LOCKS & KEYS

The Newsletter for lock collectors

Issue 12 July 2000

"*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 Word7, Works3, Write, or saved as .rtf can be used. Please send an sae if you need a reply.**

Crash!

After the last issue, the old editorial 386 computer died of a harddrive crash. I was therefore pushed into buying a replacement computer. Although secondhand, it is now within spitting distance of the twenty-first century, with Windows95.

I am now capable of getting onto the Internet at home, and can receive email at: Rphillips52@btinternet.com This will make it easier for you to send me material. I can now read MSWord7, as well as .rtf files. As yet, I have no plans for an Internet site in the near future.

I am aware that there is a large amount of material on the Internet. However, I still feel there is a place for this newsletter, although it has never achieved an economic number of subscribers.

If you too, dear reader, feel that my effort is worthwhile, please renew your subscription promptly, don't wait until November. (I regret that increased postal rates require a subscription increase.) You would inspire even more confidence in me if you would take a moment to tell me what you like, and don't like, about the newsletter. Then send me a contribution about locks.

Richard Phillips

In This Issue

Handcuffs

Methods of restraint have been used since the earliest times - before the dawn of historical record in fact, originally of cord and later of metal which, apart from some spring wedge lock shackles of Roman times, have generally been of rather crude construction. The usual methods of fastening the shackles were by hammering shut the encircling ring, or riveting the two sections of manacle. This can be seen in use in many films, especially those concerned with slaving and early prison adventures.

The spring wedge lock remained in use for a long time but by the eighteenth century restraints were being produced with the barrel lock. This consists of a spring-loaded plunger, one end of which projects from its casing to penetrate a hole in the other end of the hinged shackle. To unlock, a threaded key is wound onto the other end of the plunger and when turned further, pulls the plunger from the hole thus allowing the hinged section to open. This design, with modifications, lasted until the present day and is still widely used in many parts of the world.

For a long time the standard pattern handcuff was the 'darbies' using a straight spring-loaded barrel lock and a curved swinging shackle to encircle the wrist or ankle.

There was no room for adjustment to cope with wrists of different sizes, so a selection was required of different dimensions to en-

continued on p.3

Edited & Published by Richard Phillips
"Merlewood", The Loan, West Linton
Peebleshire, UK EH46 7HE
☎West Linton 00 44 [0]1968 661039
Annual subscription: £10 in Sterling only
Published November; March; July

Books on locks & keys in 'Frisco Public Library

Books on Locks and Keys in San Francisco Public Library

Alth, Max. *All About Locks and Locksmithing*. NY, 1972. vii, 180 pp. Ref.
Ancele, I.B. *How To Do It for Locksmiths*. Los Angeles, 1970. 64 pp.
Crichton, Whitcomb. *Practical Course in Modern Locksmithing*. Chicago, 1971. 223 pp.
Crichton, Whitcomb. *Practical Course in Modern Locksmithing*. Chicago, 1979. 223 pp. Ref.
Curtil-Boyer, Charles, *L'histoire de la Clef*. Paris, [1968]. 95 pp. Ref.
Hennessy, Thomas. *Early Locks and Lockmakers of America*. Des Plaines, IL, 2nd ed., 1976. 149 pp. Ref.
Hobbs, Alfred Charles. *The Construction of Locks*. West Orange, NJ, 1982. vi, 212 pp. Ref.
Hogg, Garry. *Safe Bind, Safe Find*. N.Y., 1968. 158 pp. Ref.
Holiner, Richard. *Collectible Locks*. Paducah, KY, 1979. 112 pp. Ref.
Hopkins, Albert A. *The Lure of the Lock*. N.Y., 1928. ix, 246 pp. Ref.
Huntington Hopkins Co. *Illustrated Catalog and Price List etc*. San Francisco, c. 1890. xvi, 930 pp. Ref.
James, J.D. *Locks & Lockpicking*. Hermosa Beach, CA, c. 1987. 24 pp. Ref.
Jousse, Mathurin. *Reproductions of Illustrations of Ornamental Metal-work, forming L'Art du Serrurier*. London, 1889. 27 pl. Ref.
Kraske, Robert. *Silent Sentinels*. N.Y., 1969. 127 pp.
Locksmith Ledger. *Electro-mechanical Locks*. Des Plaines, IL, c. 1971. 64 pp. Ref.
Locksmith Ledger. *Know How for Locksmiths*. Des Plaines, IL, c. 1970. 64 pp. Ref.
Locksmith Ledger. *Locksmith Ledger International. Security Register Issue*. Park Ridge, IL, 1994. Ref.
Locksmith Ledger. *Padlock Handbook*. Des Plaines, IL, 1967. 112 pp. Ref.
Locksmith Ledger. *Self-study Builders' Hardware Course for Locksmiths*. Des Plaines, IL, c. 1970. 120 pp.
Locksmith Ledger. *Techniques of Locksmithing*. Des Plaines, IL, c. 1975. 64 pp. Ref.
Monk, Eric. *Keys, Their History and Collection*. Aylesbury, 1974. 64 pp. Ref.
Robinson, Robert L. *Complete Course in Professional Locksmithing*. Chicago, 1973. xv, 399 pp. Ref.
Sargent, E.H., and Co. *Hardware for Utility and Ornamentation*. New Haven, CN, c. 1927. 62 pp. Ref.
Singer, Leonard. *ABC's of Locksmithing and Keymaking*. Des Plaines, IL, c. 1970. 34 pp.
Sloane, Eugene A. *The Complete Book of Locks, Keys, Burglar Alarms*. N.Y., 1977. 372 pp.
Sloane, Eugene A. *The Complete Book of Locks, Keys, Burglar & Smoke Alarms*. N.Y., 1977. 320 pp.
Stewart, Don. *Key Collectors Key Type Identification Guide*. Phoenix, AZ, c. 1988. 64 pp. Ref.
Tchudi, Stephen. *Lock & Key*. N.Y., 1993. x, 113 pp.

