

# The Lock Collector

From Tony Beck  
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## Editor's Note:

This issue extends the miserly single page biography of Edwin Cotterill included in the last one! He stands highly amongst the greatest English lock inventors, particularly for his *Climax Detector* lock patented in 1846. This issue contains Part 2: *His Middle Age and Lock Inventions*. The final Part 3 will follow next issue.

Most of us will know of Willenhall Lock Museum's demise and transformation to The Locksmith's House. All this involved considerable change when the Black Country Living Museum became the new owners in May 2003. Richard Hopkins, who helped them to deal with the complexities of cataloguing the Locks, Keys and Archive material, has kindly contributed an article setting out what was involved.

I do hope it will be found interesting, and perhaps some questions will arise. Like - will an Inventory of all the locks, keys and archives be sometime available to view? Does the Museum intend to consult with lock collectors on what items are to be exhibited in the Locksmith's House apart from those initially on show? Also what plans are there to introduce the Museum's exhibits held in BCLM's Dudley store to public view?

It's certainly sad to see the opportunity lost that might have seen finance being provided to expand and create a fine Museum dedicated to locks and keys; like there is in Austria, France, Germany, Holland, U.S.A., etc. However it can be appreciated that, at the time a quick fix became a necessity. Maybe sometime our Country might be forward looking enough to allot sufficient public funds to make this a reality - or is it just a case of dream on!

## Bits & Bobs:

**Visit to the Hanns Schell Collection in Graz, Austria (Friday/Saturday, 16<sup>th</sup> & 17<sup>th</sup> September).** Many Collectors of mixed nationalities attended this fine privately owned Lock Museum. Their large quantities of exhibits are excellently displayed in modern well lit showcases with good descriptions.



Exterior view of the modern three-storey building



An illustration showing how the exhibits were well laid out.

An opportunity was provided for trading on the Saturday morning and sales seemed to proceed at a steady pace. Most of the visitors, including many from America, England, and Germany seemed to have well enjoyed the occasion. It was certainly great to meet up with fellow collectors! The city of Graz is a fine place with plenty to see and I shall look forward to spending another visit there sometime.

## **The Willenhall Lock Museum Transformed - a Helper's View, by Richard Hopkins.**

As most readers will be aware, the Museum's funding was removed and it closed for four months until

being revived as an outstation of Dudley's Black Country Living Museum ('BCLM'), on 1<sup>st</sup> May 2003. Now called the Locksmith's House it operates as a social history museum. BCLM have rearranged the interior and introduced some new exhibits, but the upstairs showrooms are very much as they were - displaying locks and keys from the local area. Here below is a fine example:

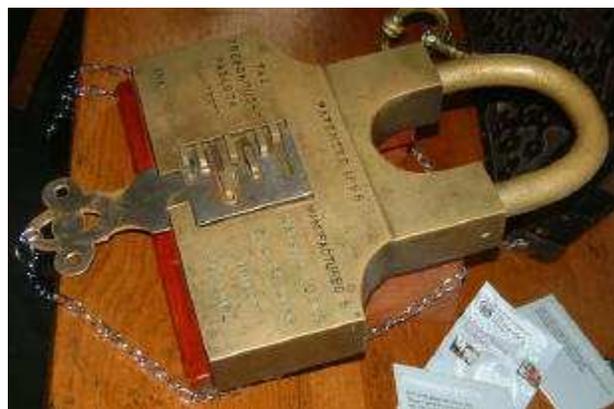


The Albert Lock, by Carpenter & Tildesley of Willenhall for the Great Exhibition of 1851 has elaborate wards, levers and a Bramah style lock mechanism.

The archives and stock of donated locks were removed from Willenhall to the BCLM and put into store. Assa-Abloy sponsored someone to catalogue these and Sheila Hennings was appointed. Having to sort out the collections, arrange displays and reorganise activities with no prior knowledge of locks she asked for help - I offered to come up from Bristol with my friend Dave whenever I could, to try to be of use.

Prior to the Lock Museum closing, when interested people were well aware that it was in difficulty, we had visited the collection on many occasions to see what was actually in the dusty cardboard boxes. As a result I probably had more idea of the contents of the collection than anyone. One discovery was that the existing computer and ledger records were woefully inadequate. Many times we would ask what the computer said about an interesting find, only to be told it was "a lock" or "a key" - no detail or history!

At the BCLM we found all the boxes were on racking in a room on the top floor. In an adjoining room the archives were in cardboard boxes all over the floor. With the initial help of a temporary assistant we tried to make sense of the labelling on these boxes. Gradually every box was worked through; numbers were checked against the existing record and the contents then compared with the paperwork. Some discrepancies were noticeable and in other instances we were amused to find odd splinters of wood with their own acquisition numbers. They had been in the box when stuff was donated and 'everything must be recorded'! Sometimes the acid free tissues only held a pile of rust but in others we found some really fine, uncommon locks and keys which were then taken and added to the display at the Locksmith's House for everyone to enjoy. Many of these are displayed in the fine old glass cases shown below, left.



Central case ("The Evolution of Locks") & a demonstration Dreadnought Padlock made by Walsall Lock & Cart Gear Co., patented 1896.

An aspect that baffles me is why did the Museum accept so many identical items that are of only passing interest to lock enthusiasts. Though of course, it is not good policy to tell a prospective donor that what he/she treasures is common and not required. The next item they might hand over could be extremely rare and may be withheld if any offence has been caused!

A further problem arose when a small lock company closed and donated all its stock to the Museum. This meant that all their unsold stock together with tools and equipment arrived there and had to be accepted. This was a common occurrence so there is a high degree of duplication of some items. Admittedly, if the Museum had not accepted the large number of items from Union when it was taken over, their donation might have been consigned to the scrap bin - so I should not really complain.



**(Editor's Note: perhaps some of this duplicated material might be used to extend the displays around the Locksmith's House including this large upstairs Workshop. Although admittedly this particular area seems reasonably well filled. It provides an interesting demonstration of a Victorian locksmith's working environment.)**

I believe there should be a system that allows all museums to sift contributions and be selective. All sort of governing laws and rules exist, but a little common sense would have been so helpful. I think things have now improved but am pleased not to be involved with the day-to-day running of a large museum.

