.

One is again struck both by the quality of workmanship of the items described, and by the quality of the collection itself. Hann Schell has collected some twelve thousand objects in the field of locks, keys, caskets, coffers, chests and cast iron art works. The entire collection has been assembled using private funds, without any public subsidies, in the course of more than forty years — a considerable achievement.

The range of items included is impressive. Some of those which caught my eye are the Art Deco boxes, and some porcelain boxes with metal mounts. There are also some Art Nouveau boxes. Then there are some Asian boxes, many from Tibet and Nepal. There are also some from Asia made for export to Europe. Altogether, a most diverse and beautiful collection.

Nevertheless, it is only a fraction of the Museum's collection. Hann Schell's Forward therefore invites readers to visit the Museum. The address is:

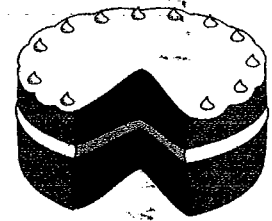
A-8020 Graz, Wienerstrasse 10 Germany
www.schell-collection.com

The book can be ordered by post or email — you can ask the post charge, which is additional to the price of Euro 28, by email: museum@schell-collection.com

Versperrbare Kostbarkeiten : Kästchen und Kabinette aus aller Welt = Locked treasures / Hanns-Schell-Collection Graz. [Text by] Martina Pall. [Fotogr.: Edmund Hofer. Engl. Übers.: George Murray]. - Graz : Hanns Schell Coll., 2006. - 149 S. : zahlr. Ill. ; 31 cm, 938 gr. ISBN13: 9783950197112
ISBN10: 3950197117

Feedback

Forging is a metalwork technique, much used with wrought iron. The term is also applied to illegal copies of an original, or objects, especially works of art and high-status branded merchandise, which falsely claim authenticity.



It has been around a long time. Deception was practised in Roman times, with mass-produced copies of statues passed off as genuine. Any defects in carving the marble were disguised by filling with hard wax. Hence, genuine workmanship, without such flaws, was 'sincere' (which has long since become a dead metaphor). In 1940, Newsweek reckoned that of the 2,500 authentic paintings of Corot, American collections alone contained 8,500. A Director of the Metropolitan Museum of Art reckoned that during his years as Director, about 60% of the items he was offered were forgeries.

Dealers know this, and some buyers come to suspect it — but there is then a conspiracy of silence. Everyone, dealers, buyers, producers, all have too much to lose, such as reputation and money invested, to say anything. Buyers are often buying 'authenticity', more than an artefact. After Van Meegeren revealed he had painted some pictures previously believed to be by Vermeer, the pictures did not change, but their value did!

By a strange whimsy, some forgeries become collectable in their own right! 'Billies and Charlies' are per-



haps the best known example.

Even more mail order catalogues have been sent to me this autumn than previous years.

There are several money boxes on sale now. Some are reproductions, sold as such, and some are new designs, including some in the style of the old mechanical cast iron banks. These might be the collectables of the future! There are also many other puzzles to while away your time, a few of them related to locks. Have a look at:

bitsandpiecesuk.com ☎0870 7507750

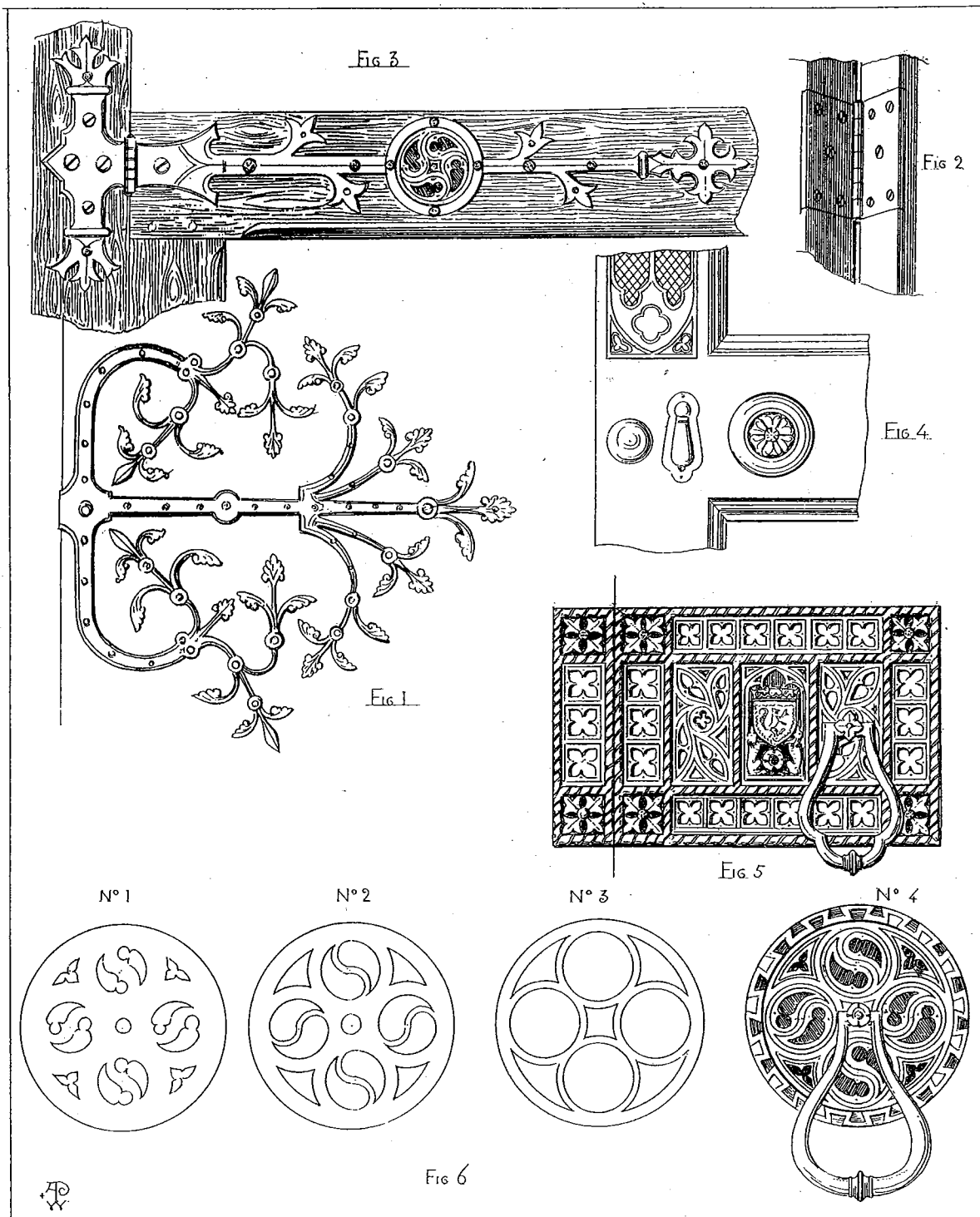
There is a Cryptex (see BROWN, D : *The Da Vinci code*) for £29.95 (+ £10 for the tools, if you wish to change the combination) from:

First Impressions, Lewes Road, Forest Row RH18 5AA
☎01342 825700

And a few more fun things (including a 6-in-1 Utili-Key multitool (£10) and TSA approved combination padlocks) from Presents for Men:

presentsformen.com ☎08701 203098

Plate III from Pugin's *The true principles of pointed architecture*



spotted one of the 'other items of interest'.

There was a despatch box of a type I recognised. It was continental, probably German. It had square edges and corners, of steel, a little smaller than an attaché case but as deep. The outside was painted. It had a lever lock with a flat steel key. This box had been forced open.

I stopped to read the caption. This was the Fuhrer's personal despatch box! It had been found in Adolf Hitler's living room/office in the Führerbunker. After Hitler and Eva Braun had committed suicide on 30th April 1945, their bodies were taken outside into the garden of the Reich Chancellery, and burned with petrol. The garden was then subjected to ten hours of artillery bombardment by Russian explosive and incendiary shelling. Inside the bunker, one of Hitler's aides poured petrol around his rooms and set fire to it, closing the airtight door behind him. As the ventilation system was no longer functioning, the fire soon went out, leaving only a little scorching.

A few days after the Russians entered the bunker on 2nd May, a British colonel of the Seaforth Highlanders was shown around.

The 'Reich Chancellery Air Raid Shelter' was built 1935-36. After the RAF bombed Berlin in 1940, a further, deeper, bunker was built; it was completed in 1943. The original bunker was renamed the 'Vorbunker', and the new one, the 'Führerbunker'. They were connected by a straight staircase. Apparently, (unlike the several other

bunkers) no original plan survives of the Führerbunker.

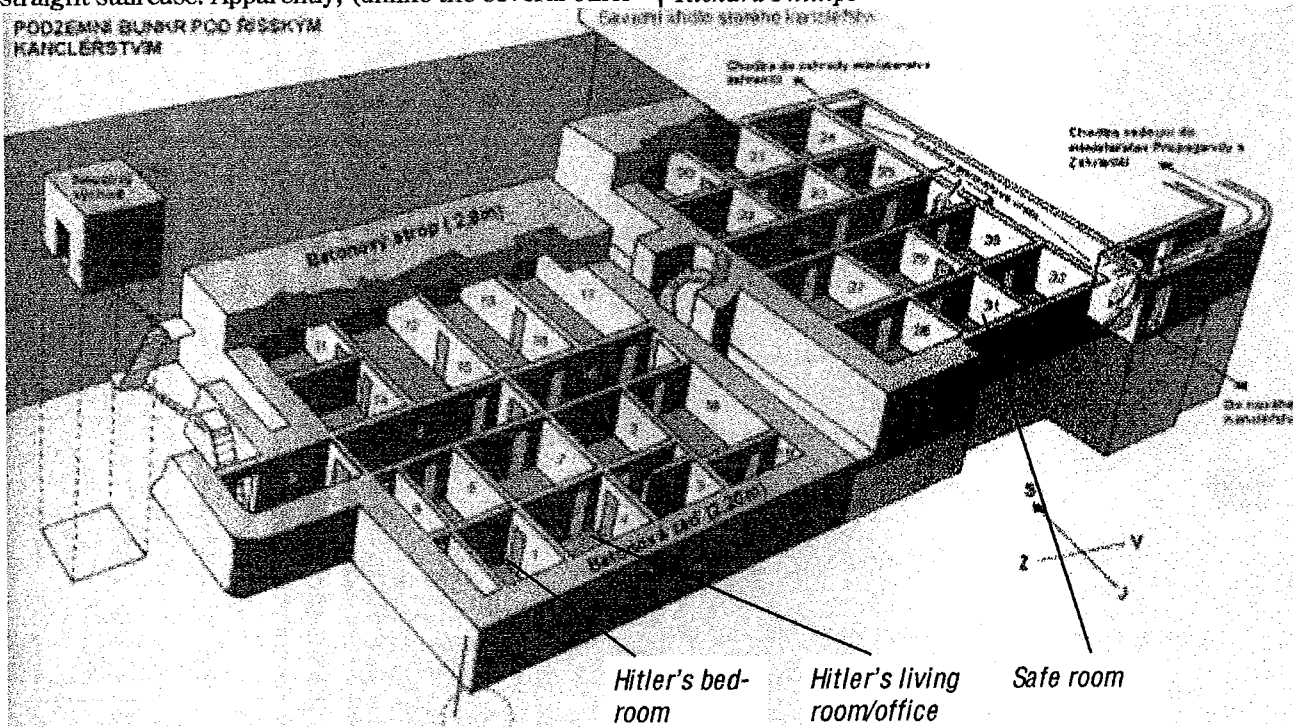
Several large safes were installed in the bunkers during construction. There were three large ones in a room in the Vorbunker, and another in Hitler's bedroom, at the end of his bed. When the colonel looked around, he saw these safes, and noted that they had all been blown open by the Russians, and emptied. In Hitler's living room/office, the colonel saw, lying discarded on the floor, Hitler's personal despatch box – also forced open. The colonel picked up this as a souvenir, and it eventually was brought to Fort George. He brought back another souvenir, now also in the regimental museum. Albert Speer had planned to build Berlin's new monumental buildings. To impress the Fuhrer, Speer brought models of the proposed Great Hall, which is to be a gigantic indoor arena for speeches and rallies, with the largest dome in the world. Speer left his plan with Hitler, and it was found in the Führerbunker in 1945 by the colonel, and he brought it home as a war souvenir.

The Russians, and East Germans, made several later forays into the bunkers, and incomplete demolition attempts. In 1973 they explored the maze, and made many photographs. In 1988 a German artist, Erhard Schreier, made these drawings, before the roof of the bunker was demolished and the ruins were filled in.