In Chinese. Chinatown branch library
Liu, Chien-Hsing, *So chiang pi pei k'an so ta ch'üan. Ts'ai pan*. Hsiang-kang: Hsing hui t'u shu yu hsien kung ssu, 1993. 351 pp.
Tseng, Chieh-hao, *T'u chieh chien i k'ai so ta ch'üan*. 198? 458 pp. Ref.

In Spanish. Mission branch library
Pey i Estrany, S[antiago]. *Carpinteroa y Cerrajeroa*. Barcelona, 1984. 167 pp.
Pey, S. *Instale usted mismo sus sistemas de seguridad*. Barcelona, 1987. 80 pp.

Children's fiction
Hughes, Shirley. *Alfie Gets in First*. N.Y., c. 1981. [32] pp.
Patron, Susan. *Dark Cloud Strong Breeze*. N.Y., c. 1994. [32] pp.
Seaman, Augusta Huiell. *The Brass Keys of Kenwick*. N.Y., 1951. 273 pp. Ref.

These are the thirty-five titles listed on the Main Library's computer, but some may turn out to be borrowed, lost or withdrawn. Those marked 'Ref.' are for reference only.

The Main Library also houses the Patent and Trademark Center which holds United States patent abstracts from 1872 to date, and complete patents from 1871-1911 and 1961 to date.

Jon Millington, March 2000

Handcuffs continued from p.1

sure that the prisoner remained caught. Women's or children's wrists could often slip out of the standard size cuff. This was of course before equal rights legislation, when all poorer criminals received the same treatment.

By 1880 an adjustable type, the 'Scotland Yard' pattern was developed to accommodate different wrist sizes and this design is still in use today.

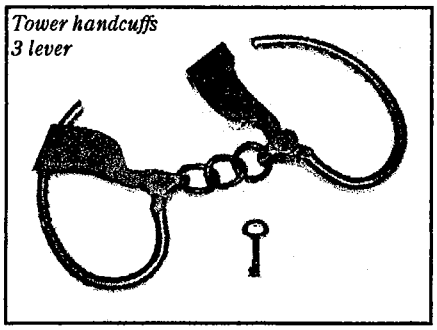
Advances on the 'traditional' design were mostly carried out in America where well over 200 patents have been taken out on handcuffs since 1860 when W.V.Adams designed a cuff of a novel shape. He did not specify how these cuffs should be locked and many further patents were taken out by J. Tower using the same basic shape but with different lock mechanisms.

In 1882, E. Bean invented a type of handcuff that starts to look more like those with which we might be familiar. Although not so secure as the Tower, it looks more comfortable. A weakness of this and many contemporary designs is that if the prisoner should grab the cuffs and close them, then there will be a delay while the captor finds the key and unlocks them. During this period, an aggressive prisoner had further opportunity to retain his freedom.

To overcome this weakness G.A.Carney patented a revolutionary design in 1912. His shackle had a swinging bow. This means that the ratchet section of the shackle can rotate through 360 degrees and will not lock unless there is a wrist in the way. Again he did not specify a lock mechanism and there have thus been many variations on the design, each 'improving' on the last.

This style is usually known as the'Peerless' pattern, after the name of the first company to make them, and is the most frequently seen today. The two wrists are usually joined by a chain linkage but the British police are now moving towards a solid design known as the 'Speedcuff' which is faster to apply and at less risk to the officer.

Tower handcuffs 3 lever



For ease of carry, the solid link is produced in a hinged version that locks solid on opening.

One problem associated with handcuffs is that the dimensions of the case do not allow for highly sophisticated locking mechanisms.

The locks are vulnerable to a variety of methods of attack from rapping, through shimming to straightforward picking or even prising apart.

Rapping, in this sense, refers to banging the cuffs in a particular way against a solid object to cause the bolt to withdraw and release the shackle. It works with several different designs but is mostly used on the well-worn Darbies when the spring has lost a little power. I think it would be painful for the wearer of the cuffs, but if it gets you free it might be worth it.

Shimming involves passing a thin piece of metal into the lockcase between the ratchet and the bolt. We have now created a smooth path for the ratchet to slide over because the bolt is held back from the ratchet. A common hairpin is often all that is needed but as in all walks of life, practice is required. Finer tolerances and improved mechanisms produced many designs for shim-proof cuffs although generally these also had their weak spots.

Picking the locks is often the simplest way out of handcuffs and many patterns only need a bent paperclip to release them. Knowledge of the working parts is essential.

To overcome this problem many designs use a double lock. After the cuff is closed, another operation is carried out to prevent picking. Again, knowledge of the working parts will reveal the unlocking sequence and the paperclip is often sufficient to allow escape. Even the metal tag on a shoelace or the ringpull from a beercan can be used.

These weaknesses make a nonsense of many 'dramatic' films where 'professional' criminals remain connected because they do not know how to remove the handcuffs.

Riveted leg irons are acceptable in this context.

Prising apart the two halves of a handcuff frame, especially the poorer quality cuffs is also a means of escape. The two sides through which the shackle swings may be forced apart with two levers and the ratchet will then open.

The ridges on central heating radiators have been used, allegedly, for this task.

Other techniques for escape might include strips of cloth, fishing line, springs and assorted metal gadgets, but most important is knowledge of the particular mechanism on the device used.

From the above we can see that handcuffs are only to be used as a temporary restraint when the prisoner is under observation or guard, for it can be relatively easy for an alert and informed prisoner to depart.