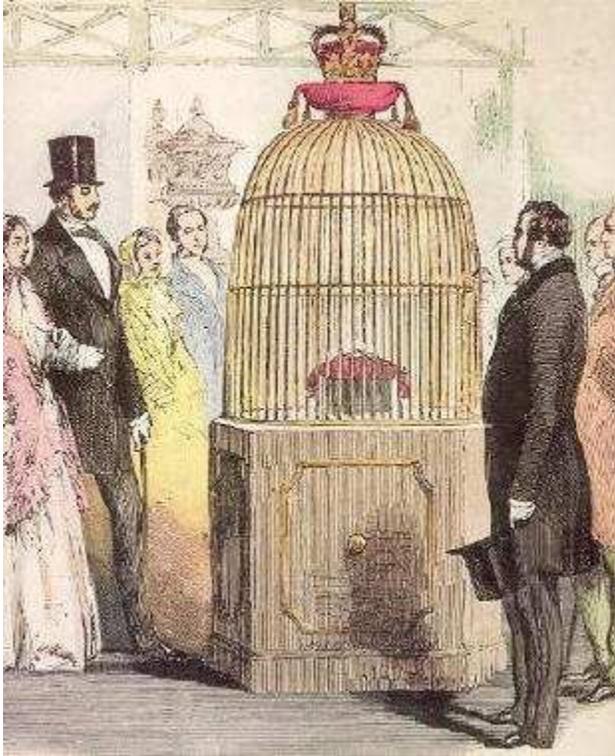
There were other helpers; Trevor Dowson also spent some time working on the archive material and put all the manufacturer's small brochures and leaflets in alphabetical order in filing cabinets. This made it easy to find things and was also great to look through when we had a few moments to relax. Peter Hall also assisted with valuing some of the collection to keep the Museum's insurers happy.

We now know most of the boxes contents and will be returning to BCLM soon to make a start on improving our initial basic entries. Dave and I had the easy job but then Sheila had to try and write up, and in many cases enter onto the computer, the information we had provided. This has taken place over the last two years and we have tried to get to BCLM roughly every six to eight weeks. We have juggled with some of the lock company catalogues and, a couple of months ago had them all in alphabetical order by Company name, and (when there were several catalogues from the same manufacturer) in date order.

The work that Dave and I have done has been dirty, tiring, often in a very cold room and quite heavy; not to everyone's taste, but good fun! It is set to continue for some time for, although Sheila has moved on, a new curator Graeme Clarke has been appointed and has had his office and archive material moved to Willenhall. All the fine tuning we have done will have to be repeated before we can get stuck into a more detailed record of the things that I find most interesting - locks and keys.

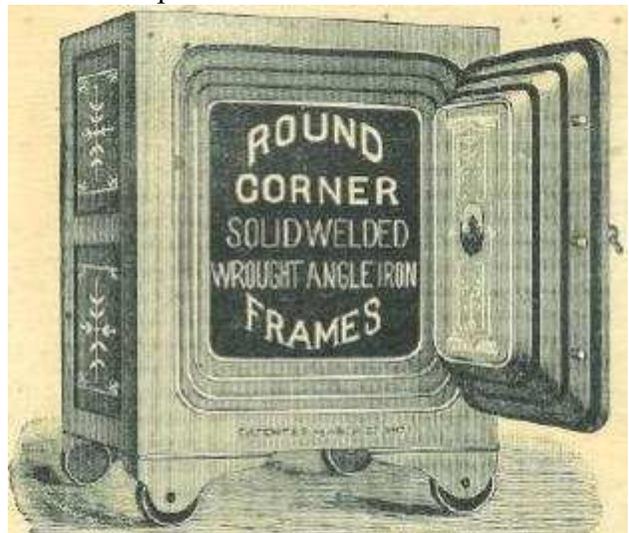
## Interesting Items:

On the left is a contemporary illustration of the fabulous Koh-I-Noor (*Mountain of Light*) diamond on display at the Great Exhibition of 1851. It was exhibited there in a large gold ‘bird-cage’ design cabinet. Chubb & Son made it secure at night by mechanism that lowered the jewel into one of their safes below.



Quite a different exhibit here on the right above; an advertising key ring shaped like an American safe.

Below left this photograph adopts the Edwin Cotterill theme contained in this issue. It shows part of the padlock number 1040. However, strange to see the firm has misspelled their trade mark “Acme” name.

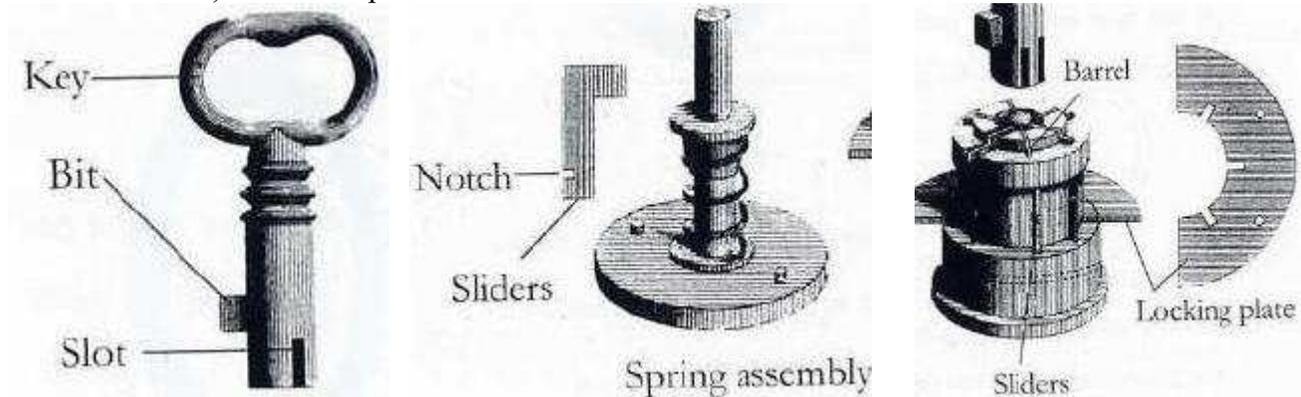


On the right above is a Diebold Safe Company advertisement for their patent safe product of about 1880.