Amazing to find this piece of history so far from its home!

Richard Phillips

PODZEMNÍ BUNKR POD ROSEKÝM KANCLERSTVÍM



Společenská místnost A. Hitlera a Evy Braunové

- 1. Lůžko A 21
- 2. Křeslo a pohovka a lavičky E a B
- 3. Kuchyně a jídelna
- 4. Křeslo místnost A 21

Pracovní místnosti

- 5. Chodba a kancelářský stůl
- 6. Stůl pracovní stůl
- 7. Kuchyně pracovní
- 8. Koupelna
- 9. Křeslo
- 10. Chodba

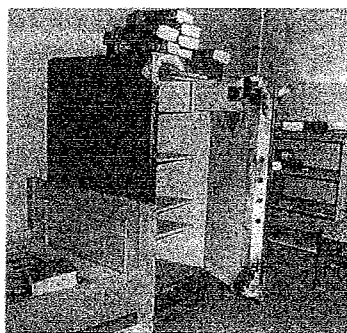
- 11-13. Pokoj Dr. Stenningera a jednotky místnosti
- 14. Kuchyně a jídelna Dr. Stenningera
- 15. Kuchyně pracovní vzhledem k místnosti 1
- 16. Přestavba
- 17. Kuchyně pracovní a jídelna
- 18. Kuchyně pracovní vzhledem k jídelně

- 19. Tiskárna
- 20. Kuchyně pracovní
- 21-23. Místnosti pro rozpravu
- 24-26. Místnosti pro personál
- 27. Kuchyně pracovní
- 28. Kuchyně pracovní a jídelna
- 29-30-31-32. Kuchyně a jídelna

the last redoubt ...



Blasted safes in the Vorbunker; drawing by Erhard Schreir



*Safe in Hitler's bedroom, at the foot of his bed.
Photographed days after the end of the war,
for Time Life.*

Information mainly from: LEHRER, Steven *The Reich Chancellery and Fuhrerbunker complex*. Jefferson, N.C. : McFarland & Co, 2006. 0786423935

ture and design. And not only in Britain. In Australia, particularly in Tasmania, and in the Southern Highlands of New South Wales, in Brisbane, and in Sydney and its environs, his great legacy is much in evidence.

The only child of talented parents, Pugin's childhood was marked by a precocious early desire to draw and a confidence in his knowledge and skill. This enabled him to start work at fifteen on designing Gothic furniture for George IV's refurbishment of Windsor Castle. In a broader sense, his Gothic Revival features such as the pointed arches to church windows and doors, came to denote Christianity here, as well as across the wider English-speaking world.

His work, particularly his writings, inspired and influenced future designers, architects and local craftspeople right into the early years of the 20th century. A convert to Roman Catholicism in 1835, he was passionate about the mediæval world. As an emerging designer, his style, Gothic Revival, came about from his intense study of Gothic buildings in England and France, commenced as a young child and continuing through adulthood.

He considered the Middle Gothic or 'Pointed Period' Middle Gothic or 'Pointed Period' represented the purest form, and for him the most spiritual; and that architecture must revert to the true 'Gothic Style'.

The architect—designer

Many of the great 19th century architects designed not only their buildings, but also much of the fittings, and even the furniture. Pugin was no exception. A neglected area of Pugin's architectural interiors is his work in wrought iron. Iron was extensively used in mediæval times for a variety of architectural elements and domestic wares. Pugin also grasped the fact that objects made of iron did not invariably have to be matt black — a popular misconception created by unskilled conservators in the early 20th century. Much of Pugin's ironwork is tinned or polychromatic, faithfully following mediæval practice. He also carefully supervised the manufacture of individual items. In a letter to John Hardman (John Hardman & Company, Silversmiths) in 1847, Pugin specifically mentions that 'the hinges and handles in iron ought to be tinned.' In 1838, Pugin had entered into partnership with John Hardman, the younger, member of a Birmingham button manufacturing firm, to manufacture metalwork to his designs. The firm eventually expanded to meet the requirements of Pugin's designs in many other media: in fact, all the requirements for church furnishing.

Pugin was fascinated by furniture mounts. Made in wrought iron and brass, their quality is quite exceptional. Mundane wares such as iron drawer-handles and brass hinges under Pugin's careful eye are given a lightness and variety that is especially pleasing. This also applies to his designs for door furniture, which seem both from his correspondence and the surviving examples, to have been of particular interest to the architect.

Pugin's early studies and experiments

Pugin made use of the old wrought-ironwork in the museum at St. Mary's College Oscott, near Birmingham. Pugin was sometime Professor of Ecclesiastical Antiquities here, and made it a centre

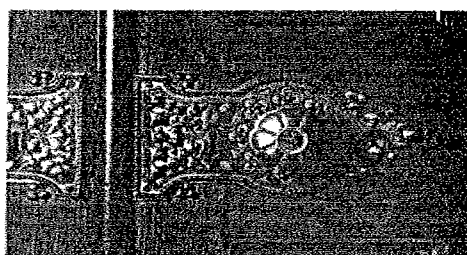
for his early experiments in ecclesiastical furnishings. It is clear from the correspondence that Hardman's employed a number of blacksmiths to carry out Pugin's designs and in a letter in 1847 Pugin instructs John Hardman 'you should go at once to Oscott to borrow the different specimens of ironwork from the museum and examine carefully the locks on the chests in the sacristy — if you can get one off so much the better —

they will be most useful.' This letter also refers to a design for 'a pattern lock for the Palace of Westminster which will go with the hinges you made'. Included in the Great Exhibition were some very fine Gothic keys and in the Hardman correspondence there are several references to Gothic padlocks. The door furniture and the locks at the Palace of Westminster are especially fine, and reflect credit on both designer and locksmith. Pugin also designed some very elegant wrought-iron screens; one from St Giles's, Cheadle is formed in a design of deceptively simple quatrefoils, surmounted by a delicate cresting composed of repeating fleurs de lys, the details highlighted with gilding.

Pugin designed several churches, and included some furniture designs. He made several individual designs for communion vessels and crucifixes, which were quite expensive. To meet the demand for less costly items, Pugin created some designs for Hardman to make as stock items. This was also a shrewd business move, allowing Anglican churches to buy Pugin's designs — but from a protestant maker!

'pointed arch' architecture

Pugin published a polemical essay asserting that the 'pointed arch' architecture was the only true Christian architecture (not a sentiment which would have been espoused by First- or Second-century Christians). However, his trenchant comments on design and craftsmanship are as valid today as when he wrote them.