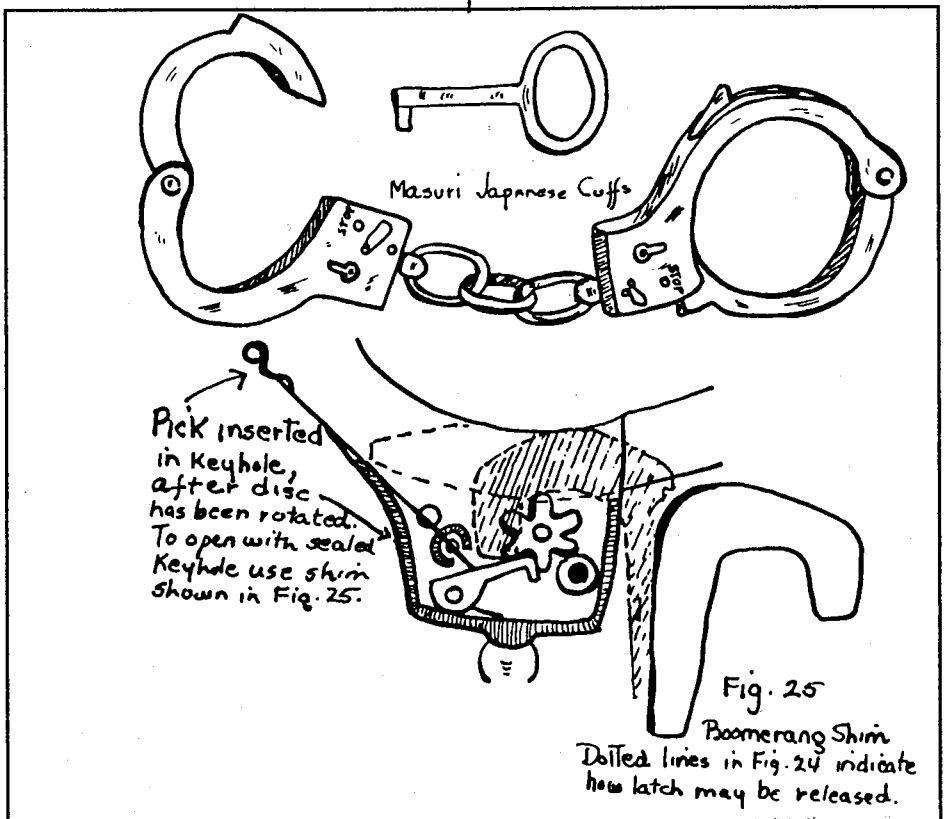
It is not possible in an article of this length to give more than a very brief story of handcuffs so for those who wish to learn more I have included the details of two books that are fascinating and essential reading and an Internet address that will take time to load but has about 170 illustrations of different restraints.

NICHOLS, Alex R *Handcuffs and other restraints.* Stroud, Kingscourt Publications, 1997, 48p including 26 of illustrations, Bibliography. 21cm. ISBN 0 9531338 0 X (Available from The Boot Cottage, The Street, Kingscourt, Stroud, Gloucestershire GL 5 5DR UK; price £3.50, postage extra.

This excellent introduction to handcuffs is probably the only work currently in print in the U.K. It is intended as the forerunner to a fully comprehensive work that will cover the World and other places as the psychology of restraint is to be featured. I recommend it unreservedly as a no-nonsense, well illustrated introduction to a very wide ranging subject, although as an introduction it cannot be compared directly with the next work.

GROSS, T L *Manacles of the world*: a collectors guide to international handcuffs, leg irons & other miscellaneous shackles and restraints. Clayton, Missouri, 1997. 162p, 170 illus., bibliography, 28cm, LC97-93583. (Available from PO Box 16896 Clayton Missouri MO 63105, USA. U.S.$10 plus postage in U.S.A. $3 per copy; postage outside U.S.A. $5 per copy.

A very well illustrated and scholarly work covering a vast range of handcuffs. Where patterns of the same shape are produced in different countries, one is taken as the illustration and cross referenced to save duplication. After introducing the history of restraints and certain variations in design, Mr Gross takes the production of handcuffs country by country in chronological order with an easily readable and informative text. My only niggle is that the keys are seldom shown and the differences in the less frequently seen locking mechanisms are not fully explained. This is only a personal thing as I like to see the workings. This might be rectified in a future edition. Strongly recommended.



Masuri Japanese handcuffs. *These cheap cuffs are widely available in Britain and USA. They lock by a starwheel whose points engage into dimples in the swinging arm. The pawl which checks the wheel is deep inside the case, so the ordinary straight watchspring shim is ineffective. The keyhole is too large for the standard key. Although the doublelock needs no key for release, these cuffs are surprising secure.*

Yossie's Handcuff Collection

http://www.blacksteel.com/~yossie/hcs-menu.html

This site on the Internet shows the private collection of 'Yossie' The 170 illustrations of restraints show a wide range of handcuffs, usually with their keys. A short technical comment accompanies most cuffs. It makes a very good addition to the books above and the alphabetical listing of the cuffs makes it easy to find a particular model. There are links to several other sites. I hate to think how much it must have cost to acquire such a collection, or where he finds room to store it.

Richard Hopkins

[There is some information on Roman manacles found in Britain, which can wait for a later issue. Ed.]

ROPER, Carl A *Handcuffs, US* .50p. Phoenix, Desert Pubs 1977. A small booklet listing many old and new cuffs, with patent illustrarions.

Handcuffs, books, and much else of interest to locksmiths and escapologists can be bought from: Wheeler-Tanner Escapes, 3024 E 35th, Spokane WA 99223 USA; telephone 509-448-8457.

Humane Restraint Co. Inc PO Box 16 MadisonWi 53701 USA.

Most British handcuffs are made by Hiatts of Birmingham, but following publicity several years ago, they no longer sell to individuals. Chubb made escort cuffs for the prison service, sold only to the Home Office. The type long in use has been discontinued, and a new model, possibly made by Lips, has entered service. British makers or importers of handcuffs include:
La Trobe Handcuff Ltd, Oakwood Park, Conway, Gwynedd LL32 8LQ They make a Peerless type in several versions.
Toye Kenning & Spencer (Bedworth)Ltd, Regalia

House Newton Rd, Bedworth, Warwickshire CV12 8QR

Chris Gower is a collector with a business called 'Fetters-Leather'. He has persuaded Hiatts to make some batches of old models, for sale to collectors: Unit 1 8-9 Bilton Industrial Estate, Humber Ave, Coventry CV3 1JL
www://fetters-leather.com

A plastic emergency handcuff key not detected by X-ray or metal detector equipment, which can be worn in various items of clothing, and fits standard US/UK handcuffs, is sold to law officers only by: www.handcuffkey.com

The US test standard for handcuffs, which is used also by the British Home Office, is on the Internet at: http://www.blacksteel.com/NIJ_Standard-0307.01.html The Home Office made restricted publication of the test results of handcuffs considered for use by British police.