## ABC of Locks for Collectors - B:

Loosely following Josiah Parkes and Sons Limited Encyclopaedia of Locks & Builder's Hardware, Willenhall, 1958.

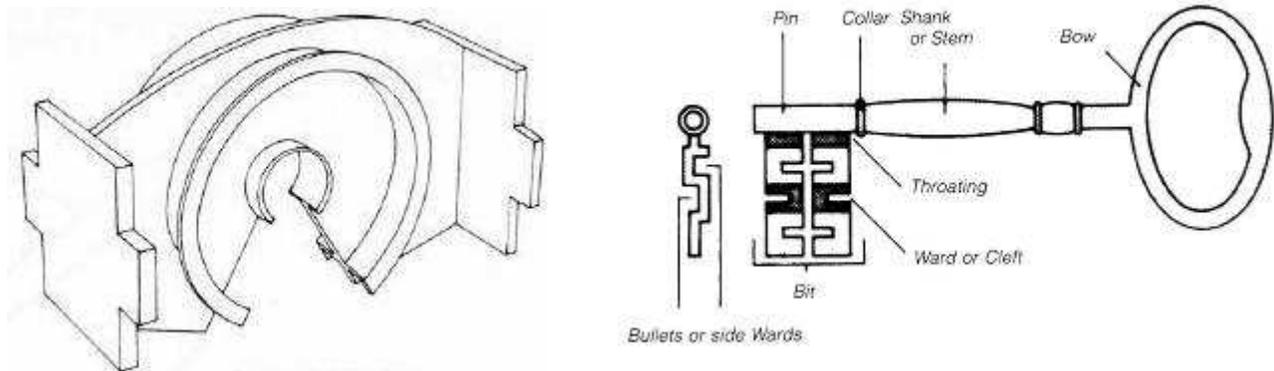
**Bramah's Lock.** Within the outer case is the central keyhole, drill pin on which the key fits, and rotating barrel. The barrel is slotted vertically for part of its length to admit sliders which are shaped to project into the central keyhole. Each slider has a differently placed notch in its outside edge. The key has slots of different depths cut into its bit end that correspond with the position of these notches. The number of slots depends on how many sliders are fitted (four in the earliest locks and as many as 18 in top quality exhibition locks). The main parts of the mechanism are illustrated below:



Each slider passes through radial slots in a circular locking plate which is screwed to the underside of the case. It fits in a groove at the lower end of the barrel and is split in two halves for easy assembly. These sliders are normally kept at the top of the barrel by a spiral spring that fits over the drill pin as shown. In this position the barrel cannot be rotated as the sliders are held by the slots in the fixed locking plate.

However if the key is pushed in the sliders are depressed to the respective depth of each key slot. Pushed in fully all slider notches should then fall into line with the inside edge of the locking plate. The barrel will then present the appearance of having no sliders at this point and it will be free to rotate around the plate. The key bit is used for turning the barrel, and as it revolves operates the bolt mechanism.

**Bridge Ward.** The type of ward fitted onto a plate, or bridge held in the centre of locks having access from both sides. As the key is turned its bit passes through the wards typified on the left below.



**Bullet. (1).** Horizontal grooves or projections (or both) on a key bit, requiring a keyhole made to suit. They are darkly shaded in the right hand illustration above. **(2).** In a lock 'bullets' are the corresponding grooves or projections or both, at the keyhole and designed to prevent entry of an improperly shaped key.

## **Part 2 - Edwin Cotterill. His middle age and lock inventions.**

By 1846 at Henry Street, Edwin had developed many new ideas for “Certain Improvements in Articles Applied to Windows, Doors, and Shutters” and it was under this comprehensive title that patent number 11,152 was granted on 25 March 1846. Its wide reaching specification encompassed nineteen items, most of which related to window and door furniture.

However that patent included the **Climax Detector lock**, Cotterill’s most important invention. It was specified for padlock use, though he prescribed that the principle could be applied to every kind of lock and many were. The way it operates can be better understood if appreciated that it is really a Bramah lock but with the mechanism applied **radially** (or spoke like), rather than vertically as in the true Bramah lock.

This means that unlike the Bramah the length of travel of the radial sliders is severely limited, as the size of the keyhole and key determine the extent that they can be pushed out by the key. Here is a simple example of this lock which shows its unusual looking key and keyhole:



The ‘detector’ is the brass crescent moon shaped section of metal shown on the top left, and operates as described below:

The lock can be described as a cylinder lock consisting of an inner rotating brass cylinder; within the top a groove concentric with the outside perimeter has been machined. The groove is sited about half way across the face of the cylinder and into fits a non-moving, blued steel ring (or plate) which is attached to the top cap of the lock. This ring has as many slots cut into it as there are sliders in the lock.

These sliders, which are small steel bars, fit into radial grooves machined in the top surface of the brass cylinder and end in the central large, round key hole where they are bevelled or angled to contact the key. Hidden away beneath the rotating cylinder are as many individual spiral coiled springs as there are sliders, so arranged to push the sliders towards the keyhole.

Each slider, just like the Bramah ones has a deep notch cut into it at a different place. When the key, that has angled cuts in it corresponding to each slider, is pushed into the lock it pushes out all of the radial sliders to different positions. If it is the correct key, all the notches will line up facing the blued steel ring with the gaps cut in it. So that the whole cylinder can freely rotate and move the lock bolt in or out by means of a cam on the back of the cylinder.

If the **wrong** key is applied, the sliders do **not** line up at the correct positions. Continuing to turn the key puts pressure on the slotted steel ring; this is fastened to the top cap of the lock by means of screws in elongated holes which allow the whole assembly to slightly rotate. That causes the "Detector" (or *Click*) looking like a crescent moon, to swing inwards thus deadlocking the cylinder as it engages with two deep grooves in the rotating cylinder.

