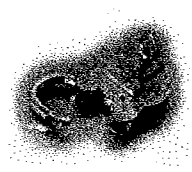


LOCKS & KEYS



Issue 27

The Newsletter for lock collectors

March 2004

On the opening of all locks Padlock designs

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

"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.

Most readers probably have not heard of Charles Babbage. Those who have, probably know him as the 'Father of the computer'. He described himself as a 'philosopher'. However, he was much more than that. His life's work was principally the design and construction of two mechanical computers, neither of which was completed in his lifetime.

"If a lock ... is not so inviolable as it has hitherto been deemed to be, surely it is in the interest of honest persons to know this fact."

However, he did much other research and development, on projects of his own, and at the request of governments and other bodies. He did major work for Trinity House on the development of lighthouses. He invented 'operational research', an opthalmoscope, and a periscope. He

(Continued on page 6)

This is a plain brass lever lock 'old English' shape but no markings save for the number 88 on both sides of the lock body in picture *fig. 1* inside the shackle hole. It has at present no key available. This is probably:

- Indian manufacture
- homemade or
- a prototype or
- a project for an apprentice.

Actually, it is of handmade Indian make, and another has since been found. It does not conform to how other many Indian padlocks appear — the particular body steps, thin brass, and well adorned with pictures, writing etc.

The lock cannot be locked in the open position because of the solid pivot ring on the shackle — only when the shackle is fully closed. Perhaps it is meant to be key retaining. I had thought it might have needed two keys but I have been able to pick it a number of times which is a frustration in itself. I usually pick it into gate and then inspect the lever positions to get a general key shape. But because the second bolt has nowhere to go, it is a real balancing act to keep it just right.

It is interesting in that it locks normally as most lever locks at the toe end of the shackle, but there is also a secondary bolt that locks up into the heel (pivot) side of the shackle. In picture *unknown-1-c* you can see the hole that the bolt enters. Also refer to picture *unknown-1-d* and you will see a built up area that will push the bolt down so that

(Continued on page 4)

In This Issue

- 5 Master lock design
- 8 Padlock pictures
- 12 European lock collectors' meeting
- 13 Manipulating rabbits
- 16 Gibbons cell locks

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Editor

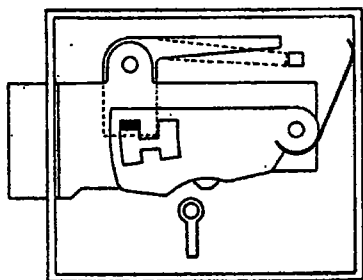
This issue developed two themes, partly prompted by a re-reading of HOBBS' *Construction of locks*. One was the variety of padlock designs, and more, the variety of workshop processes and materials used; most production techniques and materials used in light engineering production have been applied to padlocks. In fact, most engineering production processes can be illustrated by padlock examples (there's a collection theme!).

Millions of them have been made in the last couple of centuries, in all qualities, and for all purposes, ranging from the trivial to the most important.

A reader sent me a large number of pictures of his collection. As I looked through the padlocks, it struck me that they represent a very wide range of production processes, materials, and design. Re-reading *The construction of locks* (HOBBS, A. C.: London, Virtue & Co., 1868), I found Hobbs expressed a similar sentiment on p. 1. 'Much which is both mechanically and commercially important is comprised in a lock. Every improvement in the manufacture of iron, steel, and brass may be made to reflect its light on the lock manufacture. All, in proportion as they are improved, impart some of their aid to the lock-maker.'

The other theme followed on his pp2-3, concerning discussing the security of locks. I had discovered Charles Babbage in the 1970's. I encountered electronic computers whilst still a schoolboy (that's off topic) and so was intrigued to read about Babbage. Even more so, to find he had been interested in locks. I had just come across the Hobbs 'Protector' pivoting bolt stump, and did not understand it. (I had not then found the Kingsway reprint of Hobbs' book, which appeared in 1970). So I searched for Babbage's paper around the world, without success.

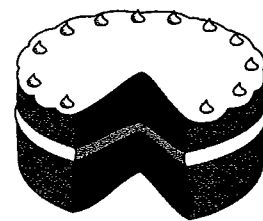
Maybe readers will be interested in how my interests in locks, magic, and computers started, and have intertwined; and might contribute their own stories of how they became lock collectors.



Hobbs' 'Protector' pivoting boltstump. If any pressure is applied to the bolt before the levers are arranged, the stump moves away, and the swinging arm contacts a fixed obstruction in the case, preventing the bolt withdrawing.

Feedback

Last issue carried a letter from a frustrated collector. I had hoped there would be some response to this, but, so far, there has been none. Nor have I had many questions, answers, or for sale advertisements.



There is a joke that the way to make money on eBay is to write a book on how to make money buying and selling on eBay! There are now too many books to mention. Clearly many people are making good money from dealing on eBay, and it is squeezing bricks and mortar junk/collectible shops. It is moving huge quantities of items. Originally a glorified car boot sale, there are now also some more valuable antiques for sale. There remains much cheap stuff at the bottom end of the market, but there are real bargains which most customers could not find elsewhere. And yes, there are locks and keys. However, be aware there are fake padlocks (and money-boxes, and possibly other types of lock), and fake keys.

I saw recently, a few doors apart, two padlocks. One was brass, looking like an 'old english' lever padlock. However, the 'keyhole' on the front is actually a pintumbler cylinder, looking like a sliding keyhole cover. It was a Century lock, I guess 1950's. I don't know any more about it.

The other was an unusual shape, with a rubber bumper and close shackle. Its unusual mechanism, and the story of its design, is described on p.5.

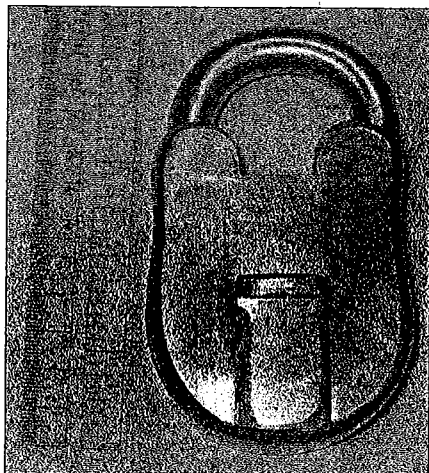


Searching the Internet one day, looking for something else, I encountered a public forum, mainly on old safes. There were numerous enquiries about the value of old safes, and how to dispose of them — might be of interest to US readers interested in safe locks. One frequent contributor is Ken Dunkel, who earns his living as a safe engineer, and has an interest in old safes. His comments on learning manipulation of safe locks appear on p.13 below.

<http://www.clearstar.com/public/pubboard.htm>

Security Industry personnel will make every effort to answer appropriate non-security-compromising questions posted here. This is a public service provided by ClearStar Security Network and the Professional Security Industry.