Lock-plates and door handles, brass; made by John Hardman & Co. for Eastnor Castle, Herefordshire, 1849.

Pugin castigated 'glaring, showy and meretricious ornament' as 'never so much in vogue as at present'. He also condemned cast-iron as a deception.

Pugin made a particular point of the mediæval skill of suiting the design to the material, and having regard to fitness for purpose. 'In the first place, hinges, locks, bolts, nails, &c., which are always *concealed in modern designs*, were rendered in pointed architecture *rich and beautiful decorations*; and this not only in the doors and fittings of buildings, but in cabinets and small articles of furniture.

The early hinges covered the whole face of the doors with varied and flowing scroll-work. Of this description are those of ... the western doors of Litchfield Cathedral, the Chapter House at York, and hundreds of other churches, both in England and on the continent. Plate III. figs. 1 and 3.

Hinges of this kind are not only beautiful in design, but they are *practically good*. We all know that on the principle of a lever a door may be easily torn off its modern hinges by a strain applied at its outward edge, (fig. 2.) This could not be the case with the ancient hinges, which extended the whole width of the door, and were bolted through in various places. In barn-doors and gates these hinges are still used, although devoid of any elegance of form; but they have been most religiously banished from public edifices as unsightly, merely on account of our present race of artists not exercising the same ingenuity as those of ancient times in rendering the *useful* a vehicle for the beautiful: the same remarks will apply to locks that are now concealed and let into the styles of doors, which are often more than half cut away to receive them. Plate III. fig. 4.

A lock was a subject on which the ancient smiths de-



SKIDMORE'S
 FIRE & THIEF-PROOF
 IRON AND STEEL
 STRONG ROOM DOORS
 AND FRAMES
 And STEEL SAFES.
As supplied to the largest Architects and Contractors throughout the United Kingdom.
 PRICE LISTS, with references and list of public buildings supplied upon application.
Established 1850.
THOS. SKIDMORE & SON,
 Staffordshire Safe Works,
 WOLVERHAMPTON (England).
 Melbourne, 1898, Prize Award.

Skidmore advertisement from the Architectural Review, 1897

lighted to exercise the utmost resources of their art. The locks of chests were generally of a most elaborate

and beautiful description. A splendid example of an old lock still remains at Beddington Manor House, Surrey, [this lock is now on display in the Victoria & Albert Museum, London]. ... In churches we not unfrequently (sic) find locks adorned with sacred subjects chased on them, with the most ingenious mechanical contrivances for concealing the key-hole. Keys were also highly ornamented with appropriate decorations referring to the locks to which they belonged; and even the wards turned into beautiful devices and initial letters. Fig. 5. In all the ancient ornamental iron-work we may discern a peculiar manner of execution, admirably suited to the material.'

Pugin also had a relationship with Thos. Skidmore & Son. Skidmore's made many of the locks Pugin designed, together with some architectural ironmongery, and some impressive wrought-iron screens. Today the company is probably better known for its safes and strongroom doors.

Richard Phillips, adapted from Paul Atterbury: Pugin. Yale, 1994.



Will homeowners say good-bye to keys?

In 2005, Cambridge Homes, an Altamonte Springs, Fla., division of K. Hovnanian, began offering a keyless entry lock by Kwikset for all of its models, says Maurita Pohlman, a design studios consultant for the company. But since the introduction, there haven't been many requests for the product, Pohlman says.

"I think [home buyers are] just not as familiar with it", Pohlman says. "If it continues to not generate any interest, we'll probably eliminate it from our selections."

Although those in the industry say keyless and remote entry locks are the wave of the future – and note that such models are now common in commercial and multifamily projects – few owners of single-family homes seem to be jumping on the bandwagon.

U.S. Homes' Sacramento division, a subsidiary of Lennar, does offer a keyless model by Weiser Lock as an upgrade, but few people request it, says Chad Martin, a marketing coordinator who works with products at the company design center.

Monica Soladay

Building Products, Jan-Feb 2006

Looks like mechanical keys will be with us for a few years yet then!

Broughton's of Leicester

I was looking for some cabinet hardware – fittings for a small cabinet, a nest of shallow drawers I had. These drawers were made of solid mahogany, with various depths. Originally they had been made to hold lathe tools. They seemed well suited to storing locks and keys. I lined the drawers with a coarse woven linen (similar to hessian), after polishing the outside of the cabinet. I also replaced the velvet top of the cabinet. What I could not find was small drawer pulls.

On a visit to Leicester I was walking down Churchgate, and found myself outside the (old – there is now a bigger showroom in an old cinema) showroom of Broughtons of Churchgate. As is well-known, the only shops men willingly go into are ironmongers (or in our case, locksmiths). So I happily went into the showroom.

I found the cabinet fittings I needed. And much more. Broughtons have an extensive range of door and window ironmongery in wrought iron, cast iron, and brass.

Malleable iron is particularly suitable for the production of Period Ironwork due to its strength and durability. Over 360 items of their range of Black Period Ironwork are displayed and are in stock at their showroom. Special order items (commissions) are also available if you are matching existing furniture.

They have some fine brass rim locks,

remakes of some items from their old catalogues (they have been making ironmongery and brassware for nearly a century and a half). However, the brass rim locks, though sturdy, are only 2 lever. They are still made as they were, when 2 levers was often considered adequate security. Of course, insurance companies do not like rim locks, with doubts over the strength of fixing. So Broughtons advise (and sell) modern security locks.

Broughtons also have a considerable number of genuinely old/antique locks in stock. What is in at any time varies, as these come from salvage, and other sources. They are cleaned and restored, ready for fitting. Prices vary greatly, according to source and the amount of work which has to be done on the lock. There are usually several Victorian/Edwardian warded rim locks, and some Chubb (or Chubb-type) combination latches in stock.

If you cannot find what you want, either new or old, they will make something for you. Either one of their own old patterns, or to your pattern. Also it is possible to make a lock of a different hand, if required. This service is not cheap, and does take time; but it is useful to architects and restorers.

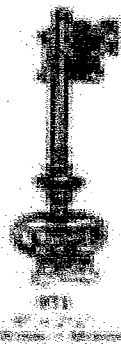
I found the showroom fascinating, and the staff helpful.