It is thought that about 90% of Cotterill's *Climax Detectors* had only simple 6 or 7 slider locks. Here is an example of the *Climax Detector* fitted within an extremely fine padlock:



Key:

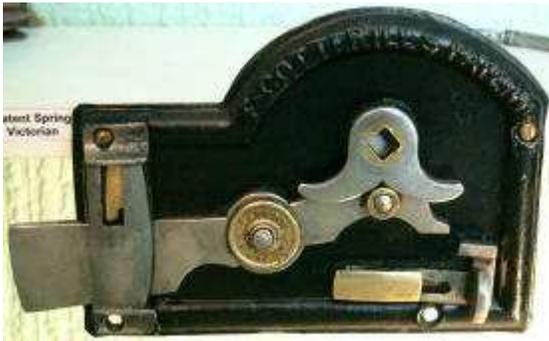


**Improved door latches** were provided in the 1846 patent, in particular a **plate latch** illustrated below. It has curved arms or levers attached to the axis of the door knobs to raise the latch when the knob is turned. A spring on the left side is compressed as the latch is raised, causing it to return when pressure on the door knob is released. Cotterill's advertisement of 1849 is shown below announcing this patent latch:

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**IMPORTANT NOTICE**  
TO MERCHANTS, FACTORS, ARCHITECTS, BUILDERS, AND THE  
PUBLIC IN GENERAL.  
**EDWIN COTTERILL,**  
**PATENTEE,**  
No. 101, HENRY STREET, ASHTED, BIRMINGHAM,  
Respectfully informs his numerous connection, that he is now prepared to supply them  
with any quantity of his  
**NEWLY PATENTED ACME LATCHES,**  
Consisting of THUMB, CASE, NIGHT, and every other description required, which  
are constructed on a truly Mechanical Principle, giving to the whole a pleasant and  
uniform action, and entirely averting the liability to get out of repair.  
Another unparalleled advantage is, that the commonest Acme Latch is far superior  
to the best ordinary Latch made, and is sold at a considerably less price.

This advertisement also introduced the name ‘**Acme**’ which came to be Cotterill’s widely used (and registered) trade mark. **The Patent Acme Latch** is illustrated on the left below:



Improved door latch comprised in the 1846 Patent. It can be locked from inside the door by the bolt, bottom right



Leather case of the Portable Door lock subject to the 1857 Patent.

**Portable Keyhole Door Lock (Patent Lock Sentinel).** Cotterill’s invention of this lock was covered by a Provisional Patent, No. 1331 on 12<sup>th</sup> May 1857. It was mainly used by wealthy travellers who would insert the lock in the keyholes of their hotel room doors to block unauthorised entry.

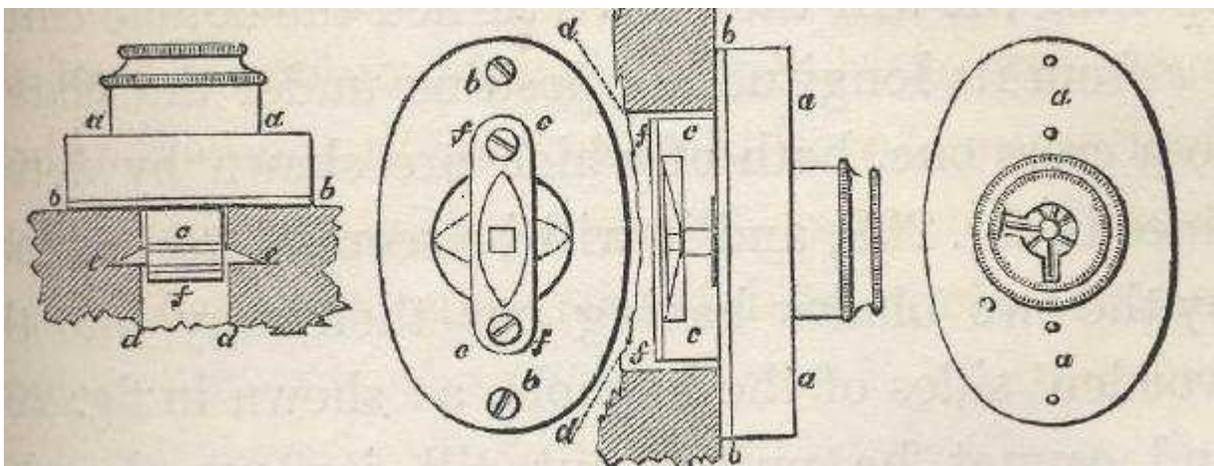
The lock comprises two metal plates joined by a hinge at one end, with opposing notches on their inside edge. They are separated by a square rod along which a button slides. On the unjointed part a small lock is attached to the end of one plate. The rod is also connected to the lock so that on turning the key the rod is turned and it moves the button at right angles to the plates. In this position the plates cannot be withdrawn from the keyhole.

In using this device the button is first adjusted on the rod to the door thickness. That is done by opening the lock, to move a catch on its rear enabling one of the metal plates to open out, like an old fashioned jointed ruler. The rod is also hinged part way along its length so that it can move sideways for the button to be moved. A door pressure spring (as shown in the photograph below) fits over the metal plates.

In this photograph the oval button is hidden by the pressure spring; it rides on the central square rod. When the hinged plates are opened out it can be moved to fit inside any of the six opposing cut outs. When the button is in the same plain as the plates they can be freely moved in and out of the keyhole. But they are held in the door keyhole when the button is moved at right angles:



Cotterill did not apply for Letters Patent within the allotted time, thus no Patent was issued for this lock. Perhaps that might have been caused by his knowledge of a similar lock, called a *Lock Protector* being made by S. Mordan around 1830. Although for that too no apparent patent was issued and Mordan's lock is quite different in its operation as shown by the illustrations below from the George Price 1856 treatise:



Mordan's portable Lock Protector, c. 1830 has a short pipe, which, after the door is locked, is thrust into the keyhole. It has a small Bramah style lock so made that on turning the key "two lancet-shaped pieces fly out laterally and bury themselves in the wood; thus preventing the removal of the protector unless its own key is applied."