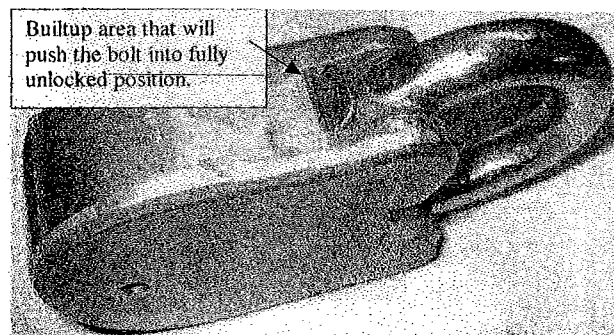
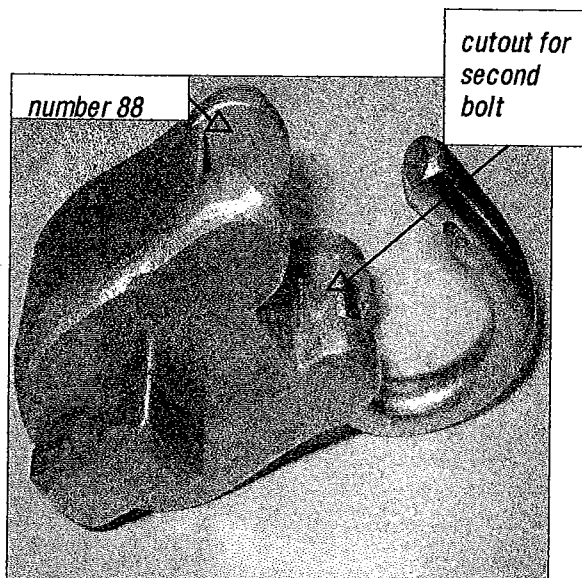
Indian padlock pictures



Unknown Indian cast brass padlock



Same Indian padlock, from side, showing two-piece case.



Unknown Indian padlock. On the inside of the shackle heel is the cut-out notch for the second bolt. On the outside (back) of the shackle heel is a wedge that will push back this second bolt into its fully with-drawn position as the shackle opens.

(Continued from page 1)

it is fully thrown. The shackle hole is blocked so you cannot see the levers.

It has Indian characteristics in that there is a gap at both the top of the levers and the bottom of the bolt strap. There is a gap, then three levers, a solid "lever", three levers and then the talon and then a gap. I have only seen this type of construction in Indian padlocks. But the body is not of what I call normal Indian style.

Most English-made 'old English' shape lever padlock bodies are made in two main styles-

Three pieces top, bottom, and side and then riveted together.

Two pieces, top and side together in one piece and the bottom; the side middle has pins that pass through the bottom and are peened over and finished off. The sections all butt up against each other: there are no recessed sections, dovetails etc.

Indian padlocks generally differ in one way. They are recessed at the top near the shackle "ears". The two Indian padlocks on p3 are good examples.

Ian Webb

The Drainage Collection, Salisbury

Salisbury was a new town, built in the 13th century when the residents of (Old) Sarum decided to move down off their hill, and build a new town on the plain. Uniquely, the town was built with open drain channels running in the main streets, permanently flushed with water diverted from the nearby River Avon.

These channels were cleaned and replaced with covered storm drains and a piped water supply in the 1850's. The workman kept some of the objects they found during this work, and some of these formed the Salisbury Drainage Collection. They selected mainly metal objects and recognisable fragments: there are no shreds of leather or fabric, nor stone, glass, pottery and wood. Of 1,350 objects, there are some 450 keys and locks.



Lock and Keys. The Drainage Collection is perhaps best known for its large number of keys (nearly 450). Their beauty, interest and dating was featured in the magazine *The Connoisseur* as early as 1911 and most publications on medieval keys refer to this collection.

It is worth recalling that before the Industrial Revolution, locks and keys were often made by the local blacksmith and rarely, therefore, are any exactly alike. Dat-

ing these keys and also many other classes of object is made doubly difficult by the fact that little stratification was recorded during their discovery. However, it is possible to give general guidelines with regard to a key's date, and the collection is still used as a source of dating by local people who dig up or find old keys.

The earliest keys were found in a layer of bluish clay at the bottom of the drainage excavations and have been assumed on this basis to date from the 13th century. They were made from a single sheet of iron cut into shape, the ward cuts on the bit made by chisel cuts rather than filing and the stem rolled round forming a hollow.

Keys with a ring bow or sometimes a lozenge shaped bow at the head of the stem tend to be 14th century; those with a kidney shaped bow — 15th century, and very elaborate bows occur most frequently in the 16th and 17th centuries, by which times the stems themselves begin to be ornate.

Experience in dealing with enquiries over many years shows that fifteenth century door keys are relatively common in Salisbury in relation to other types of key. One wonders whether this is because there was more wealth to be locked away in the 15th century (Salisbury was at its height in wealth and prestige then), or whether there were more thieves about. Perhaps it is simply that these keys are more obviously old, attractive and recognisably interesting and therefore tended to be more readily collected. Whatever the reason, most of the keys are likely to have been accidentally lost and many a medieval oath must have been uttered at doors throughout Salisbury as their owners discovered their loss.

The larger keys are mostly door or chest keys, whilst smaller ones tend to be casket or coffer keys. There is an unfinished 15th century key and there are several unusual keys, notably an 18th century one which folds back into its own handle, a set of locksmith's keys and an 18th century screw key complete with its padlock.

Locks are represented by padlocks which range from the 14th century barrel through to the 16th century globular, and the 17th century trunk-shaped forms. There are also screw handcuffs and a fine horse's fetterlock with key. Most types, except the locksmith's keys and handcuffs, are illustrated in the museum's book.

SAUNDERS, Peter *Channels to the past : the Salisbury Drainage Collection* [Salisbury] : Salisbury and South Wiltshire Museum, [1987?] 12p., ill., facsim., map. 30cm. ISBN: 0947535020

PENNY, W E W *The medieval keys in Salisbury Museum.* *Connoisseur*, 29, Jan 1911 pp11-16.

Masterly padlock design for Master Locks

Brand awareness can be a double-edged sword, when used against a company by the competition. That's what happened to Master Lock. After decades as leader of the padlock market, and with over 90% brand awareness, a few years ago Master Lock was seeing its market share dwindling because of cheap knockoff products that confused consumers into thinking the copies were high-quality Master Locks — and buying them instead of the real thing. In the face of the pricing pressure they were receiving from mass-merchant customers such as Wal-Mart and Home Depot, Master Lock had to make a decision. As sales and margins shrank, Master Lock's management hoped that a redesign could differentiate their product from its considerably cheaper clones.

Designer-psychologists

Design Continuum belongs to a new breed of market-focused designers who view their work as expressing values and meeting emotional needs. Think of them as designer-psychologists, perhaps, or designer-salesmen, pros who run the fast track where design and marketing merge. Instead of beginning by analyzing deficiencies in the product and inventing features to correct them, Design Continuum gives priority to understanding the emotions that drive buying decisions. Their designers ask, "How can we give the customer an experience that will speak to his or her values?"

Customers

To answer that, Design Continuum researched the padlock category to see where Master Lock's strength might be. They identified three major issues that the brand would need to address. First, they found that, whilst the average person has many padlocks, no one spends much time thinking about them. Second, people had trouble finding them in stores; padlocks are generally located in the hardware aisle, but that's not where people looked for them. Finally, people couldn't distinguish between the Master Lock brand and the knockoffs.

These initial findings led to a revelation about the product: It wasn't the padlocks that were important to people, it was what the padlocks protected. This revelation led to the team's strategy for the design: "It had to do more than just be a good security device, it also had to fit into the fabric of consumer's lives in a way that the current padlock did not," says Design Continuum.

Close shackle security

To find a way to do that with the product's redesign, Design Continuum sought to answer two questions: What did consumers think about security, and where did consumers use locks? To answer the first question, the team conducted focus groups and interviews; in doing so, they discovered that most people believe that locks are broken into with bolt cutters. A lock where less shackle is exposed would appear more secure to consumers — and would give Master Lock a competitive advantage. (American customers, at least, did not know the term 'close shackle'.) Shoppers cared less about the padlock and its mechanism than about protecting their possessions. The team also discovered that people were reluctant to lock up outdoor equipment because the prominent display of locks

signaled mistrust of one's neighbours — indicating that there could be a demand for locks without the archetypal lock appearance.