Broughtons of Leicester Ltd, The Old Cinema Cropston Road, Anstey Leicester LE7 7BP, United Kingdom

Tel.+44(0)116 234 1888

Fax. +44(0)116 234 1188

<http://www.broughtons-churchgate.com/>



Broughton's showroom

Crime wave

Several issues ago I published a short list of films featuring burglary and safe-breaking. No other suggestions have come in, but the subject has been extensively covered in a recent book, so here are the details.

AUTHOR: Hughes, Howard

TITLE: Crime Wave

SERIES:

PUBLISHER: I.B. Tauris

ISBN: 1845112199

FORMAT: Paperback, 244 x
172mm, 264pp

BIC: Films, cinema

DEWEY: 791.436556 -
791.436556

PRICE: £14.99

PUB DATE: 26/05/2006



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DESCRIPTION:

Crime movies inhabit dark and desperate worlds, yet they account for many of Hollywood's most triumphant successes. In full acknowledgement of this achievement, "Crime Wave" offers an authoritative and informative, stimulating and entertaining guide to the crime movie phenomenon, from its early days to the present, charting its history and celebrating the people who have given it a special and enduring place in cinema goers' affections. Chapters focus on landmark Hollywood films - from 1931's "The Public Enemy", through "The Maltese Falcon", "Point Blank", "Dirty Harry", "The Godfather" trilogy and "Goodfellas", to "LA Confidential" and "Oceans 11" - telling their stories and on the way discussing many more crime movies, both major and lesser known. "Crime Wave" represents and investigates gangster and heist movies, blaxploitation and noir, murder mysteries, vehicles for vigilante or buddy cops, even a gangster love story. It features biographies and filmographies detailing the key participants and background details of the film's making, locations and sets.

It also explores each film's sources and influences, its impact on the crime genre and current fashion, including spin-offs, copies and sequels. It examines the films' themes, style and box office fortunes. Detailed cast list information is provided for each of the main featured films. Written with passion, for those who love this cinema, "Crime Wave" is the perfect partner in crime.

Workshop notes

Most collectors wish to have their locks not only conserved and stable, but clean and in working order – restored if necessary.

The majority of locks are made of ferrous metal, iron or some form of iron alloy; or of brass. Most locks mainly of brass also have some ferrous parts. Both metals can have a variety of finishes.



A concretion of stone, iron oxide, and iron — as tested by a magnet.

Sometimes there is an initial problem when it comes to working on a lock. Iron is so prone to rust that it can initially be difficult to undo screws to take a lock apart for working on it. The subject of the corrosion of iron is a complex one, but fortunately few of us need to concern ourselves with much of the scientific detail of this.

Auto-electricians in the past had a wheel screwdriver for unscrewing tight screws (holding the field coils of dynamos, for example). It was like a drill press in appearance; a lever could apply great pressure to keep the bit in the screw-head, whilst a wheel of about 18" diameter could apply enormous torque to undo a screw. These seem to be no longer used, so if you find one going cheap, it could be a useful shop tool.

The impact screwdriver

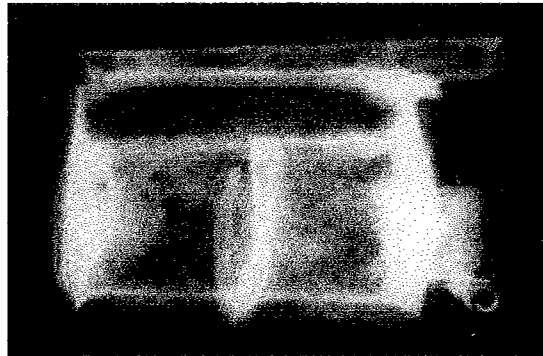
Today, a tool that was formerly a rare specialist tool has become readily and inexpensively available. The impact screwdriver is about the size of a large cold chisel. It usually comes with a choice of interchangeable bits. It will undo or tighten screws very effectively. It contains a ratchet to convert part of the impact of a hammer blow into a turning force, whilst staying firmly in the screw slot. Other methods are also available, such as heating the screw with a soldering iron and allowing it to cool; or Plusgas Fluid A™ penetrating oil. If all else fails, there are screw extractor sets, which damage the screw, or drilling out the head.

Rust softeners

Few locks are collected (other than archaeological

specimens) which have deteriorated to a mass of rust, and any such need expert attention. Most are suffering from surface rust. A power wire brush will tend to polish rather than remove rust. A better course is first to soften the rust with paraffin oil (kerosene). After using kerosene, the iron must be thoroughly cleaned with a dry cloth, and kerosene replaced usually with oil or wax. This is because the water dissolved in kerosene will in time encourage further rusting. On a small scale, medicinal paraffin oil can be economic instead.

Plusgas Fluid A® may also be used. This is acidic, and



This x-ray shows that the corroded lump at left is a 'chinese' slide-key padlock, with the spring mechanism missing.

should also be thoroughly removed afterwards, by wiping with light oil, or .303 Oil® – see below.

The table of treatment of iron and steel is from Plenderleith¹, which is the best book generally available. However, its coverage of iron and steel is not as extensive as might be wished. It is of more use for objects of precious metal and vertu.

Among mild abrasives, in addition to wire brush and wire wool (which comes in a range of grades and is relatively inexpensive), carborundum powder or paste can be useful. Small tins can be bought from motor accessory shops - motor engineers use (or used to use) them for grinding engine valves.

Potscourers

A museum conservationist gave me some other tips. Plastic sheet potscourers (commonly of green nylon mesh) are useful on locks which are more dirty than corroded. This is so successful that 3M now package a graded range of this material for metal cleaning and sell it through DIY and tool shops! For cleaning and polishing small parts in particular, Garryflex™ blocks are useful.

Garryflex² blocks are made of a resilient rubber loaded with abrasive grit and available in 4 grades (36 - 240 grit). The grit is evenly distributed through the block. It stays constant throughout its life, without becoming finer in use. It does not clog, and it can also be lubricated with water or oils. It can be used in place of

(Continued on page 12)

What is LibraryThing?



Enter what you're reading or your whole library—it's an easy, library-quality catalog. LibraryThing also connects you with people who read the same things.

- Get recommendations.
- Connect to people with similar libraries.
- Tag your books as on Del.icio.us and Flickr (eg., wwii, Victorian, philosophy of science, vampires, theology, dogs).
- Put your books on your blog.
- Export your data.
- Import from almost anywhere too.
- Enter 200 books for free, as many as you like for \$10 (year) or \$25 (life).
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Questions from readers

Write in to "Locks & Keys" with your questions about locks. Somebody will surely be able to supply answers. The Editor will be pleased to print a composite answer to questions. When replying, please mention the number of the question.