**Letters on Cotterill's locks.** The above *Sentinel* lock is marked with a letter "L" on its small lock and on both keys. Here below on the left is a "Royal Climax Detector" key marked with a letter "A". Could this be 1846? If so the letter "L" would date the Sentinel spot-on to 1857.



Royal Climax Detector lock key, marked "A"



A much later Acme 'Signpost' (see below) key, marked "A A"

So maybe these letters were issued annually? I have a Climax detector safe lock marked with a letter "E" which would date it to 1850 which is about its correct age. This would need further research to clarify and confirm, or maybe someone knows?

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In 1850 Cotterill was shown to occupy a house at Washwood Heath together with his factory at 101 Henry Street in Birmingham. By 1852, trading as "patentee, and manufacturer of the Royal Climax Detector locks", Cotterill had acquired additional premises at 105 New Street, described as a 'Depot for Fire-Proof Safes, Chests, & Co'.

The Henry Street property was dispensed with by 1856 and replaced by 16 Vittoria Street which in 1858 became Cotterill's sole trading premises. By 1861 he was employing 30 locksmiths there. Away from business Edwin married Elizabeth Hipwood in Birmingham at Handsworth Parish Church on 20<sup>th</sup> January 1863. He was then aged 48 and his bride was 31.

**COMPLETE IMMUNITY FROM FIRE, THIEVES, & GUNPOWDER.**  
**C O T T E R I L L ' S**  
 IMPROVED PATENT WROUGHT-IRON  
**FIRE-PROOF SAFES, CHESTS, DEED, & BULLION BOXES**  
 Warranted in every way perfectly Fire-proof, Thief-proof, Powder-proof, and Drill-proof.  
 FITTED WITH THE "ROYAL CLIMAX DETECTOR LOCKS;"  
**The only Unpickable and Powder-proof Locks extant**  
 The Keys of which can neither be Copied, nor Impressions taken from them in Wax.  
 The only Keys possessing this great security.

Above is Cotterill's advertisement of c.1863 the year to which this particular Part of his life extends.  
**Part 3 to follow in the next issue will look at Cotterill's later life and his locks that were made then.**

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**Are Whitfield's Locks the Same as Cotterill's?** At the time of Cotterill's middle to later years a lock similar in style and design as his was being made by Samuel Whitfield. So some explanation is called for on this question. I am indebted to Mike Fincher for giving the following advice on the subject.

It has been my experience in the past that working locksmiths generally do not differentiate between the Cotterill and Whitfield cylinder locks! Many times I have been contacted by a locksmith who said "I have a nice Cotterill lock for you" only to find that it was actually a Whitfield! So rather in the way that the general public refer to all pin tumbler door locks as *YALE* locks and all vacuum cleaners as *HOOVERS*, all Whitfield locks have been branded as *COTTERILL'S*.

The one thing that the two locks have in common is that they are both cylinder locks, that superficially look the same and use sliders to achieve security, but there the resemblance ends. The Cotterill lock patented in 1846 is a sort of Bramah lock where the sliders are disposed radially (like spokes in a wheel) rather than vertically.

Whitfield did in fact use Cotterill locks but stopped doing so, at least by 1867 in favour of a lock patented on 20th January 1862 and known as *Mappin's Patent*. Like the Cotterill it has radial sliders but unlike Cotterill, these sliders are all divided, unequally into two pieces. What appears to be one big brass cylinder is actually two concentric ones; an inner and rotating one and the outer non-moving one.

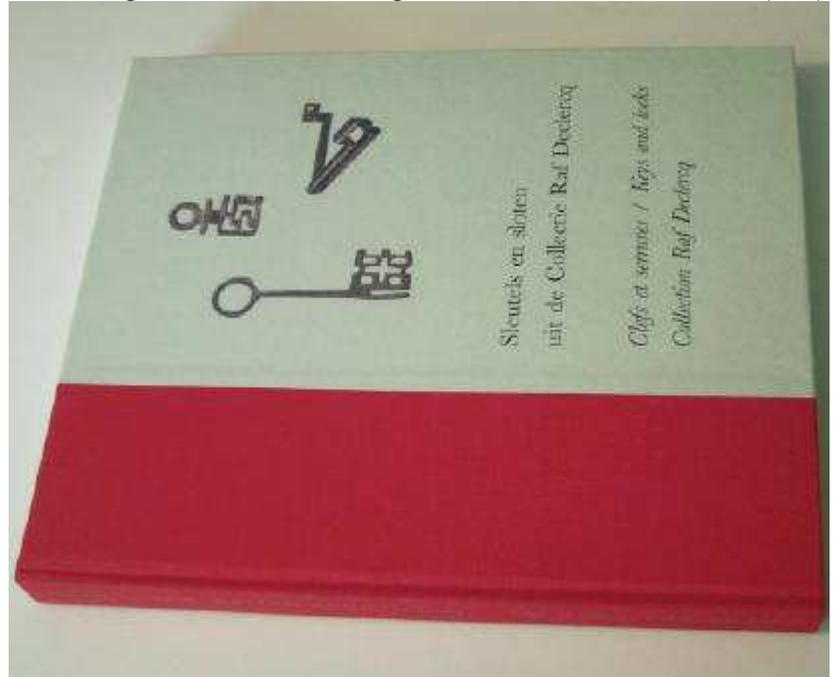
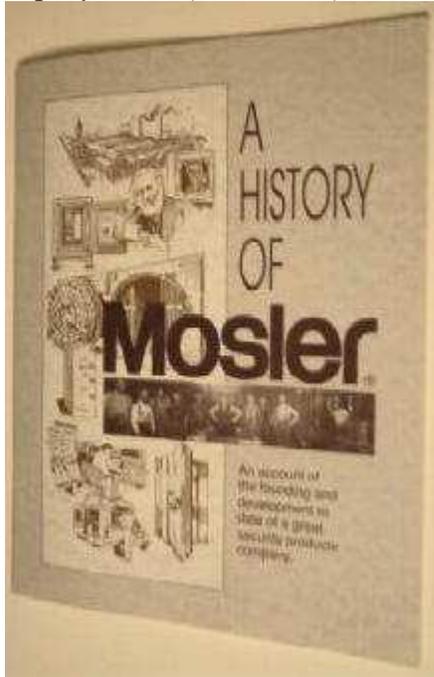
The key, which looks superficially just like the Cotterill key is pushed into the central key hole. This acts on the individual pairs of sliders causing the joint between them to line up on the division between the inner and outer cylinders; assuming the correct pattern key has been used.