To answer the second question, the team identified the primary areas consumers used padlocks and decided that they needed to target each of these areas — beginning with the home and yard and automotive categories — with products designed specifically for them.

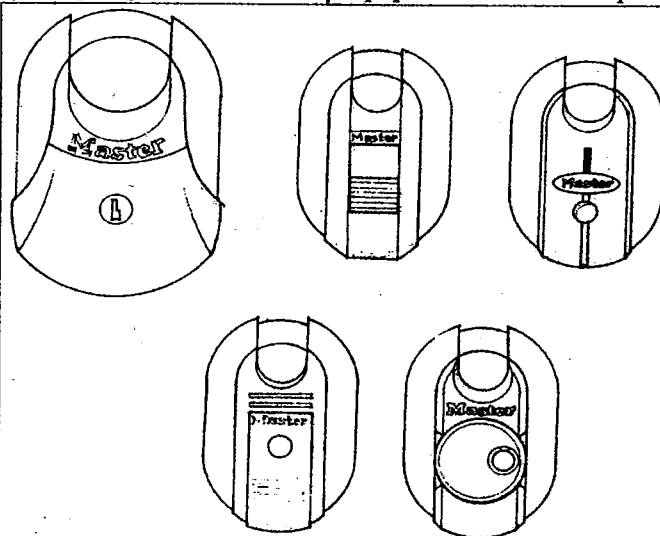
Armed with this research, Design

Continuum's team of consumer researchers, business analysts, and designers began brainstorming solutions to Master Lock's business — and design — problem.

As a first step, for maximum impact with minimum

(Continued on page 14)

Design Continuum: think of them as designer-psychologists who run the fast track where design and marketing merge.



Early line drawings explored different ideas of bumper shape and keyhole cover. All featured a lock mechanism front center, and a close shackle.

(Continued from page 1)

worked on international mapmaking. His ideas on this were so far ahead of his time that the British government only accepted them reluctantly a century later. Most of his studies he published as 'Papers', although some of the Papers he wrote he did not publish.

I became interested in locks, and collecting locks, whilst still a schoolboy. When I lost my locker key, I found I could open my warded self-locking padlock as quickly with a steel dip-pen nib. I had to learn more about locks, and lock-fitting, when I had an attempted burglary at home. After I left school, I found a famous old magic book with a chapter on locks and escapology. Thereafter I avidly searched other magic books for information on locks, not knowing at first that escapology is a rare branch of magic. I did not find anything else about locks in those books, though I did become an amateur magician (but that is another story).

In the 1970's I came across the collected edition of Babbage's works. It contained all of his published Papers, and some of his unpublished ones. A Swedish researcher had recently revealed that Babbage did important work in cryptography. He invented a solution to the Vigenere cipher — then the world's most secure cipher. Britain was engaged in the Crimean War, and



this work was not published. A decade later, a Prussian army officer independently re-invented the same method and published it. He has long been given the kudos for this invention, and Babbage's priority is little known.

Babbage alluded to a Paper that he had written but not published. What prompted his interest in lockpicking is

not recorded. He might have known that the tentative method (later used by A. C. Hobbs) was published in an early edition of the *Encyclopaedia Britannica*, although few persons in Britain were aware of this. He might have seen the publicity given to early lockpicking challenges, although most of this was limited to local papers in the Wolverhampton locality.

Babbage lived in London, and several times visited the Great Exhibition, where he met A. C. Hobbs. Babbage acknowledged that Hobbs knew far more than himself about locks, but was pleased to find that he had had the same idea as Hobbs. "I felt that the maker of that lock surpassed me in knowledge of the subject as much as I had thought I excelled [the criminologist] Vidocq."

"On the opening of all locks"

Babbage informed Hobbs that he had written, but not published, a Paper, "*On the opening of all locks*". In this, he described the tentative method of lockpicking, and a device to defeat this method. Babbage neither patented nor published it, but his idea was identical to the 'Protector' pivoting bolt-stump, for which Hobbs later obtained a patent². After Hobbs' patent expired, other lockmakers used the idea.

In the absence of Babbage's paper, it is now impossible to establish who had priority on the idea. So what became of the paper? As it was not published, presumably it existed only in one manuscript copy.

During the 1970's, I conducted an extensive correspondence with scholars, libraries, and archives around the world, in a search to find it. Babbage archives are spread around the world, partly as a result of the travels that dispersed his later family members, and partly by sales of his effects.

One scholar suggested that Babbage might have given his Paper to Hobbs, either permanently, or intending a loan, which was not returned. Hobbs' papers also are scattered, but most of the lock papers he had in Britain seem to have stayed here, as part of his company. Hobbs & Co. became legally Hobbs Hart & Co. after Hobbs' death; it became part of the Chubb Group in 1956. Chubb's archives were kept at head office, which was for sometime in west London. From time to time (apparently, not permanently) there was an archivist. My enquiry there was unproductive.

There is still a faint possibility the Paper is in the Chubb Archives. Williams Holdings, which owned the Chubb Group for some years, disposed of the archive by giving it to the City of London's Guildhall Library. Staff there have spent a considerable time conserving and calendaring the archive, and no calendar is yet available.

This Paper is of considerable historic importance, and it would be interesting to find it. If anybody has any more information about it, I would be pleased to have it.

Lockpicking is a valuable skill for locksmiths. They can charge for opening lockouts. Sometimes customers request keys to locks that are locked. Opening the lock is often a necessary preliminary, just as clockmakers must be able to let down the mainsprings of clocks that are not going, before repair is possible (they are invariably fully wound).

Explaining lockpicking

Hobbs was not the first person (nor the last) to reveal information on lockpicking, although he was one of the most explicit. He opined that informing users of the weaknesses of their locks enabled them to make better choices, whilst not telling criminals anything that they did not already know³.

The locksmithing trade in the USA is much larger than in Britain, with a larger need for training; and Americans have been more forthcoming on the subject. The invention of the spirit duplicator ('Hectograph'), and later, the stencil duplicator ('Mimeograph'), followed by 'office printing machines', made possible self-publishing on an unprecedented scale.

As soon as the Internet appeared, hackers began to explore it. Some of their explorations involved physical access to buildings normally inaccessible. To assist such explorations, one (or a group) at a well-known US university, gathered together existing published information and wrote "*A guide to lockpicking*". This guide was subsequently published on the Internet⁴. The Internet is the world's largest arena of free speech, where publishing anything is remarkably easy and inexpensive. Although originally fiercely non-commercial, it has also become the world's largest market place.

Now anyone with uncensored access to the Internet can find information (for free and for purchase) on lockpicking, and buy tools. There is even a real-world lockpicking club in Europe.

Lockpicking information sources

I have collected several website addresses on lockpicking and tools. They vary from basic to quite advanced; some are widely known, some less well-known.

Currently popular with young teenagers is a series of stories called "*A series of unfortunate events*", by Lemony Snicket. There is now an unofficial guide to the world of Lemony Snicket. It serves as a commentary on various aspects and incidents in the books, one of which has a lockpicking incident. The commentary has a chapter on how locks really are picked. Along with a description, abridged from the "*Guide*" alluded to above, there are websites listed, which include one of the addresses where the "*Guide*" can be found. This is real information.

In Britain, the "Special Air Service" was for several decades a little-known elite force regiment, originally raised in North Africa in W.W.II for raiding behind the enemy's lines. "Special" is British officialese for 'secret'; but following several highly-publicised operations, the regiment became one of Britain's best-known! There have now been some two hundred books commercially published about it (many by ex-members)! Several of these describe the training of the troops, whose roles include conventional combat, and counter-terrorist activity. Several popular books now include details of lockpicking.