Incite Technologies Corp. sells books and equipment, some of which might be of interest: www.my-secret.com

Nuisance jailed for having handcuffs 8/99

KOTA KINABALU, Thurs. - Causing nuisance and illegal possession of handcuffs landed a 22-year-old local man in a Magistrate's Court this morning which fined him RM200 with a seven-day jail in default.

Mohd Nasirum from Kampung Tebobon near here was arrested by the police in Kampung Air downtown about 4.45pm on July 10, this year after receiving a public tip-off that a group of people there were causing nuisance.

The police, who conducted a body search on the accused, found a pair of handcuffs placed in a leather cover.

Since his arrest, he had been remanded in the police lock-up until produced in court today.

ESS December 3 1995 13

OUT OF THIS WORLD

■ A PEASANT farmer in Peru has offered to give his six-legged llama to scientists in exchange for a battery-operated TV. And he's told them: "I'd like to tune in for Christmas."

■ ARMED police swooped on the home of Tanya Goetz, 35, handcuffed her and threw her into jail in Erlanger, Kentucky, after her 14-year-old son failed to return a library book.

■ THE pilot of a light plane and his passe-

Sunday Express

CLICK—and a photographer is snapped in

A GRIM-FACED policeman peered into a parked car outside Fulham police station this week and observed: "Excuse me, sir, I see you are handcuffed to your mini."

The driver, 26-year-old fashion photographer **Richard Clive**, was in no position to disagree. His wrist was firmly manacled to the steering wheel of his car.

"I don't really know how it happened," says Richard, son of Yorkshire landowner **Peter Clive**. "I use the handcuffs to secure my cameras when I leave the car. I was fiddling with the things while I waited for a friend in Chelsea and somehow locked them on my wrists."

Richard drove to the police station and waited helplessly until finally help was summoned.

"That was only the beginning of the trouble," said an officer at the police station. "They were an old type of handcuff—out of production. We eventually had to find a makeshift key and get him out. I think the lads found it very amusing."

Questions from readers

Write in to "*Locks & Keys*" with your questions about locks. Somebody will surely be able to supply answers. The Editor will be pleased to print a composite answer to questions. When replying, please mention the number of the question.
(There are no questions or answers for this issue.)

Various items have come in.

Every time I pass a church
I pay a little visit
So when at last I'm carried in,
The Lord won't say:
"Who is it?"

Quite.

(Seen at Bodelwydden church.) A more immediate reason for visiting churches might be that our parish churches contain much of interest to us, such as ironwork, chests, (usually valued), locks, old safes, (usually not valued). We shall come back to some of the interesting items in churches in a later issue. Just to make the point in passing. Whitby parish church has a wooden chest on show in a respected position with a notice recounting how a thief threw it over the cliff to break it open; how it was recovered from the beach below and repaired. There is also an old (now legally antique) square corner safe with a money slot roughly hacked in the top, and garish paint ladled on. Unlike the wooden strongbox, this early iron safe is not regarded as of historic value or interest.

Appleby-in-Westmorland has an antique Philips & Sons holdfast square corner safe with a money slot neatly cut in the top. Although base fixing might have been considered, its sides have been neatly trepanned and a stout chain passed through to fasten the safe to the fabric of the building.

Incidentally, Bodelwydden (the White Church) church is an architectural curiosity, as is its WW1 war memorial, if you happen to be passing along the A55 in north Wales.

◆◆◆

Jon Millington mentions that there is a book on chastity belts:

DINGWALL, Eric John *The girdle of chastity: a medico historical study.* Routledge, 1931.

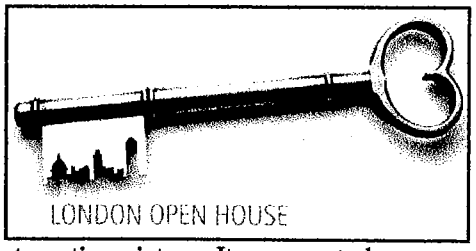
Jon also complements the San Francisco Public Library patent centre, as an addition to the booklist on p2 above.

◆

Glasgow Council's Finance Department uses paper with a rather elegant watermark of crossed medieval keys, which I cannot reproduce here, but it is an attractive idea.

◆

About the middle of September, across Britain, many interesting buildings will open their doors freely to the public. Originally called 'Doors Open', it is now also sometimes called 'Open House'. It is part of the European Heritage Days Initiative. Programmes for local areas are usually issued mid August, available from public libraries, tourist information centres, architects' societies, etc. Many of the programme booklets have in the past included some variety of key in their design. The London Open House has an



interesting picture. It appears to be a warded key: closer inspection of the bit shows it to be a silhouette of some London buildings. Further information on London (23-34 September) from http://www.londonopenhouse.org/ . For England, the Civic Trust 09068 800 603; Scotland 0141 221 1466; Wales 01222 484 606; Northern Ireland 01232 543 078.

◆

The **Black Country Museum** is engaged in a £1.5M addition of the former Smethwick swimming baths to the museum at Tipton Road Dudley 0121 557 9643. It will house galleries and exhibitions on Black Country trades. The Museum is appealing to you, dear readers, for some locks to exhibit, especially some high quality items from Chubb and Yale, and some cabinet locks. *(See p12)*

Phoenix arisen

The Phœnix Safe Co. Ltd has a history which in effect makes it one of Liverpool's oldest trading companies. In 1799 as Richmond manufacturing it was producing seamen's chests, strongboxes, and coffins for the ships sailing to America.

In 1832 a group of Basque steelworkers who were earning their passage to America stopped in Liverpool, and worked for Richmond. Their expertise led to the first all-steel strongboxes manufactured by Richmond, the forerunners of today's modern security safes.