As the shear-line between the pairs of sliders and cylinders are now in adjustment, the inner cylinder can freely rotate and pull or push the lock bolt in or out by virtue of a cam on the back of the cylinder. Should the wrong key be used, the inner and outer cylinders are securely locked together, and further pressure will activate a detector, which looks very like the pallets of a clock, causing it to lock up the two cylinders. Thus indicating that a clandestine attack has been made on the lock.

To summarise, the Cotterill lock is effectually a radial Bramah and the Whitfield, is a "Yale" pin tumbler lock using radial split sliders in place of Yale's pairs of pins.

## Literature on Locks, Keys & their Makers:

**A History of Mosler.** An Account of the Founding and Development of this great U.S. Lock & Safe Company. Pictorial stiff card covers with 36 (unpaginated) pages, illustrated throughout. Published by the Company, 1992 (1st Edition). 8.5" wide x 11" high. A most interesting and informative book. **£13 (\$25).**



**Keys and Locks from the Raf Declercq Collection.** A book principally written in Dutch but with English and French translations. First published privately in 2004 it provides selections from the Raf Declercq Collection of the 'Slot - en - Sleutelmuseum' in Nieuwpoort where the exhibits are permanently displayed. The Author, Declercq lives in Knokke-Heist and the book credit's the townspeople's support for its publication. It contains 224 pages with nice hard back covers and is well illustrated with 114 colour plates and 12 monochrome illustrations.

The exhibits and photography are both very good. Just minor points of criticism from my perspective are that the photographs tend to be too spread out, with at times just a single item on a page; also, although the translations are welcome Dutch, English and French does add complexity to reading the book; and for preference in a book of this sort I rather like the glossy type pages rather than the thick matt paper. These are personal views of course and others would see no problem. It does provide a good interesting book to read - size is 11.2" high x 9.3" wide, 28.5cm x 23.5cm. Sale price, new is pretty high: **£53 (\$100).**

## Items Wanted:

Trevor Dowson of 17 Landseer Drive, Gleadless Valley, Sheffield, Yorkshire, S14 1BS is interested to buy British or foreign **Safe plates**, and has duplicates to trade.

**Safe plates** wanted, collections bought, telephone 02893362506.

Always interested in any old, interesting or unusual locks etc available to buy. Also any books etc relating to locks and keys. Do let me know if you have anything to sell (including safe plates); I will make every effort to agree a deal! Tony Beck, telephone 01332 679358.

## COLLECTOR'S CORNER --- (3) TIME LOCKS.

### Consolidated.

The Consolidated group of companies existed long before they decided to make time locks. They were already involved with the clock-making industry as they supplied the E. Howard watch company of Boston, Mass. This was one of the leading American firms producing all sorts of clocks and watches, with hammers, bearings, springs, and clock plates as well as nickel plating parts for them. In addition Consolidated made a great variety of materials, such as piano wire and wire strings for musical instruments like banjos, guitars and musical boxes.

Around 1865 the E. Howard watch company approached Consolidated with the idea that a joint venture be set up to make "Timeclock locks" for use on safes and strong rooms. This may have been because the Yale Lock Manufacturing Co had already approached E. Howard on the subject? However the time was not right and nothing came of this early suggestion. So Consolidated continued the close relationship with Howard by doing the nickel plating of their clock plates, pinions and gear works.

When the great time lock revolution finally burst on the high security world, mainly due to James Sargent's efforts, financially backed by Col. H. Greenleaf, the "Consolidated Companies" changed their company name in 1870 to "Consolidated Time-Lock Companies". Here below on the left is an early lock bearing this name, and on the right a Consolidated double time lock



Consolidated Time Lock. 46 hour Single Lock Chronometer. H. Gross Patent.



Consolidated's Double Time Lock stamped "Hall's Safe Lock Co's Patent Lock Chronometer" - another 46 hour lock.

With Sargent and Greenleaf leading the field, quickly followed by other companies such as Yale, Dalton, Pillard, and many others, Consolidated felt that they must have a share of this market, but unfortunately they were not a cash rich company. So there was no possibility that they could finance a factory to make all the gear work and escapements for a complete time lock.

Consolidated were at this point approached by a major safe and lock company, Joseph L. Hall of Cincinnati, Ohio, to make dedicated time locks for them. They were already involved with Joseph Hall as they were nickel plating Hall's dials, handles and lock bodies. The only problem with what otherwise was a plum order was the fact that Hall wanted the product in a hurry!

The solution was for Consolidated to approach E. Howard & Co to suggest a mutually beneficial deal,

whereby they would make the clock movement plates, escapement platforms, display faces, cases and fittings. While Consolidated would design, develop and Patent the new lock in their name.

This new business was launched in 1876 and for 18 years they continued to alter and adapt their lock designs to suit Hall & Co.'s various needs. Other companies such as Mosler approached Consolidated for special time locks that Yale was unable to supply. Here below is a twin movement Consolidated time-lock coupled with Halls "Premier" combination lock, c.1880:



Suddenly this happy partnership came to an abrupt end! The Yale Co., probably the main competitor to Sargent & Greenleaf, presented E. Howard with an ultimatum, stop supplying Consolidated with parts if you wish to keep the lucrative Yale business! Yale backed up their ultimatum by threatening to go to the clock maker Seth Thomas for time-lock movements. This was probably just bluff as Yale had originally used Seth Thomas movements in their very first time locks and found them unsatisfactory!