Whilst searching the Internet, I came on a public forum that is mainly concerned with safes. Many enquirers ask how to open safes. One experienced safe engineer observed that knowing how to pick or manipulate locks is not difficult. The difficulty is in becoming proficient at doing it. His post is worth reprinting elsewhere in this issue⁴.

Lockpicking is a concern for lock makers; it is a valuable skill for locksmiths. It might also be useful to lock collectors on occasion. However, anecdotal information suggests it is little used by criminals. They might on occasion show bursts of energetic activity, but generally, they are not much inclined to the sort of perseverance required to pick good locks. Although warded locks were opened in the past, many modern burglars seem to have trouble picking modern locks. However, towards the end of the era of the four-lever mortice deadlock, when many were still in use, there was published a full description, with diagrams, of the keys needed to open them. It appeared in a popular spy book by a prolific author who had written numerous spy novels⁵.

Richard Phillips

1 <http://www.fourmilab.ch/babbage/lockpick.html>

2 BP 13,985 of 1852.

3 "Many well-meaning persons suppose that the discussion respecting the means for baffling the supposed safety of locks offers a premium for dishonesty, by shewing others how to be dishonest. This is a fallacy. Rogues ... know already much more than we can teach them concerning their several kinds of roguery. Rogues knew a good deal about lock-picking long before locksmiths discussed it among themselves. If a lock ... is not so inviolable as it has hitherto been deemed to be, surely it is in the interest of honest persons to know this fact, because the dishonest are tolerably certain to be the first to apply the knowledge practically; and the spread of the knowledge is necessary to give fair play to those who might suffer by ignorance. ... The unscrupulous have the command of much of this kind of knowledge without our aid. TOMLINSON, Charles, ed.: *The construction of locks*. London, Virtue & Co., 1868, pp. 2-3.

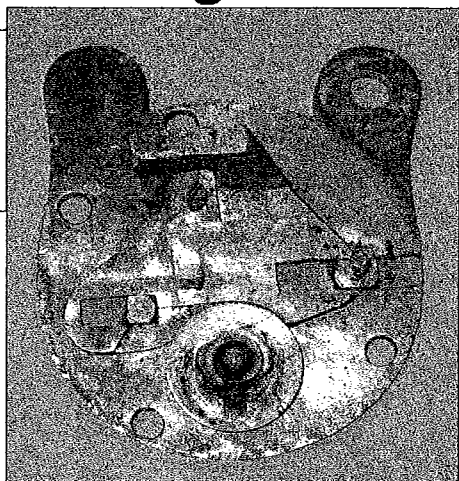
4 <http://gregmiller.net/locks/mitguide/> ; <http://www.lysator.liu.se/mit-guide/> ; <http://www.capricorn.org/~akira/home/lockpick/>

5 See "Manipulating rabbits" on p13 below.

6 NEWMAN, Bernard: *Spies in Britain*. Hale, 1964.

Padlock designs

*Bottom —
lock assem-
bled on
backplate.*



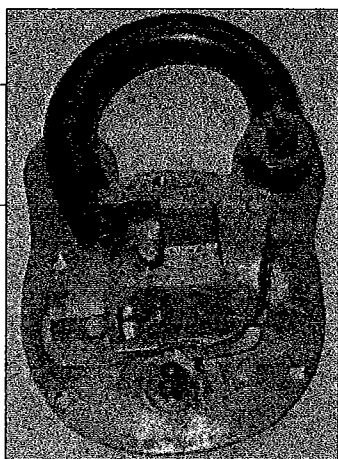
*Top and mid-
dle (cap).*



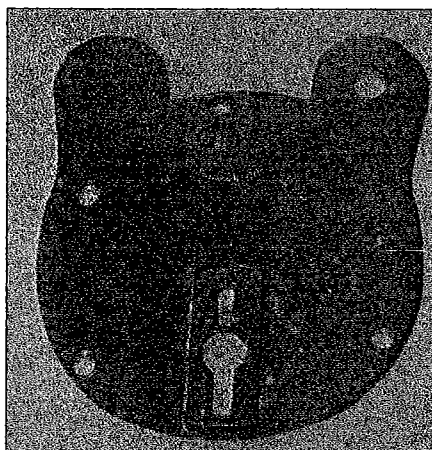
Most 'Old English' shield shape padlock bodies are made in two main styles. **Three pieces:** top, bottom and middle, and then riveted together. **Two pieces,** top and middle (side) together in one piece, and the bottom, the top and middle have pins that pass through the bottom and are peened over and finished off. The sections all butt up against each other there are no recessed sections, dovetails etc. Brass locks are often castings, iron (except malleable castings) are usually stamped/pressed.

Indian padlocks generally differ in one way. They are recessed at the top near the shackle "ears". The two Indian padlock shown below right are good examples. The other padlocks on this page are all English style.

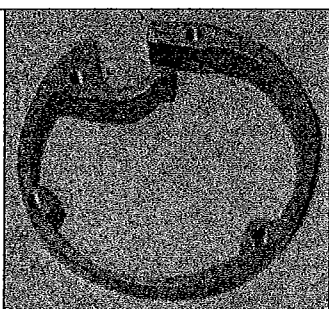
*Bottom — lock as-
sembled on backplate.*



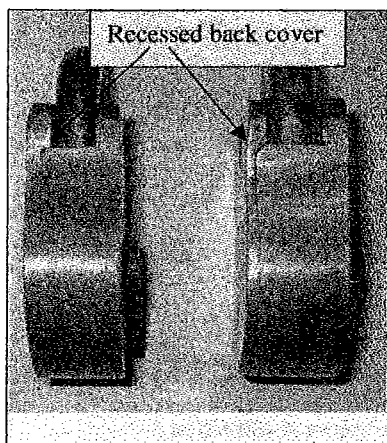
*Top plate
(cap).*



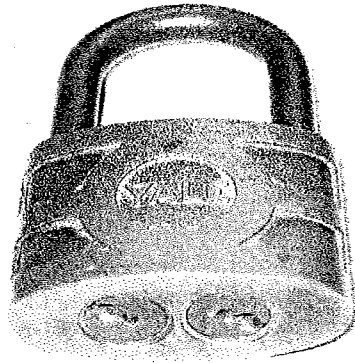
*Middle (side). This is a
brass casting, used
with ordinary rivets.
Steel is usually
stamped from strip and
bent. Lock case rivets,
or tabs, may be used.*



Recessed back cover

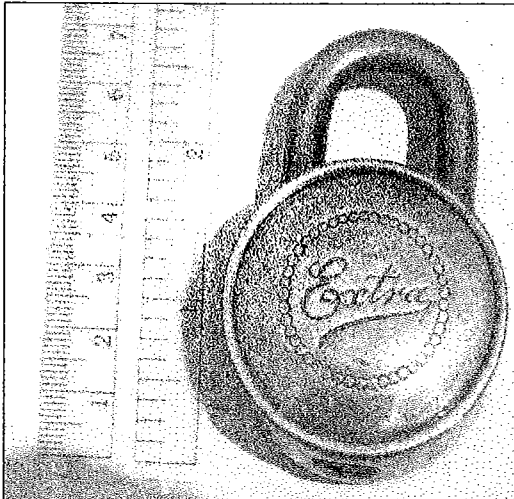
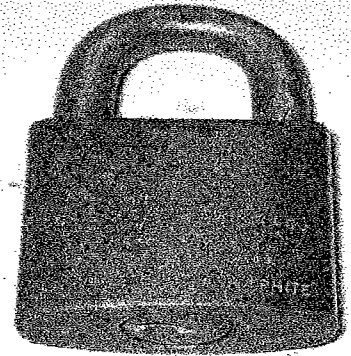


*Two Indian
padlocks,
cases of
cast brass
made in two
pieces.*

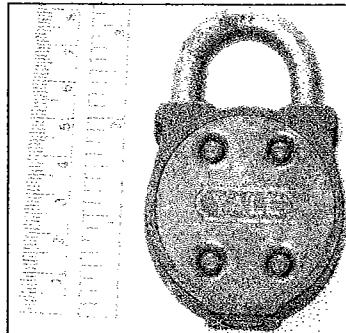


left: Cast bronze body, used for both warded and pin tumbler mechanisms. This is a Yale Bicentric lock.