5] Trevor Dowson would like any information or trade catalogues on the safemakers George Withers, Samuel Withers, and Thomas Withers, who had separate businesses in West Bromwich. Also the safemaker Bash & Co, in business in Glasgow c.1874 - 1911.

For sale / Wanted

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<http://www.locksmithvideoschool.com/TT/OKSpecial.htm>

(Continued from page 10)

emery cloth, wet and dry paper, wire wool, etc. Blocks about the size of a sanding block cost about £3. The company also makes a wide range of abrasive finishing products such as flap wheels and disks, shaped grindstones, and rotary cutting burrs and other such tools. Consult your local tool merchant or engineering supplier.

Other useful tools can be made or had cheaply. Cleaning brushes, of bristle or bronze wire, and cleaning jags, such as were used for cleaning pistols, are useful for reaching inaccessible places in lockcases. With the banning of legal private ownership of pistols in Britain, demand for these tools will be restricted to illegal owners. There are many of these tools around, and they can be used with short strips of emery paper, or rag loaded with emery paste.

Rust solvents and rustproofing

Among the best rust removers is phosphoric acid. It acts as a rust solvent for light rust, and then as a rust inhibitor. Jenolite™ is a proprietary form much used by motorists for rust treatment. The original form is a liquid. There is also a thixotropic (non-drip) form, which leaves an undesirable residue, and is best avoided. Phosphoric acid leaves some steels a pleasing dull black. Indeed, phosphating as a rustproofing treatment was introduced in the 1930's. (Some steels, however, become a grey or mottled grey/black finish. It is largely a matter of taste what is acceptable.) Blueing (actually the result is more usually rather black than blue) can be produced by heat on some steels. It looks good on some small parts, such as screws. Other acid solutions produce better results than phosphoric acid. Gun dealers (if you can find any still in business in Britain) sell cold 'blueing' products such as G-99, excellent for small parts. Blueing is also an excellent finish for some steel keys, after cutting. Other acid solutions can be used to produce 'browning'. This is a stable brown oxidation finish often used on guns before blueing became the usual finish, and is good for old iron keys, though it is less rust resistant than blueing. A gunsmith can advise on the process.

Surface protection

When rust has been removed or stabilised, and if necessary, chloride salts washed off, and perhaps blueing applied, most metal

(Continued on page 13)

objects should be protected by some surface film.

It might be desirable for a lock going into service to be painted or repainted. There is a large variety of paints available. Household wood/metal enamel is often suitable, but cellulose (or acrylic) spray paints widely used in the motor industry are easy to use and convenient for small jobs. Suitable primers and undercoats can be obtained from motor accessory shops and specialist paint dealers. For rim locks, it is a matter of choice whether matt or gloss finish is used.

In the past, lanolin or petroleum jelly (Vaseline™) were often used for items in showcases, but they leave the object sticky and greasy. 303 Oil™, from gun dealers, is a water-soluble oil useful for protecting steel. It dries to a protective coat which is nearly dry, and protects from the level of moisture found indoors. It has no lubricating property, but it is helpful in cleaning dirty metal where the grime is a mixture of grease, rust, and soot etc. Much better is **microcrystalline wax**³. This is a semi-synthetic wax useful for preserving metals, wood, and leather against moisture. It does not attract dirt or airborne contamination. A proprietary form is sold as Renaissance Wax™. This can have additional solvent, white spirit or petrol, added, to make it easier to apply by brush instead of wiping on with a cloth. It is good for protecting metal, wood, and leather objects. It leaves a dry surface with a slight sheen, which is pleasing, and can be handled cleanly.

Another finish is clear lacquer. This can be sprayed or brushed on. It is especially suitable for brass and silver, and withstands considerable handling. Frigilene™⁴ lacquer is a suitable cellulose lacquer. Before applying lacquer, objects should be degreased by dipping or wiping with a suitable solvent, such as trichloroethylene⁵ (trichlorethene, Trilene™), or toluene, or cigarette lighter petrol. Be sure to take suitable precautions, such as rubber gloves, and ventilation, with all chemicals. The fumes of trichloroethylene are anaesthetic (but non-flammable); the others are flammable.

Unfortunately, the difficulties of applying lacquer by spraying are such that it is best left to professional conservators; indeed, Frigilene lacquer is not sold retail. Make friends with your local museum conservator, and bring in clean, preferably degreased items, and you might be able to have them professionally sprayed with lacquer as a favour!

It is also possible to protect ferrous metal stored or displayed in enclosed spaces with 'vapour phase inhibitor paper' (from tool merchants). This is useful for protecting tool cupboards and drawers. Unfortunately VPI's can attack copper alloys (brass and bronze), and soft solder. Many locks contain components of copper alloy, so this is not a suitable method, but could be useful for ferrous metal keys on their own.

Lubrication

Locks that are in working order generally need some lubrication. In principle, because it does not suffer heavy corrosion like iron, brass and other copper alloys do not need lubrication. However, brass can tarnish, and most intricate mechanisms benefit from some lubricant. Various light oils are available, from general-purpose oil such as 3-in-1™, or the similar Express™ gun oil, to the lighter sewing machine oil. WD40™ is even lighter, and does not last well, but is useful in a damp atmosphere. It is actually a 'water displacing' product, rather than a lubricant. Many mechanisms require more than oil for lasting lubrication — grease. Plain petroleum jelly (Vaseline™) can be used. Grease containing some detergent, as used for lubricating motor vehicles, generally sticks and lasts better. More intricate mechanisms are better lubricated with a dry lubricant which does not attract dust and grit or become gummy over time, as some oils do. The usual dry lubricant is pure flake graphite. This fine powder is often dispensed in puffer bottles.

In between oil and dry lubricant is 'colloidal graphite'. This is an extremely fine dispersion of finely ground graphite in oil — often a somewhat volatile oil. Graphite lowers the surface tension of the oil without lowering its viscosity. The oil spreads and penetrates more easily, taking the graphite to rough surfaces where it can build up a smooth surface layer. When the carrier oil evaporates, there remains a dry, non-clogging lubricant. Lockease™ is one such product.

There could be a debate about lubricating locks with grease or oil. Although the makers use them, some conservators object to them. If left for a long time (and locks notoriously suffer from infrequent maintenance) oil and grease become gummy, and attract grit which becomes a grinding paste, causing faster wear. On the other hand, whilst dry lubricants do not suffer this problem, they provide no corrosion protection.