By the late1830's the company was renamed Withy Grove Safe Co. and began to design and patent steel security devices and safes, many of which are still in use today. This continued until 1985, when the first Phœnix patented designs appeared.

I was part of the team that set up the Chubb Milner Trade Division for Chubb in 1983. While researching a name for the new trade division, I came back to the round Chatwood Milner logo (based on the round Milner logo, not the angular CM logo). The marketing people at the time wanted a more modern name and image, and so the current Chubb Milner style was adopted.

However, in 1983, I had patented a basetray designed to increase the security without any loss of fire protection in a standard Far Eastern fire safe. Chubb at that time were not interested in that type of safe, and so I left to produce my own designs. The first sample patented basetray was made by my partner John Solomon, of Withy Grove Stores, who at the time were still making safes.

We then formed a company to promote the new product. We were a Liverpool-based fire safe company, and I knew that Chubb had lapsed their ownership of the Chatwood Milner logo in 1977. We adopted that logo, and called the new company Phœnix. We removed the Chatwood Milner Liverpool and London lettering in the outer ring of the logo. We inserted Phœnix Safe Co. Liverpool, and traded under that name from 1986, when Phœnix was incorporated.

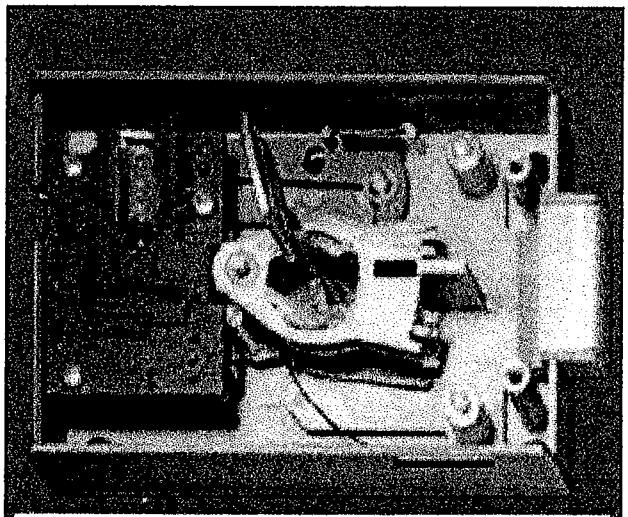
Interestin- gly, in the 1800's Withy Grove were contemp oraries of Milner Safes. Both companies were designing and patenting safes in their respectiv e factories not three miles apart in Liverpool.

We have an original Withy Grove patent document and sample safe from 1840, which is being refurbished to go on show at our offices, together with a 1983 patent Phœnix model.

Phœnix was formed to exploit the untapped mail order market for security products and became the UK's first mail order safe company It began selling its patented fire and burglary resistant products through the American Express consumer catalogues.

With the growing impact of computers and the fact that information had become more valuable than money, it was in 1988 that Phœnix designed and tested its first data safe.

Even small companies could afford to spend £600 on an Amstrad computer, and perhaps Sage software to run the company. However, a data safe to protect the critical information being generated would cost at least £700. The price disparity between the technical wonder that was an Amstrad PC, and the square box that was the safe, effectively stopped any but the most concerned company director from buying a data protection safe at that time.



Electro-mechanical time-delay lock

The first Phœnix 2001 Datasafe broke the mould: it retailed at under £199 and brought a cost-effective answer to data protection.

We make data safes in Liverpool, but other products are made to our design and specifications in the USA, Germany, Czech Republic, and Korea.

The locks used are Hudson and Medico from the USA, Mauer and StuV (Steinbach und Vollman) from Germany and Czech Republic, and Diplomat from Korea.

The importance of security cannot be over-emphasised. 58% of companies that suffer loss from fire will never recover their full trading potential — and half of these will have ceased trading within 12 months of the event.

This proved particularly relevant to Phœnix. The

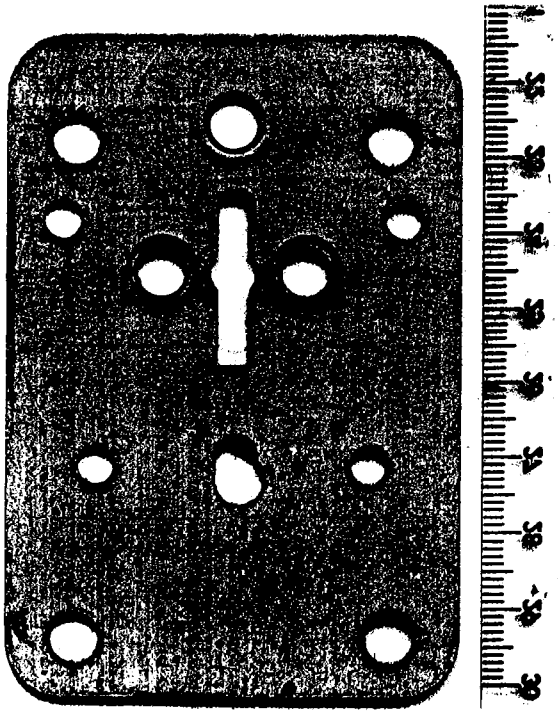
company had been testing its safes continuously since 1988, but nothing can compare with the real thing. At 10 o'clock on Saturday 14th December 1996 a faulty electric light started a fire in the company's Liverpool offices. Despite the immediate attendance of the fire brigade, within 15 minutes the entire office was engulfed in flames, and with all its contents, was totally destroyed. However, all the records were stored in the company's own safes, and survived intact. With the assistance of BT engineers, and the computer maintenance company, Phœnix was back in business with relatively little difficulty on Monday morning 16th December.

Reports at the time that the costs of the fire were borne by the Phœnix marketing budget are not entirely true, but it did help. It does, however, dramatically underline how ferocious fire can be, and how simply disaster can strike.