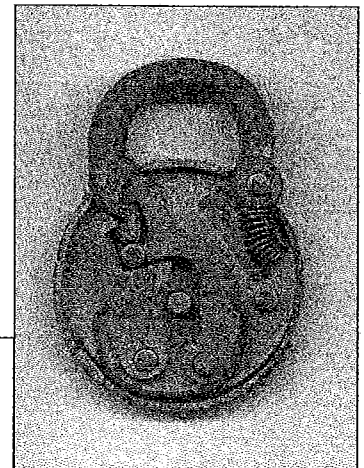
right: Extruded brass solid lock body. Only metals such as brass, which are not too tough, can be extruded, but the solid section requires relatively little machining. Increasingly popular since the 1970's.



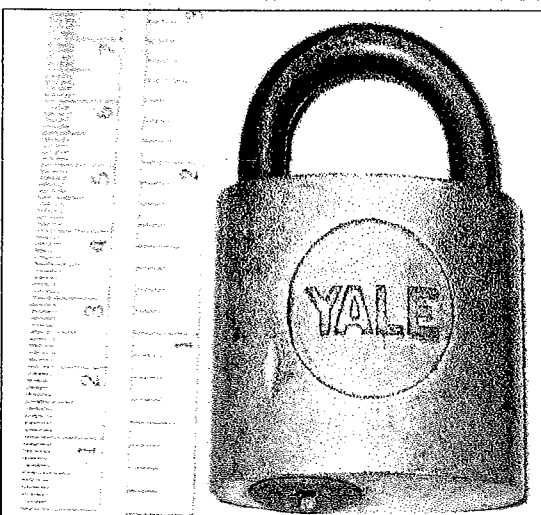
above: Extra (German). Case pressed in 2 pieces, seam closed by pressing/spinning over a flange — common for light, cheap padlocks. There are many variations on this.



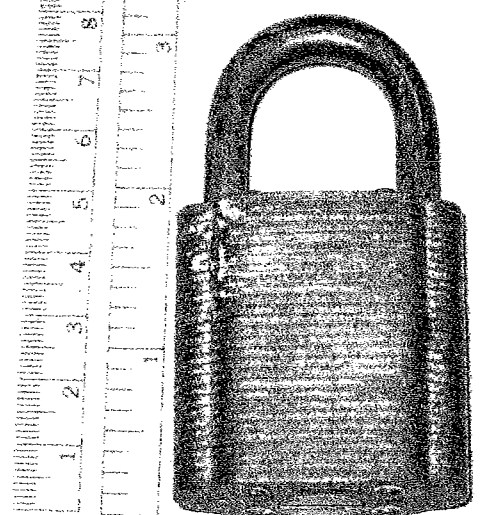
above: Die-cast body, with mechanism contained between two plates held together by rivets.



above right: Pressure die-cast zinc alloy 6-lever lock. There are two sets of levers, whose ends hook into the shackle toe, and a fixed ward plate holding the shackle spring.

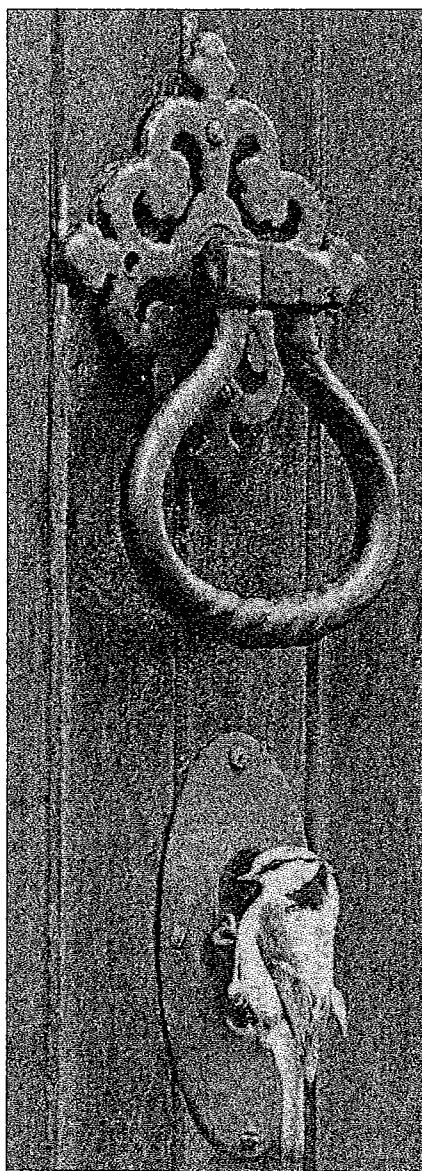


above: Pressure die-cast zinc alloy body, appearing similar to the extruded solid body, but of cheaper material. From 1920's. More used for disc tumbler locks than for pin tumbler. This design has been widely copied.



above: Laminated steel body, invented by Slaymaker in 1920's, now widely used for various mechanisms.

Secured by design



Blue tit nesting in Fyvie church door lock in 2004.

For three successive years, blue tits nested in the lock of Fyvie parish church door. This is one of the more obvious examples of wildlife making its home in a lock. The picture above was taken in May 2004.

Blue tits weigh 11gm, with a wing span of 12-14cm, and may have two broods of about six eggs in one summer.

Cigarette cards were originally created to stiffen paper or cardboard packets; then the advertising and promotion potential was recognised. Many colourful novelty designs appeared. This was one of an American series of 75 various circles and

Travelling bind

United States Transport Security (TSA) now routinely opens and searches the luggage of some 15-20% of travellers in or passing through the USA.

There are three types of security checks on baggage at airports. Explosive detection systems; explosive trace detectors; and visual/hand examination.

In an ideal world, these checks would take place in front of the passenger, but in many airports this is not possible. If a case is deemed to carry a potential security risk and identified for further inspection, it will be opened, by force if necessary.

The problem is growing, and insurers are likely to refuse claims if luggage is left unlocked. Current advice to travellers is confusing. Holiday firms do not wish to be responsible for theft from unlocked baggage. However, TSA is not liable for any damaged caused in security searches, though it 'sincerely regrets' having to do the searches. TSA is advising travellers to leave cases unlocked 'to facilitate the search process'.

Maybe the best advice to travellers is to use soft-sided luggage with zippers which can be locked by a padlock. Such luggage locks can be easily opened with cutters. Inside the case, prominently on top of the contents, place a spare, unlocked, padlock (without the key, which is kept on the person); and a note asking for the damaged lock to be replaced by the open one.

See also the website:

www.tsa.gov



ovals, dating from 1888 and printed in colour litho. Today they are highly collectable and quite rare.

DAGGETT, Frank *Cigarette cards and novelties*. London, M. Joseph, 1981. 0718119703.

Richard Hopkins

Design/sales points

NOTES ABOUT LOCKS

Written for

CHUBB & SON'S LOCK & SAFE CO. LTD.,

LONDON & WOLVERHAMPTON.

by

F. J. BUTTER.

A copy of this little booklet was given to me many years ago by a lock collector. It had various manuscript annotations on its pages, from the original owner.