Zinc alloy

Zinc was used for making castings from time to time, but proved to suffer from a form of corrosion (resembling 'tin plague'), sometimes in a matter of months after production. Investigation was made in the 1920's, to discover the cause. Various common impurities were found to be the cause of the problem. Zinc of high purity, mixed with minute and carefully controlled quantities of other metals (aluminium, magnesium, and copper) was found to produce a satisfactory casting alloy. In America this is called Zamac, and in Britain, Mazac. Actually there are several similar alloys, but consumers need not be concerned at the minor differences. Alloy produced since the 1930's should be stable (although some specimens have proved to be unstable). The corrosion manifests as flaking and cracking. Unfortunately, there is no cure, and no effective prevention measure. The only help is to

keep Mazac items cool and dry.

Surface finishes

Conservationists prefer to preserve as much as possible of what survives of an object's original finish and condition. Private collectors generally prefer to restore their exhibits to pristine working order. This is a matter which should be coolly considered and debated.

There is a wide range of finishes now available for modern locks, but most only appeared in the 19th-20th centuries.

Many iron locks until after the medieval period were left 'blued' after the hearth scale was scraped off. Actually, what colour, in a range from blue to black, results from heating and cooling iron largely depends on the exact composition of the iron, and the temperature and cooling procedures. Usually the result was more or less black. Fixed locks were painted over the same colour as the door etc., until late Victorian times. Then came the fashion for painting ironmongery, even some brass, (matt) black.

Paints need an article to themselves. Old paint was more like our undercoat, because high gloss was difficult to achieve. It finger-marked easily, (hence the use of protective 'finger plates' on doors) but was not expected to be repainted every few years. It was not too good at protecting iron from corrosion, especially outdoors.

Forms of bituminous lacquer or varnish were more successful from the 19th century. These finishes are called '[black] japanned', 'wrinkled japan', or 'brown varnish'. Generally the varnish was applied by dipping or brushing, then stoved. This finish is little used today, and difficult to reproduce authentically. 'Black crackle' is a stoved paint finish, easy to apply industrially, but difficult on a small scale. Hamerite™ paint is available in many colours, including black and metallic, is rust-resistant, and is often used on locks restored to working order.

Many ordinary rimlocks and mortice locks can be painted black — matt or gloss. In older conservation areas, they may be painted to match the door.

Wooden lock cases

Wood parts of locks (and all-wood locks) sometimes need conservation. Museum-quality specimens should have expert attention. Many ordinary stock locks and Banbury locks need only a little attention, however. Infestation by wood boring beetles is easily cured by insecticide used in the furniture trade. The solvent for this is a petroleum spirit, and needs ample time to evaporate before wooden lock cases can be painted or given any other treatment.

If the wood has been seriously weakened by woodworm, (or indeed dry rot) it can be consolidated. Valuable specimens should have expert attention. For

ordinary specimens not in too bad a condition, there are now diy wood hardeners (epoxy and polyester resins) readily available which work quite well. These are mobile liquids readily applied by brush or injection. They solidify at room temperature.

Conservation bodies

If you are seriously interested in restoration, the Guild of Antique Dealers & Restorers⁶ is a small and friendly group which would welcome you into membership for a small fee. They are very helpful to members, offering information and advice, and can help source conservation materials. Please contact Maureen Edmonson, and mention *Locks & Keys*.

Another body is the Conservation Unit⁷, which exists to foster conservation, and to improve the quality of care available to collections, including private ones. It provides advice and information.

Archaeological specimens

Few readers will likely have much to do directly with archaeological specimens, but the pictures above show what is possible for well-equipped experts. Within archaeological conservation it is standard practice that all iron objects, and other metals with voluminous corrosion and burial products, should undergo x-radiography. This procedure is a quick and cost-effective method of assessing what lies beneath the corroded surface of objects. As well as the shape, a large amount of information, such as manufacturing techniques, decoration and artefact technology, can be revealed.

1 PLENDERLEITH, H J, *The conservation of antiquities and works of art: treatment, repair, and restoration*. 2nd ed. London, OUP 1971. 0192129600

2 Garryflex™: Garryson-Insley Ltd Spring Road Ibstock Leicestershire LE67 6LR 01530 261145.

3 Renaissance Wax™: Picreator Enterprises Ltd 44 Park View Gardens Hendon London NW4 2PN; 0181 202 8972. They supply a range of conservation and restoration materials. Microcrystalline waxes may also be obtained from Liberon Waxes Ltd 6 Park Street Lydd Kent TN28 8XU; 01697 20107/21299. Other suppliers are Conservation Resources (UK) Ltd, Unit 1 Pony Road Horspath Industrial Estate Cowley Oxon. OX4 2RD, 01865 747755; and Alec Tiranti Ltd, 70 High Street Theale Reading Berks. RG7 5AR, 0118 9302775.

4 Frigilene™, and other lacquers: Wm Canning Ltd Great Hampton Street Birmingham B18 6AS; 0121 236 8621. Canning are also suppliers of electroplating supplies. Nickel plating, for example, can be a useful finish for modern keys, if time is available after cutting.