There is not space here to detail the company's economically-priced product range, from cash boxes and key safes, to a variety of fire and burglary safes, safe deposits, cabinets and cupboards, in several sizes. There are models for home and business, some with base-fixing. Locking choices include not only keylocks, but also mechanical and electronic combination locks. Details and prices are available from Phœnix Safe Co. Ltd, Coburg House 35-37 Sefton Street, Liverpool L8 5SL. [phoenixsafe.co.uk]

John P Thompson, MD

STUV Typ 4.19.92 VdS-Klassel, from a Phoenix firesafe. This has a zinc cast case and bolt, with pressed aluminium levers. Levers are endgated with false notches and enclosed bellies for a double-bitted key.



Natural lore

Moonwort was once credited witha varietyof magical powers. It had one special ability that must have endeared it to thieves. Like the elusive and mysterious springwort, it opened locks and drew out nails, and it had the useful advantage over springwort that it was easily recognizable and grew wild on English heaths. A leaf laid against a nail at once loosened the latter, so that it fell out easily; one thrust into the keyhole opened any lock, however secure. Nicholas Culpeper (1649) records that if horses stood on the plant, it pulled off their shoes. He records a story that thirty of the Earl of Essex's horses thus lost their shoes on White Down, near Tiverton.

Springwort, from Classical to Medieval times, was credited with wonder-working properties. It endowed its possessor with the power of discovering secrets and hidden treasure, opening locks, and making himself invisible. Unfortunately, no-one now knows exactly what this plant was.

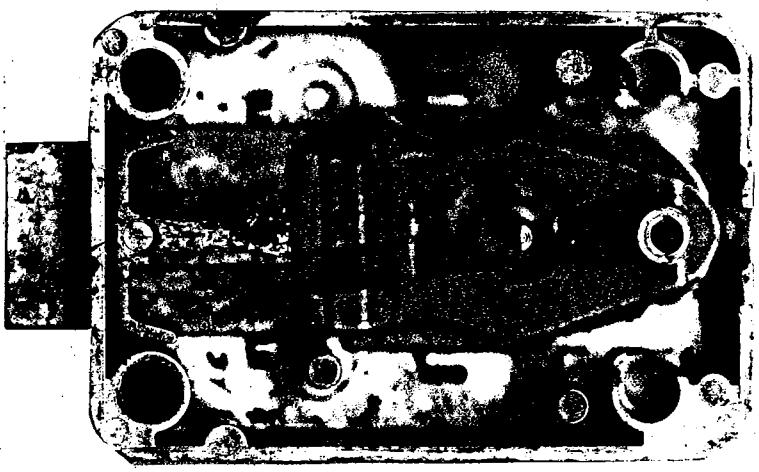
In Hungary, Vervain was beloved of thieves because, like moonwort in England, it had powers over locks and bolts. If a man made a small cut in his hand and pressed a fragment of the leaf into it, that hand would afterwards be able to open any locked door or chest-lid simply by touching it.

Culverkeys is an old name for such plants as bluebell, columbine, squill, etc., whose flowers have some resemblance to a bunch of keys.

RADFORD, W *Encyclopaedia of superstitions,* 1969.

Moonwort is the fern *Botrychium lunaria.*
Vervain is *Verbena officinalis.*

Trevor Dowson



Car security

Lock makers have been involved with cars from before the era of motorcars[1]. Joseph Bramah, an inventive genius, invented[2] a car suspension using pistons supported by compressed air. He had enough difficulty even finding mechanics capable of greasing a plain car axle bearing however. George Stephenson used this suspension for a railway locomotive in 1816. In the 1960's forms of pneumatic or hydro-pneumatic suspension appeared on the Citroen DS19 and the Mercedes 600. British Leyland introduced the Hydrolastic Suspension with the BL1100 in 1962, developed from Bramah's idea.

Corbin went further. They ventured into making cars, before the Great War.

Early cars did not have any security - very few persons could drive. They were 'horseless carriages' before they were called automobiles. The bodies were built by coach-builders, and early doors had budget catches with drop handles. These were soon replaced by springlatches with turning handles, of T or L shape. However, it was some time before disktumbler locks were incorporated, and the key number appeared on the face of the door lock until after the war. It remained on the ignition lock until the beginning of the nineteen sixties! A pen-sized telescope was widely advertised from the 1950's, suitable for reading the ignition lock number through the window. Mine is chrome-plated steel; current production is plastic.

Although there were car thefts before the war, it was the Great War which really boosted motor crime into a serious problem. So many men were trained to drive, and as mechanics, and cars became more common. Soon there were numerous accessories for sale - including anti-theft devices.

Steering locks and hook (or chain) locks have a long history. So have devices to secure spare wheels. In an era when roads were littered with horseshoe nails, quick changing, and several spare wheels, were useful; and easy to steal.

Early ignition switches appeared before the Great War, using Lucas spade keys. Soon disktumbler locks became normal. Bilfix locks[3] were used briefly on some cars, mainly Jaguars, in the 1930's.

Many early cars had a removable trunk, rather than an integral boot as we know today. The original trunk was a wooden box, with an ordinary boxlock. It was fastened to the car by leather straps. My Grandfather's trunk is beside me as I write, with a 2 lever boxlock; the registration number painted over but still discernible.

Car door locks greatly improved their performance in the 1960's as a result of crash tests, but the locking device almost universally used in Britain remained the disktumbler lock, with several series having only 200 differs. British Railways Research Station tested such locks, and their record for opening new locks (used, worn, specimens are easier) was 7 seconds. How long does it take with the correct key?

Exceptionally, Rolls Royce cars used Yale pintumbler locks all round.

Cars mostly had opening quarterlights after WWII, which could be opened from outside with a teaspoon. Later a locking button was added, requiring the use of 2 teaspoons.

When door locking knobs appeared, they could be manipulated from outside fairly easily. Various redesigns sought to make this more difficult. One useful tool was the Slim Jim, a long strip of spring steel with notches in one end. Details, including a dimensioned diagram, were published in a British automobile standard on vehicle security. (I have lost the reference and have no copy. At that period, because standards are extortionately priced, the British Standards Institute printed them on dark red paper to frustrate photocopying.)