It appears to have been published by Chubb in 1937.

There are many details of great interest to customers and therefore to salesmen who have to discuss and explain such points. They are matters which, affecting as they do, appearance, convenience, durability, easy working, cost, and so forth, are of direct concern to the user.

The facts here set down deal with numerous points which are of importance to buyers. These notes will be useful to young salesmen and others in the business by enabling them to satisfy a customer, settle a doubt, and complete the wording of an order.

The above two paragraphs are from the author's Forward. Some, but far from all, of this material later reappeared in the author's *Encyclopaedia of locks and builders hardware* (Josiah Parkes, 1968).

Interestingly, this booklet for salesmen shows awareness of the 'very few' differs available on the 4 lever two-sided mortice lock — an awareness which did not spread to many customers until the 1960's.

Mail order Bargains!

Candle Safe

NEW

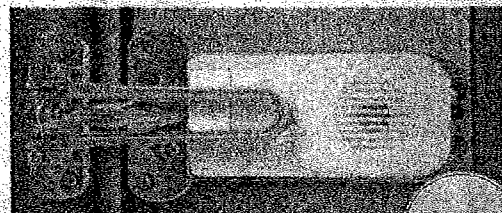
Fool intruders and keep your valuables safe!

This attractive vanilla fragranced candle has a secret to hide — it's also a safe! Hide your valuables in the cleverly disguised safe compartment inside — intruders will never suspect it as a hiding place. The candle can also be burned for several hours.

Item	Code	Price
Candle Safe	1217	£7.99

Siren Lock

Protect your home and provide yourself with peace of mind. This durable alarm fits neatly on any door and door frame in your house and emits a high pitched warning sound to scare off intruders. It is triggered when the door is opened, which breaks the magnetic field, thus setting off the high pitched siren. At only £12.99, it's a small price to pay for your safety and security. Requires 1 x N battery.



Item	Code	Price
Siren Lock	1222	£12.99

NEW

How to Make Sure You Never Lose Your Keys Again! Simply Whistle For Them!



Just whistle and

Key Finder will beep and flash from anywhere in the room, helping you to find your keys immediately. Also a handy light for locating key-holes in the dark or

even stray keys at the bottom of your bag. Batteries supplied.

Keyfinder	40435	£4.99
Key 3 For	40436	£10.00
4 x AG3 Long Lasting Batteries	40304	£2.99

24 hour credit card hotline:

☎ 01733 777333

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

There are no questions, answers, or advertisements for this issue.

POLICE are hunting burglars who stole a heavy safe — but left behind the keys to open it. A three figure sum in notes and cash was in the safe — but the thieves face a tough task to get their hands on the loot. The break-in took place at a company based on the Mallaig Industrial Estate in Lochaber between Saturday and Sunday. A Northern Constabulary spokesman said: 'The keys to open the safe had been accidentally left on top of it, but the burglar or burglars left them behind before making off with the safe.'

METRO Tuesday, February 1, 2005

*Padlock dated 1549
Small padlock, renaissance
Ball padlock, renaissance*

[One of the attractive postcards sold by the Hanns Schell Museum.]

2005 European lock collectors' meeting

Dear Lockfriends!

We have been able to reserve rooms in a newly built hotel near the museum and near the centre of Graz. We have reserved all the rooms in this hotel — and obtained a reduction of 20% off the normal price. Please make your own reservation under the password: "Lock collector meeting" or "Sammlertreffen". The rooms are reserved from 16th to 18th September. I think it would be no problem to stay longer in the hotel.

Prices: Single room: €39 — including breakfast

Double room, per person: €36.20 — including breakfast
Room for 4 persons, per person: €26 — including breakfast.

Email: office@hotel-feichtinger.at
www.hotel-feichtinger.at

We are looking forward to seeing you again and to have great days in the Hanns Schell Collection.

Today we are making our new book about locks, keys, mounts and cases, which is printed next month for our exhibition in Vienna in the Technical Museum of Vienna.

PALL Martina: *Art treasures from the Hanns Schell Collection, locks, keys, boxes and mounts.* In German and English with many pictures and illustrations.

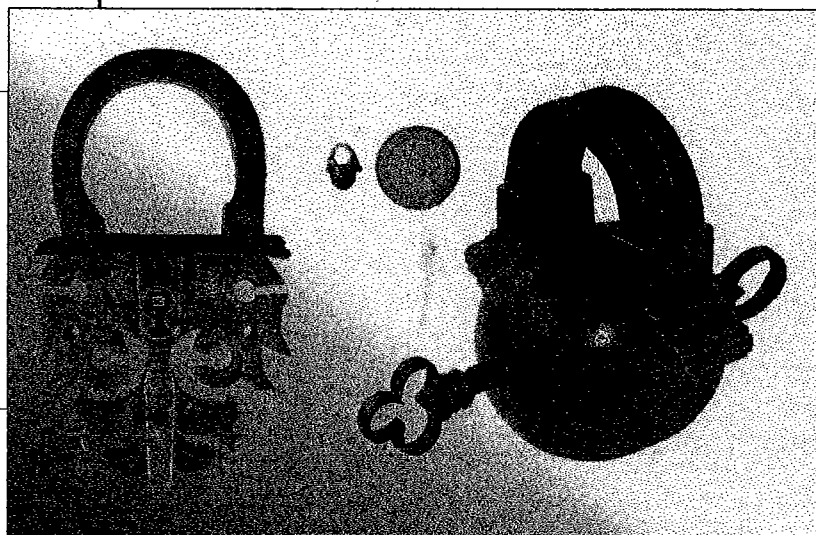
'Iron' greetings Martina Pall, Hanns Schell and the team.

Hanns Schell Collection
Österr. Museum für Schloss, Schlüssel, Kästchen und Eisenkunstguss, Wienerstrasse 10, A-8020 Graz, AUSTRIA

Tel. and Fax: +43 (0)316 715656-38

Email: museum@schell-collection.com

Homepage: www.schell-collection.com



Manipulating rabbits

"Where might I start reading/learning about 'manipulation'? I have access to rather high-tech recording studio equipment that might help amplify any sounds from the mechanism."

THIS ARTICLE was written by an experienced safe engineer who earns his living from his safe business, in response to an enquiry by the owner of an old safe about learning diy safe lock manipulation.

Manipulation is one of those skills that is quite similar to learning where the rabbit that the magician pulls out of the hat comes from and where he goes when the magician is finished with him.

In other words, many people are interested in knowing and learning. What happens most often is that if the person is interested enough, he or she will take the time 'o find out the 'secret(s)'.

However, with that information and understanding comes an incidental but all-important recognition: Namely, while anybody of reasonable intelligence can learn and understand either process, whether it's making rabbits appear/disappear or opening safes by manipulation, actually investing the time, patience, and above all practice to enable one to do it competently and consistently is not something everybody is willing to do or temperamentally suited for.

Thousands of locksmiths have learned manipulation theory and procedures over the years, but it has been my experience that most who learn do not take it much further than that first class. They content themselves

with knowing the so-called secret, same way I'm content to know the mechanics of conjuring rabbits.

For my part, I know where the rabbit comes from and where it goes after appearing, but without a lot of practice, I couldn't do it believably. On the other hand, I'm a fair hand at safe manipulation. Go figure, right?

With all that said, if you're still interested, look at HowStuffWorks.com. There are public access web sites that do a fair to excellent job of explaining a lot of the concepts of locks, safes, lock-picking, manipulation, and more.

The majority of such sites, however, give at least some information that if not totally erroneous, is at least somewhat skewed in some respects.