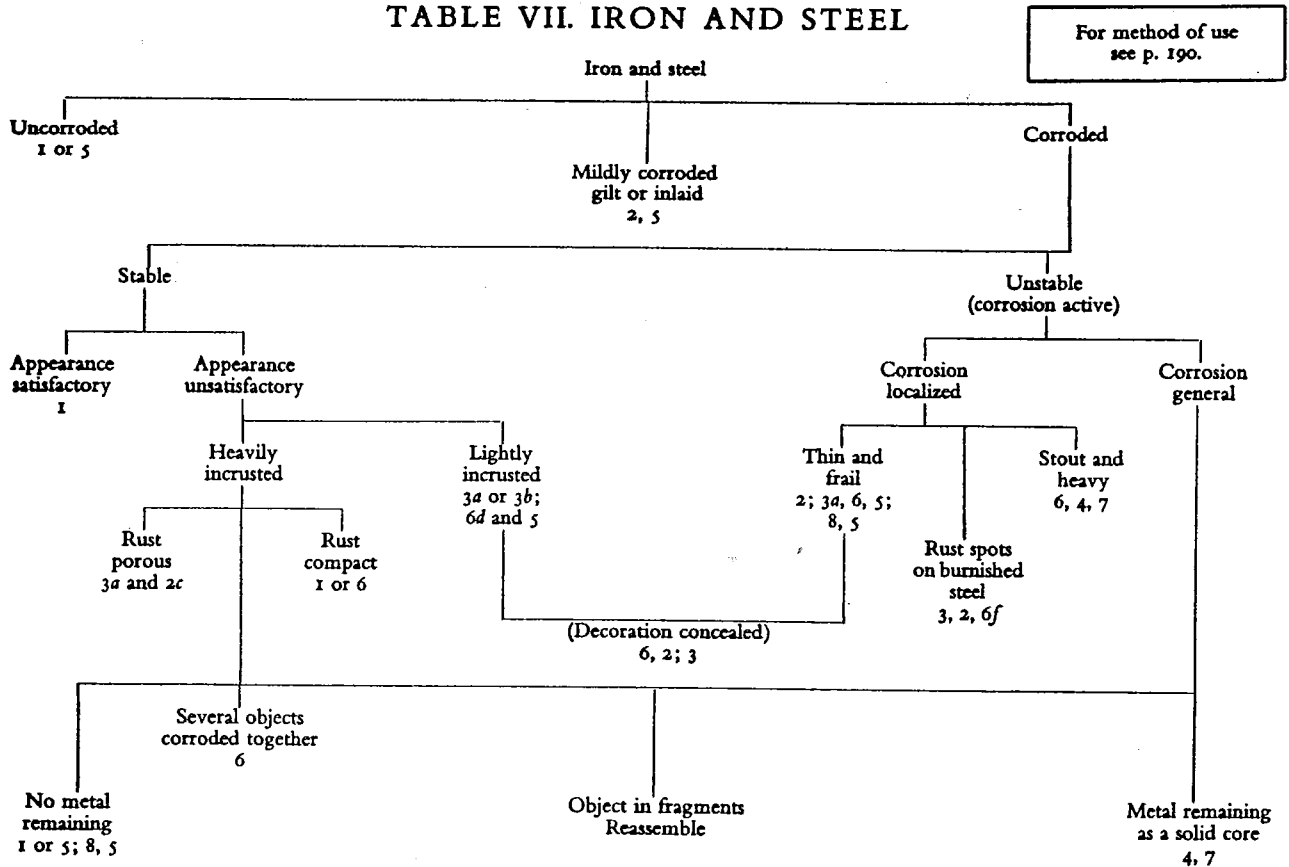
5 from a pharmacy or dry-cleaner.

6 Guild of Antique Dealers & Restorers: Secretary, 2 Willow Cottages Hereford Road Shrewsbury Shropshire SY3 7QL; 01743 271852.

7 The Conservation Unit, Museums & Galleries Commission 16 Queen Anne's Gate London SW1H 9AA; 0171 233 3683, fax 0171 233 3686.

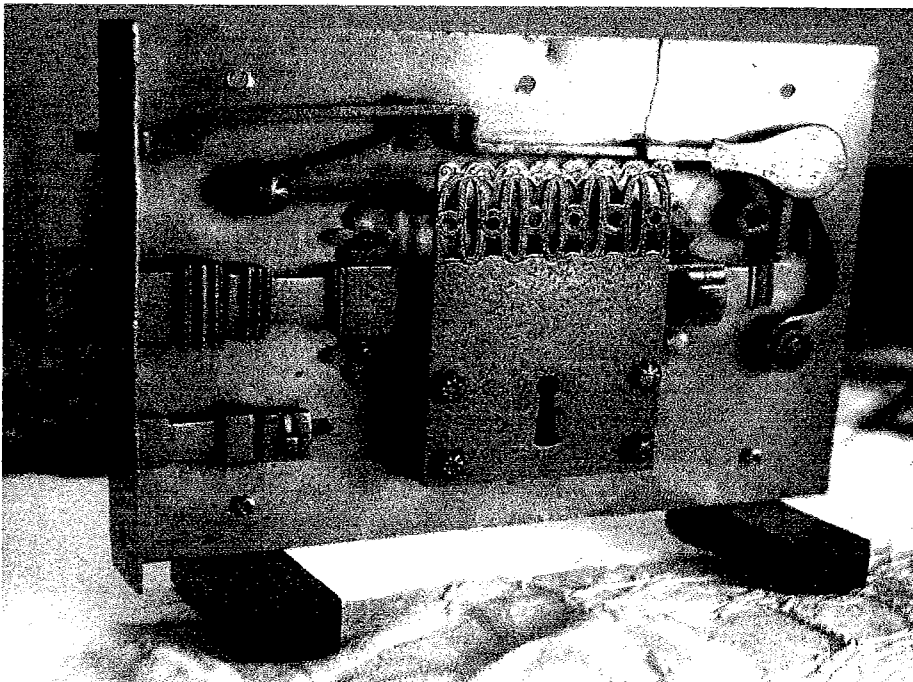
Bluing details are available here:
[http://en.wikipedia.org/wiki/Bluing_\(steel\)](http://en.wikipedia.org/wiki/Bluing_(steel))

TABLE VII. IRON AND STEEL



1. No treatment.
2. Mild abrasives:
 - (a) Fine emery powder; (b) carborundum powder; (c) steel wool.
3. Rust softeners:
 - (a) Paraffin oil; penetrating oil; 'Plus-Gas Fluid A'.
 - (b) Petroleum jelly; lubricating oil; clock oil.
 - (c) Lanolin mixtures.
 - (d) Deoxidine, Jenolite.
 Rust solvents:
 - (e) Oxalic acid.
 - (f) Citric acid half neutralized with ammonia.
 - (g) Deoxidine, Jenolite.
4. Reduction: (a) zinc and caustic soda. (b) electrolytic reduction.
5. Protective finishes: (a) lacquer, (b) microcrystalline wax.
6. Mechanical: (a) picking, (b) chipping, (c) grinding, (d) scratch-brushing, (e) grit-spraying, and (f) burnishing.
7. Washing in hot distilled water to remove soluble chlorides.
8. Washing in hot caustic soda or cold sodium sesquicarbonate.

Catalan lock (Carles Ortes)



Catalan door lock, 15C., of fine workmanship. The base plate is bronze, the rest iron. The scroll spring on the latch is used because wrought iron is not very springy. 11.4" x 7.9" (photo: Carles Ortes)

A small part of the lock stock of

WMC Antiques

The "Victorian Ironmongers"

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