E. Howard felt that they had no choice but to terminate their agreement with Consolidated. Fortunately another supplier was found in the Elgin Watch Co. Consolidated were at this time also involved with the Dalton lock Co., making their bolt retraction motors for them. Dalton were interested in having their own time locks but suggested to Consolidated that they should move away from old technology. Instead of having two clock movements mounted on one plate, they should adopt Yale's newly conceived idea of making each movement a complete stand-alone modular unit. So using Elgin watch movements, a joint venture was set up between Dalton and Consolidated to produce 3 or 4 movement time locks for Remington and other safe makers.

Now it was the turn of Joseph Hall & Co to become upset! They did not appreciate Consolidated selling to rival safe makers. Consolidated were able to buy time (sorry for the pun!) by returning to E. Howard & Co for the supply of movements but strictly on a short term basis. By a freak co-incidence, the Waltham Watch Co solicited Consolidated at this crucial time and so a temporary crisis was averted! However a slow decline of Consolidated's fortune continued, resulting in final closure. We must sadly conclude that to have an excellent product, bought by good customers is not enough! A secure financial basis together with much luck is needed for sure success.

**Author's Note:**

1. These locks were so well designed and made that many were still working after 100 years. To start with they were NOT complete or stand-alone time locks like the Yale and Sargent & Greenleaf ones. They were mainly employed to control the drop arm of Hall's combination locks, or to trigger the automatic bolt retraction motors used on Hall's safes, vaults, and money chests. Later, with the Dalton/Consolidated partnership, stand-alone time locks based on the Yale modular construction with 3 to 4 clock movements became the norm with either Elgin or Waltham watch movements.

2. Finally I would like to express my sincere indebtedness to Dan Graffeo for his help, without which this article would not have possible.

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## **Internet Sites relating to Locks and Keys:**

These three sites discuss the art of safecracking:

[www.crypto.com/papers/safelocks.pdf](http://www.crypto.com/papers/safelocks.pdf) - a 34 page technical article on Safe and Vault security. An illustrated paper that examines Covert Entry - Drilling; Manipulation (using a U.S. combination lock as a model); etc. An interesting if heavy going contribution by Matt Blaze of Pennsylvania University.

[www.timhunkin.com/94\\_illegal\\_engineering.htm](http://www.timhunkin.com/94_illegal_engineering.htm) - this is dealt with in quite a different manner. Tim Hunkin is a well known U.K. cartoonist but he also gives lectures and says "this is currently my favourite". He deals with the subject in a light hearted manner saying - "In the last twenty years the craft of safe cracking has tragically declined. It is no longer the glamorous activity featured in every other detective film, and the number of real attacks on safes has fallen dramatically. So I'm delighted to see so many children in the audience as it's time to start training up a new generation of safe crackers .....!!!!"

[www.peterman.org.uk](http://www.peterman.org.uk) - John Mitchell, a retired locksmith started working on safes in 1948 and describes their construction and destruction; the explosives; exploits of four convicted 'Petermen'; and gives some examples of safe blowing. Contains twelve illustrated pages.

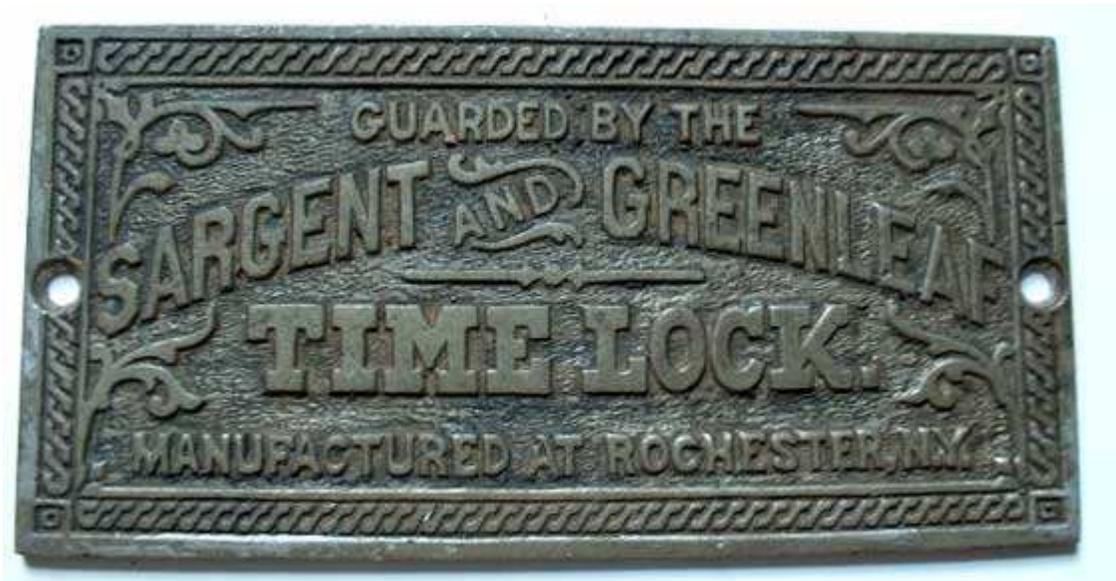
## Trade Marks:

On the left is the mark of **Slaymaker Lock Company of Pennsylvania** who were founded in 1888. The central photo bears a head that looks similar to a trade mark shown in the last issue; but this is different. It is an English manufacturer but I don't know who-do you? On the right I believe this mark on a padlock drop belongs to **Russell & Erwin Co.** of New Britain, Connecticut. Between 1846 and 1850 they were so named, but in 1851 became Russell & Erwin Mfg. Co. Is this one of their early padlocks I wonder?



## Internet Auctions (eBay), Interesting Sales:

**Expensive U.S. Safe plates.** Reflecting on Lynn Collin's past articles about these very early items it is interesting to see what some of them sell for. This eBay item shown below (size 5.75" x 3") was sold on 8<sup>th</sup> June and attracted 11 bids. Its final price reached a massive **\$317 (£174)**.