As for your access to sophisticated audio equipment, you might be surprised at how basic and simple the audio amplification gear used by manipulators is.

It's the same old story: Give me a Nikon camera and a bag full of accessories, and give a pro photographer a Brownie camera and a roll of B&W film, and the pro can outdo me any day.

Ken Dunckel

As far as learning manipulation just for one safe, forget it. Manipulation takes years to perfect and then again you learn something new almost every time you manipulate a safe lock open. Read what you see on the internet about manipulation and give it a try ... you'll probably just waste a lot of time or you might just get lucky and get it open ... Good Luck.

Dave LaBarge, CPS-CML-CMS

Thief locks himself in car

GAINESVILLE, Fla. — A suspected car thief never recognised that sometimes getting in is a lot easier than getting out.

David Christopher Lander, 51, was arrested during the early morning of July 18 2003 after he got locked inside the 1994 Infiniti he was trying to steal, according to Alachua County sheriff's spokesman Sgt. Keith Faulk.

The car has a security device that automatically locks the doors when the car alarm is triggered. A button on the driver's side door could have released the locks, but Lander apparently hadn't done his homework.

When police arrived, they found Lander scrunched down in the back seat. Police found coins from the car, along with a pendant worth \$50, in Lander's pockets at the time, Faulk said. Lander was charged with one count each of burglary and theft.

Chubb history

There is a website now available which has a brief history of the Chubb & Sons Lock & Safe Company Limited.

It gives dates for the various premises used, and dates when other companies joined the Chubb Group.

Enquirers can also obtain the date of manufacture of locks from their serial numbers.

chubbarchive@blueyonder.co.uk

http://chubbarchive.pwp.blueyonder.co.uk/recent_history.htm

This description amused me!

"The locks in these units are among the simplest and cheapest you will see. The safes themselves are imported by the containerload from across the Pacific. Not heirloom quality."

Ken Dunckel

(Continued from page 5)

investment, they redesigned the packaging and graphics, adding a colorful photo of a toolshed to a lock for homes and yards, for example, and an image of a sleek station wagon to automotive padlocks. Bingo!

Sales increased. A triumph of cosmetics? The designers would call it good communication with consumers about their needs.

Next came changes in the locks themselves to distinguish them from the competition:

"We wanted to make one core product that would be changeable — it's basically all the same product, but with an application of color and texture you make the user see it as a completely different product. We wanted to take that notion and apply

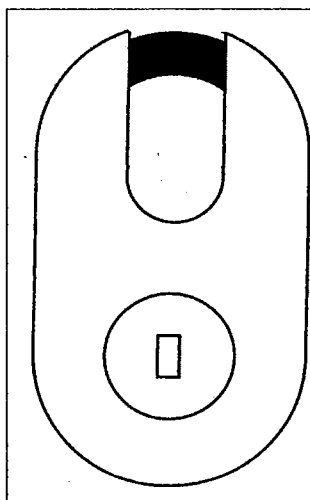
it to padlocks." This concept would allow Design Continuum to target a number of consumer areas while keeping manufacturing simple and cost-effective. Even in the initial sketch, the lock also managed to address some consumer concerns: The front-facing keyhole was easier for users to reach; the small amount of exposed shank looked secure; and the shape was graceful and unobtrusive.

Designing the mechanism

Meanwhile, design as problem solving, although secondary in this process, yielded almost a dozen improvements, including a major one in the casing material, now a stainless steel alloy reinforced with titanium to keep the locks from corroding. To this the designers fastened a hard ABS bumper, which, in addition to providing a vehicle for color, keeps the lock from scratching the objects on which it dangles. It also looks as though it would help corrosion resistance (actually the body is corrosion-resistant.)

To make the keyhole easier to use, the designers moved it from bottom to front; to render it dirt-proof, they supplied a sliding keyway cover. They added a protective high shoulder to deter bolt cutters and redesigned the closing mechanism to glide instead of clamping down. Unusually, this lock uses a 'rack and pinion' mechanism to move the shackle. The actual locking device, the pin tumbler cylinder, came from Master Lock. The rest of the mechanism, and the general shape, was entirely designed by Design Continuum's own design staff. The pin tumbler cylinder

is mounted with the pins below the keyway, and there is a toothed pinion on the back of the plug. Another admirable improvement: keys in colors to match the locks; there are now 5 colours.



The original drawing where the concept began: "Sort of like a padlock, but a padlock like you've never seen before."



The Titanium Series Home and Yard Padlock, with ABS bumper; the interior is mainly non-corroding zinc and brass.

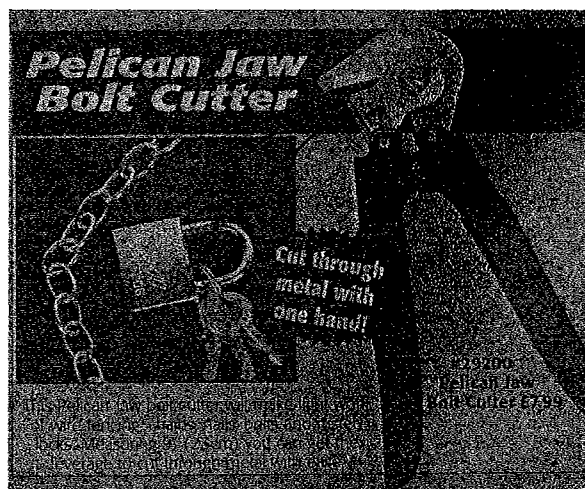
Combination version

Master Lock has extended its revolutionary Titanium Series padlock line — the world's first padlocks to feature the strength of titanium reinforcement plus a lifetime mechanical and anti-corrosion guarantee. The dial combination Titanium Series padlock has joined the keyed versions. The Titanium Series propelled Master Lock to a National Home Center News Golden Hammer Award for product innovation and an American Hardware Manufacturers Association award for

innovative packaging.

The story of the design of these padlocks is told in more detail in the book listed below, which has additional information on the process of modern industrial design.

CULLEN, Cheryl Dangel. *Design secrets. Products 2 : 50 real-life projects uncovered : projects chosen by IDSA (Industrial Designers Society of America) / Cheryl Dangel Cullen and Lynn Haller. Gloucester, Mass. : Rockport Publishers, 2004. ISBN1592530710; LC2004006845*



This useful tool was pulled from a mail order catalogue soon after it appeared — it was 'sold out'!

Bicycle locks



No. 26.

Bicycles have become more expensive over the years, and worth more protection today. *Which?* examined bicycle lock in April 2004 — a world away from the 1930 chain lock (sham lever!), or even the 1948 brake lock. Probably a pocket-sized pair of side cutting pliers would cut this chain, or the brake cable.

(Information from Trevor Dowson and Jim Evans.)

NOTES

Locks highlighted in red appear in the Best Buy guide, above left.

Specification

The price shown is what you can expect to pay by shopping around on the high street. Where not widely available, guide prices are in *italics*. Some locks come with a lock holder to mount the lock on to your bike.

Performance

Resistance to destructive attack was measured by how easily the locks were broken using, say, a hammer or saw. Locks that score ★ stood up to a variety of tools for more than five minutes, while those that score ☹ could resist fewer tools, and only for one minute at the most.

Ease of use

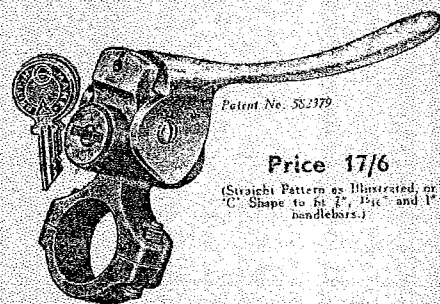
The mark for overall ease of use was given according to how easy it was to fit the lock mounting to a bike and to take the lock on and off the bike each time it's used.