Britain remains the worst country for car crimes. There have been some improvements, but there is a general reluctance to be serious

about tackling the problem. Most new cars are bought by institutional buyers, who pass on all costs, including insurance, to their customers. Private motorists buying secondhand do not buy from the Makers, so their views are irrelevant as influences on car design.

Many of the antitheft devices now sold, some quite expensive, are easily and quickly overcome, sometimes with little damage. For long, a dent-puller (often called a 'slam hammer') has been used to extract the plug from disk-tumbler locks, especially the steering lock which became compulsory in the late 1960's. Steering wheels can be cut to remove many locks intended to prevent turning the wheel. This is often easier than picking an Ace-type lock.

Other types of locking device have been used in recent years. Some have proved less than completely reliable in functioning. (Can anyone describe Ford's locks, and the electronic(?) component to them?)

In America, General Motors used the side-bar lock, which is rather difficult to pick. However, it is not immune from violence.

Many cars now are entered by smashing a window, to steal from the car, rather than the car itself. Before this fashion, additional deadlocks made by Yale, and others later marketed by AFA, and Lander Alarms, were useful. However, up to the 1960's, Yale deadlocks added to a British car were an almost certain indication of a jeweller's rep.'s car!

Bolted on, or sometimes welded, vehicle safes were used on delivery vans which collected payment in cash (long gone in this age of self-service). Many of these needed 2 keys to open. Such boxes are still easily fixed into modern cars, and would be protection for documents such as spare cash, cards, passports, but are little used.

Thanks to all who supplied information and pictures. R Phillips

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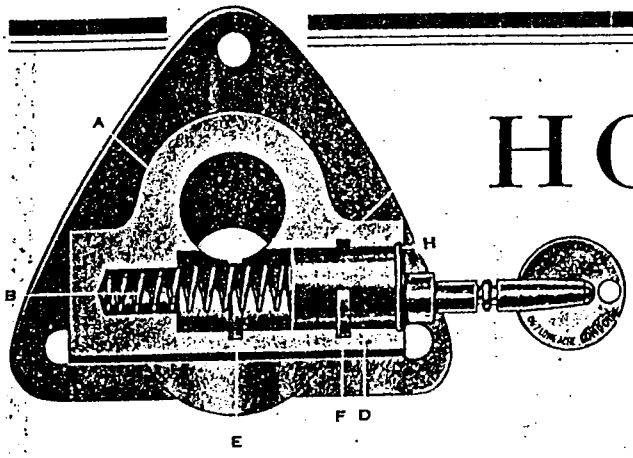
[1]apart from M. Cugnot's steam-engined tricycle tractor of 1769, which overturned on its second test drive and was not heard of again.
[2]BP3616 of 1812 'certain improvements in the construction of ... wheeled carriages.'
[3]see Issue 1, page 1.



Diagrammatic Section of the Cooper-Stewart Car Lock. In the unlocked position.

FACIA BRACKET TYPE

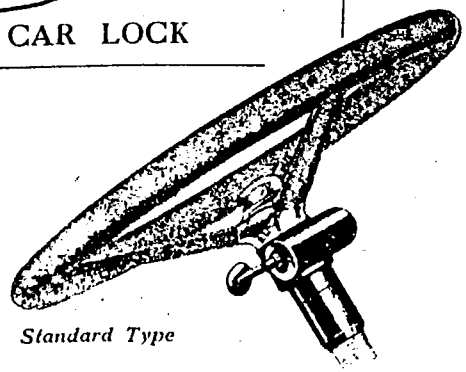
(a) Facia type bracket with housing for lock.
(b) Return spring for locking bolt.
(c) Key in position for withdrawal.
(d) Unit forming locking bolt and containing control mechanism. Note large diameter and great strength.
(e) Recess to receive interlocking cam when column locked.
(f) Interlocking cam securing locking bolt unit. Steering column free.
(g) Recess to receive interlocking cam when column unlocked.
(h) Retaining ring.

HOW MANY Morris Car Owners REALISE—

that excellent as Car Insurance is as protection to the car owner many disabilities remain if the car is stolen? Here are some —

1. *NOT* a Cash Settlement always, but usually another car is given you if your claim for theft, damage, or fire is allowed. The substituted car may or may not be as good as the original.
2. GADGETS and personal luggage, unless specially insured, will be a total loss, for these are always removed from stolen cars even if such cars are ultimately recovered.
3. Loss of use of car between the times of theft and recovery (or substitution by another car) with waste of time and attendant expenses.

The Cooper Stewart CAR LOCK



Standard Type

This patent British-owned and British-built Car Lock costs . . 45/= *plus a few shillings for fitting.* In locked position, YOUR CAR NOT ONLY CANNOT BE STOLEN —IT CANNOT EVEN BE TOWED 100 YARDS.

WE RECEIVED last month an order from a leading British Car Manufacturing Co. for 1,400 of this type lock after exhaustive tests of its merits.

On Golf Links, Seaside Esplanades and solitary places you can, by a turn of the wrist, make your car as immune from theft as the Sphinx. Your nearest motor agent can readily fix a Cooper-Stewart Car Lock and we will make him liberal trade terms. Get him to write for particulars, or do so yourself.

THE COOPER-STEWART ENGINEERING CO., LTD.

136-137, LONG ACRE .. .. LONDON, W.C.2

Telephones: Gerrard 5131, 5132 and 5133 Telegrams: "Specdistic, Rand, London

CHUBB'S PATENT LOCKS.

Makers to The Queen — And to The Bank of England.

The Directors of the Bank of England have substituted several hundreds of Chubb's Patent Locks in place of the Patent Locks of other Manufacturers, on the various Safes, Doors, and Gates, of that establishment. The Committee of the Stock Exchange have also adopted Chubb's Locks in preference to any others for the Lock-up Safes (some hundreds) used by the Members. Nearly the whole of the London Bankers and Colonial Banks, and a large proportion of the Provincial Banking Houses, have Chubb's Detector Locks and Patent Safes in constant use. Their effective security and non-liability to get out of order have given them this pre-eminence. The whole of the Locks upon the external doors and the principal inner doors of the Building for the International Exhibition of 1862, were made by Chubb & Son. Although arranged in various divisions as regards their Keys, the whole were under the command of one Master-key, which was presented by the Chairman of the Commissioners to H.R.H. the Duke of Cambridge, Her Majesty's representative at the opening ceremony.