This below is a most interesting item. It sold on eBay (September 23<sup>rd</sup>) being described as a **Gentleman's Georgian Antique Cuff Link and Stud Safe**. However as will be seen it was actually destined to hold "Gold, Silver, (and) Keys". Size is nice: 5.5" high x 4.25" wide and the case is covered in tooled leather.



The locking mechanism is **Bramah** and the “original” key was to be supplied. Whether it is “Georgian” might be doubtful; perhaps it may be around the 1850s. However what cannot be disputed is that this item is an excellent quality piece and in its day probably cost some “Gentleman” quite a packet! Every attention is paid to all details, including mahogany drawers faced with leather and titled with gold leaf; a purple silk door pocket, and matching brass handles. All this attracted 11 bids and a price **£143 (\$255)**.

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**Now, just a brief point of interest**, raised by a fellow collector, whilst a group of us were being given a conducted tour of the fine exhibits inside the Graz Lock Museum. He remarked how noticeable it is that so few young collectors exist amongst us. Although at first this seemed a rather strange comment, it was no doubt true! However it seems a wonder to me that there exists such a relatively good number of lock, key, and (not forgetting!) safe plate Collectors.

No modern reference books are available and the media hardly to any degree discusses the subject. Also, in the U.K particularly there is no specialist Lock Museum, as exists in other countries. So the exhibits are spread widely around the Country with many items being locked away in storage! Consequently our subject suffers from a lack of exposure. Perhaps the problem has developed historically; for locksmiths and those who make locks have always been very reticent indeed to discuss what they do. Mainly for security reasons of course, and to maintain the integrity of their work and services they provide.

Indeed, consider what was written in a privately written book in 1953: “It is extremely important that the information contained in this book be faithfully guarded so as not to fall into the hands of undesirables. We also suggest, after you become proficient in the art of manipulation, you destroy this book completely, so as to protect yourself and our craft.” (by C. Lenz and Bill Kenton, *The Art of Manipulation*). A clear note of warning to new craftsmen that the locksmith world requires to maintain a high degree of security!

All this, I believe has contributed to young people not being given the opportunity to learn about what lock and key collecting can offer. How can they with knowledge being so much restricted? However all doesn't seem lost as it seems to me, whilst being put in touch with fellow collectors on eBay and through other means of communication, that our numbers are increasing. What appears lacking to a significant

extent are catalysts that encourage them, in the manner that other specialist collectors attend their subject. Nevertheless, well attended international meetings and other similar events can help, and a prime reason for writing this Journal is to spread the word, thus seeking to create more interest in locks & keys.

I believe this point needs to be constantly addressed in order to obtain a younger group of collectors who can learn from those more experienced while there remains an opportunity to do so.

### **A note about our visit to the Science and V & A Museums in London.**

On 15<sup>th</sup> October a party of 16 collectors attended, which was a good size for the purpose. We visited the Science Museum first and very appreciative thanks are due to Jane Insley, Senior Curator, Engineering Technologies, for giving a talk and having brought in a few items out of store for us to see. The locks and keys display, located in a basement room, admirably maintained our interest for some time. Below are a couple of examples of the many lock exhibits we saw:



**Hobbs Patent Padlocks**, this first shown with its front cover plate removed to demonstrate the interior mechanism.



This factory cut-a-way padlock is stamped Hobbs Patent Protectors, 76 Cheapside, London, and number 40987.

Both of these locks were very likely to have passed into the Chubb's Lock Collection after they acquired Hobbs & Co.'s business.

Afterwards our party moved on to the Victoria & Albert Museum where their collection was extensive and highly interesting, so again quite lot to see, including the fine (and maybe unique?) George Price lock shown below (left hand side). A great day out and I'm sure well appreciated by those attending - thanks to all!

### **European Collectors Meeting, 2006.**

Peter Friedhelm Von Knorre has confirmed that the early planning stage for this is ongoing. After a discussion with Manfred Welker, Iron and Lock Specialist at the Germanisches National Museum in

Nuremberg it was agreed that the 5<sup>th</sup> Annual European Lock Collectors meeting would be held there. It will take place between Friday 8<sup>th</sup> to Sunday 10<sup>th</sup> September 2006. The Collectors have secured a special deal in the brand new Holiday Inn (4 star) for a double room costing 80 Euros - roughly £54, inclusive of breakfast.

Booking details and a programme for the meeting will follow.

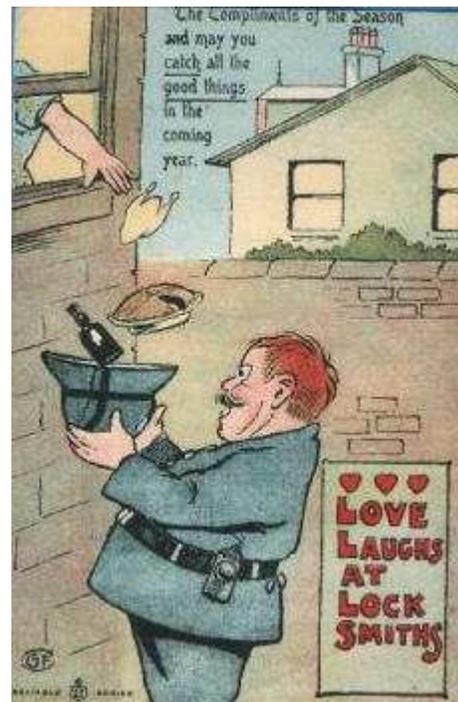
**[Overview of the Museum**

The Germanisches Nationalmuseum (GNM, Germanic National Museum) was established in 1852 as a national museum and an internationally recognized research institution. Its architectural core is a late medieval monastery, of which cloister, church and monastic apartments survive. The museum's external appearance is dominated by buildings designed by Architect Sep Ruf during the 1950/60s, together with the recently erected Museum Forum with Dani Karavan's Way of Human Rights in the Kartäusergasse (1986-1996).]

**Finally**, as the card says beneath -



George Price 'Ne Plus Ultra' padlock at the Museum.



A card for Christmas by G.F. Christie

**My Compliments of the Season and a very happy New Year to Everyone! Tony**