1 Previous Best Buy Sterling 58mm weatherproof padlock and a length of Eliza Tinsley Strongpoint security chain. We included an ordinary padlock and length of chain for comparison.

TOTAL TEST SCORE

This ignores price and is based on:
Security (resistance to picking and destructive attack) 50%
Durability (resistance to corrosion and drop test) 30%
Ease of use 20%

STOP the THIEF with the NEW RESILION CYCLE LOCK



Patent No. 55,279

Price 17/6

(Straight Pattern as Illustrated, or 'C' Shape to fit 1", 1 1/4" and 1 1/2" handlebars.)

The principles of Car locking applied to Bicycles. WHEN THE BRAKES ARE LOCKED ON, IT IS IMPOSSIBLE TO RIDE OR WHEEL THE MACHINE AWAY. For use on any bicycle, old or new, which is fitted with Cable Brakes.

A Quality Product which maintains the high standard and superiority always associated with our

**RENOWNED
"Cantilever"
BRAKES**

THE RESILION CO. LTD., 200, Liverpool Road, London, N.1
Phone: NORTH 1351

THE BICYCLE, December 29, 1948

BEST BUY LOCKS

Our Best Buy locks aren't easily picked, and offer moderate security from more dedicated thieves.

Shackle, or D locks, are the most secure. The Kryptonite New York 3000, £60 from Evans Cycles, gives the best overall security and resisted corrosion well. But it's heavy, at nearly 2kg. The Kryptonite Kryptolok Plus, £30 from Leisure Lakes Bikes, is almost as secure, is resistant to corrosion and is lighter. The Abus Sinus, £25 from Independents, is less secure than the Kryptonite locks, but resisted corrosion well.

The best cable lock is the Squire Zenith 25, £20 from Independents. But it has no mount to attach it to your bike.

The padlocks and chains aren't Best Buys, in part because they are heavy to carry, but would be handy for locking your bike at home.



LOCKS

SPECIFICATION		PERFORMANCE				EASE OF USE			
Price (£)	Dimensions (cm)	Weight (kg)	Lock holder	Number of keys	Resistance to picking	Resistance to destructive attack	Resistance to corrosion	Drop test	Overall ease of use
CABLE									
Axa Letrox 180/12	15	1820	0.8	✓	2	★	★	★	★
Halfords Flexible 1m lock	15	960	0.7	✓	3	★	★	★	★
Master Lock 6115 (OPRO)	30	1160	1.2	✓	2	★	★	★	★
Squire Zenith 25	20	1250	1.5	✓	2	★	★	★	★
Squire Xtremity XL1800/12	20	1820	0.7	✓	2	★	★	★	★
LOCKS & CHAIN									
Magnum Chain & M Disc LKM4724	25	1120	1.3	✓	5	★	★	★	★
Padlock and length of chain ¹	22	1200	1.5	✓	2	★	★	★	★
SHACKLE OR D LOCKS									
Abus Giant X-100	55	290x25	0.9	✓	12	★	★	★	★
Abus Sinus	15	290x169	1.1	✓	2	★	★	★	★
Abus Sinus Plus	30	290x169	1.1	✓	2	★	★	★	★
Axa Secu City Plus	40	290x164	1.6	✓	2	★	★	★	★
Basta Safe XL 240mm	20	245x182	1.1	✓	2	★	★	★	★
Kryptonite Kryptolok Plus	30	270x115	1.2	✓	2	★	★	★	★
Kryptonite New York 3000	60	270x160	1.6	✓	2	★	★	★	★
Magnum Ultimate Vex	20	301x167	1.6	✓	5	★	★	★	★

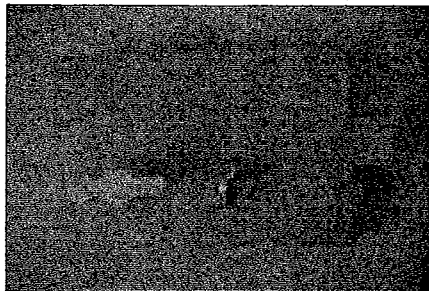
James Gibbons custodial locks, etc.

Blackstage are lock specialists located in Derbyshire, Great Britain. Blackstage provide the best in both custodial high security locks and reproduction traditional locks.

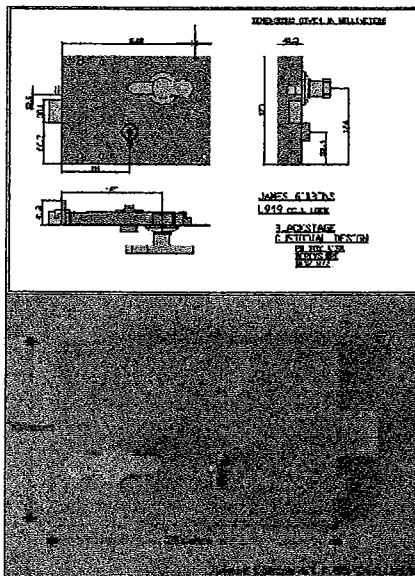
We use only the most skilful master craftsmen to supply the finest English handmade locks. All our reproduction locks are sand-cast; a traditional method of pouring molten metal into a mould formed in sand by a pattern. We cast our locks in Brass, Bronze, or Iron and offer our customers a choice of fine hand finishes.

Our standard rim locks operate on a two-lever mechanism and are supplied complete with two keys. You also have the option to order additional keys if required. Most of our locks are made to order to suit our customers' specific requirements and tastes.

We specialise in the refurbishment of antique locks and reproducing locks from existing patterns. Our clients include English stately homes and BBC television dramas. Whatever your requirements in antique locks Blackstage can service your needs.



James Gibbons custodial locks are internationally proven high security locks. Blackstage Limited are the sole distributors of James Gibbons custodial locks.



As is the usual policy of Blackstage Limited no technical details concerning the security locks have been included with this page.

Please note that Blackstage Limited will under no circumstances forward sensitive technical information to unknown parties. Nor will Blackstage Limited under any circumstances, transmit any such information by none-secure means.

Lock Refurbishment

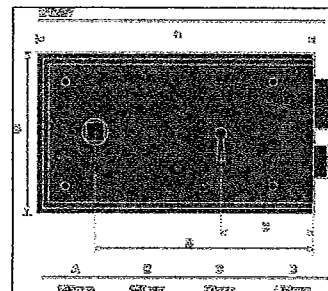
We offer a complete refurbishment service for antique locks. In many cases, we would rather refurbish existing locks than replace them. On receiving your lock we assess it and quote a price for refurbishment. After refurbishment the lock will work like new, including new keys (if required), and will be packaged and returned to you to refit. This can save you time and money and is an environmentally friendly operation. We are able to refurbish/reproduce antique door furniture.

We can also manufacture locks identical to your existing lock; even if your sample is of opposite handing.

We manufacture miniature locks and keys to order. If you have a lock but no key ... then no problem.

Keys

We manufacture reproduction keys for Royal houses,



reproduction brass lock — Edinburgh style

churches, listed buildings or for persons who wish to maintain an authentic period style to their homes. Contact us and we can make a key to operate your lock.

We can replicate locks or manufacture from measurements and pictures. We welcome all enquiries, be it for one lock or a trade enquiry for a hundred locks.



On the Blackstage website, there are links to download our catalogues, or they may be obtained by post.

<http://www.blackstage.co.uk>

mail@blackstage.co.uk

Write to **Blackstage Limited** at

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