PRICES OF CHUBB'S PATENT DETECTOR LOCKS, WITH SIX TUMBLERS (EXCEPT IN VERY SMALL SIZES) AND TWO KEYS EACH.

OBSERVE—To prevent Imposition, every Lock has a separate Number, and is marked with the Name and Address of the Patentee, thus:—"CHUBB'S PATENT," 128, Queen Victoria Street, London."

TILL OR DRAWER.

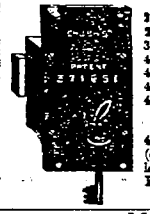
	s.	d.
1½, 1¾ in.	10	0
2 2¼ in.	10	6
2½, 2¾ in.	11	0
3 in.	11	6
3¼ x 2 in.	14	0
4 x 3 in.	15	0

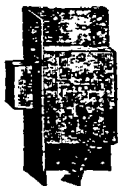
The 2½, 2¾, 3¼, and 3 in. are also kept in stock, in sets of two, three, four, five, or six Locks, with two Keys to pass each set, at same price.

Drawer Locks to shut with Spring, 3s. extra.

CUPBOARD.

(STRAIGHT: To screw on Flat.) (CUT: To let in Flush.)

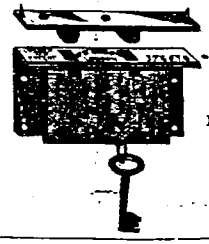




	s.	d.
2 inch	10	0
2¼ „	10	6
3,3¼ „	11	0
4 „	13	0
4 x 2¼ inch	13	0
4 x 3 „	15	0
4½ x 3 „	14	0

The 2, 2¼, 3, 3¼, and 4 in. also kept in pairs (one each right and left hand), with two Keys to pass the pair.

BOX OR CHEST.



	s.	d.
1¼, 1¾, 2 in.	11	0
2¼, 2¾ in.	11	6
3 in.	13	6
3¼ in.	13	0
4 in.	14	6
4½ in.	15	6

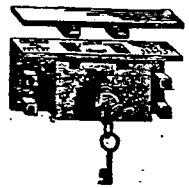
Box Lock to shut with Spring 3s. extra.

SLOPING DESK.

Same prices as Box.

CASH BOX.

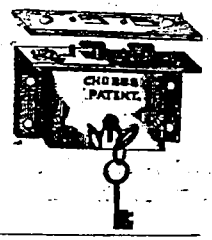
For fixing only on Japanned Boxes.



Price 2s. more than Box Locks.

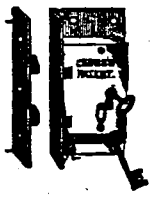
TRAVELLING DESK.

	s.	d.
2½ inch	12	0
3 „	13	0
3½ „	13	6



With either bevelled or square salvage, to suit Desks sloped or flat.

PEDESTAL. (For sideboards.)



Link-Plate Cupboard.

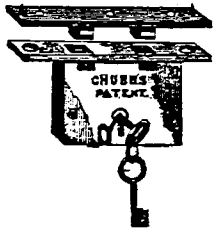
	s.	d.
2½ inch	11	6
3 „	12	6
3½ „	13	0

Each description of Locks also kept in Pairs (one each right and left hand) with two Keys to pass the pair.

MORTISE DESK.

	s.	d.
2 inch	11	0
2¼, 2½ inch	11	6
3 inch	12	6
3½ „	13	0

MORTISE BOX.



	s.	d.
2½ inch	11	6
3 „	12	6
3½ „	13	0
4 „	14	6
4½ „	15	6

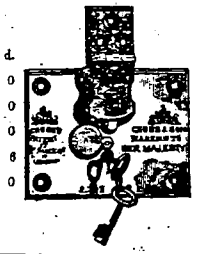
PADLOCKS.

Made entirely of Brass excepting the Hasp.

	s.	d.
¾ inch	12	6
⅞, 1 inch	11	0
1¼ inch	13	0
1½ „	12	6
1¾ „	13	0
2 „	14	6
2¼ „	15	6
2½ „	16	6
2¾ „	17	0
3 „	17	6
3¼ „	18	6
3½ „	19	0
3¾ „	19	0
3½ „ extra strong	26	0
4 „ „ „	30	0

TRUNK OR PORTMANTEAU.

	s.	d.
2½ inch	15	0
3 „	16	0
3½ „	17	0
4 „	18	6
4½ „	20	0



PORTFOLIO.

PLAIN: For Wood flaps of Portable Writing Desks. | PROJECTING: For Portfolios, Pocket Books, &c., with LEATHER flaps.

	s.	d.
1½ inch	11	0
1¾ „	11	6
2 „	13	0
2½ „	13	6
2¾ „	13	0

LETTER BAG.

With large Hasp for Engraving Name and Address, and three Keys.

	s.	d.
2½ inch	15	0

For prices of Solid Leather Letter Bags, complete, see page 2.

TRAVELLING BAG.

The upper part of front Plate left plain for Engraving Address.

	s.	d.
2¼, 3½, and 4 inch	14	0

For prices of Bags complete, made of best Enamelled Leather, see page [illegible].

BOOK-EDGE.

All to close with Spring.

	s.	d.
From ¼ in., rising by 1-16th inch at a time up to 2 inches	20	0
2 in. to 2¼ in.	22	0
2¼ „ 2½ „	24	0

ESCUTCHEON.

As additional Check Locks for fixing over the main Key-holes of Safes, Iron Doors, &c.

Very convenient for Wine Cellars and similar repositories, the holder of the Escutcheon Key being able at any time to lock out the Key of the Main Lock.

Each 26s.