



LOCKS & KEYS



Issue 1

The Newsletter for lock collectors

November 1996

Welcome from the Editor

Welcome to the first issue of Locks & Keys. This newsletter is for anyone interested in collecting locks and keys, or with an interest in other aspects of locks, such as antique restorers, museum curators, bankers, and of course, locksmiths.

I aim to cover all types of lock and locking device operated by a key or keyless combination. I hope to include not only locks as such, but devices with locks built-in, such as moneyboxes, handcuffs, padbars, and anything else which readers consider should be covered.

There will be regular articles on readers' favourite locks; places of interest; readers' queries for other readers to supply answers; notices of books; and advertisements of locks for sale and wanted.

The newsletter will not last very long from my own resources, however. *Your* contributions are essential if it is to survive!

"Locks & Keys" needs your contributions!

Biemer'll fix it

A cylinder lock invented in Germany is occasionally seen in Britain in something like its original form.

Herr H. Biemer patented his lock in Germany, and also in Britain and the United States. British Patent 391,043 was granted in 1932.

The lock was made in Birmingham by the short-lived Bilfix Lock Co. Vauxhall and Jaguar used some for the door handles of some cars in the late 1930's. I have also a locker lock marked BILFIX BRITISH PAT. The lock was known in Britain by its original German name of BILFIX. In America, this became the BELL LOCK.



The following is an extract of the patent abridgement.

A rotatable barrel lock comprises a plurality of thin tumbler strips 8 bearing directly against one another and provided with lateral lugs 9, Fig. 3, for displacement by a cam groove in the side of the key, the lugs 9 also preventing the tumbler strips from dropping out of the barrel 3. The tumbler strips 8 are not subjected to any spring loading, but a spring-pressed tumbler 27 of the form shown in Fig. 9 may be fitted for engagement by a sloping end (continued on p.2)

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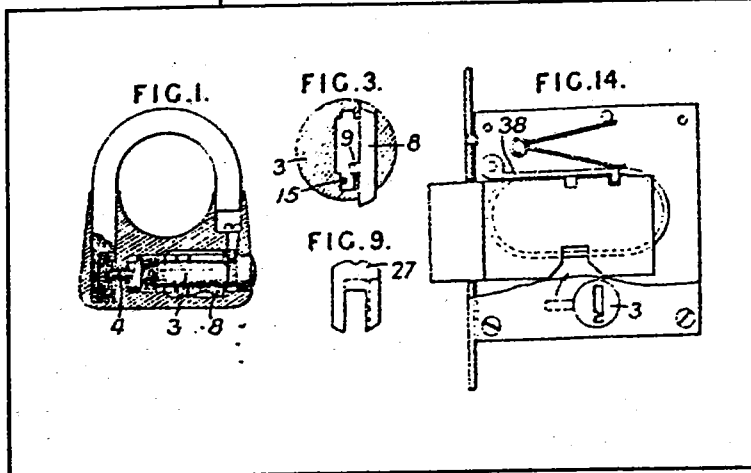
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The Bilfix lock (continued from p.1)

of the key. The rotatable barrel 3 may effect the withdrawal of a locking plunger 4 for the shackle of a padlock, Fig. 1, or actuate a tumbler 38 and withdraw the bolt of a mortice lock, Fig. 14. A guide rib 15 in the barrel 3 positions the key.

The key has a straight, square-sided groove



along each side near the bottom of the blade. There is also a groove on each side whose distance from the middle of the blade varies along its length.

The milling cutter which cut this groove was controlled by cams to produce varying patterns, to create lock differs.

Originally, all the tumblers were identical, and when the plug was loaded, a cut key was inserted. This forced the tumblers to protrude, some from one side and some from the other side of the plug - rather like a double-sided disk tumbler lock plug with the wrong key.

Then the plug was inserted into a hollow cutter (in effect a plug-cutter), and all the protruding parts of the tumblers were machined off. In this state the plug was fitted into its cylinder. Then when the key was removed, some tumblers were forced up and some down, locking the plug.

The Bilfix was one of the locks which benefitted from the availability of the process of pressure die-casting with zinc

alloy. The process allows the cheap and plentiful production of intricate shapes which would be too expensive to make by machining.

The zinc alloy has the useful property that, unlike most metals which contract on cooling, it expands slightly. Thus it can make very detailed castings because unlike some other metals, it does not lose the fine detail as it cools.

The saving on making intricate keyways, for example, and the rest of the shaping of lock plugs, makes possible the cheap production of cylinder locking devices. Indeed, they have largely displaced lever locks from furniture. And the host of specialised utility locks would scarcely have been possible without these cheap intricate castings.

Although the British-made Bilfix lock had



only a short life, in more recent years it has come back, from America. In the USA it is a fairly common utility lock for vending machines.

Here, it is sometimes found in sports centres and swimming pools, locking clothing lockers. Usually the lock incorporates a coin deposit mechanism. The key is released when a coin is deposited, allowing the locker to be locked. Unlocking returns the coin and retains the key.

Repair of damaged locking devices is usually not attempted - a new one is inserted. As far as I can discover, keys are not cut here - they are imported with spare cylinders from America.

Richard Phillips

AA & RAC KEYS

The British Keys marked A.A. are issued by the Motoring organisation "The Automobile Association". It was founded in 1905 to protect motor users from the numerous "police traps" of those days, and has grown to be one of the greatest motoring organisations in the world. A squad of cyclist patrols on the London-Brighton road at week-ends formed the nucleus around which the A.A. has grown up, so useful were these first patrols to motorists of 1905 that it was decided to establish the service on a permanent basis. It was, therefore, largely due to the arbitrary enforcement of the 20 m.p.h. speed limit, introduced two years earlier, that the Automobile Association came into being. In the early days principally in the smaller hotels, special toilet cabinets were provided by the Association, in which clean small towels and brushes for members' use were found, they were accessible only by means of a member's key, a small pin type key all one differ. (Photo No.1)

By 1920, for the convenience of members, A.A. Roadside Telephone Boxes with a twenty-four hour service were erected in districts where telephones were scarce, and on roads passing through lonely areas, at important road junctions, cross-roads, dangerous points, etc. All A.A. roadside telephone boxes were fitted with locks of a standard pattern, and keys of an exclusive section, (photo 2), were issued to members, enabling them to use any A.A. telephone at any time, whether the patrol in charge was on duty or not. This key had an open head with pierced holes to allow the letters A.A. to be in the head. The toilet boxes that were still in the small Hotels had the locks changed to suit this key, the design of which was later changed to a solid embossed head. These Locks and Keys were manufactured by H & T Vaughan of Willenhall, and were embossed "AA" and "The Key to the Open Road" on one side, and "H & TV 1921" on the other together with the members Registration Number. (Photo 3). Later issues of the 1921 type had slightly different embossing, with the AA and Property of the Automobile Association on one side and H&TV on the other, together with the member's Registration Number inscribed within a more ornate border.

In 1935, (by which time H & T Vaughan had been taken over by Yale & Towne in 1929,) the A.A. changed the section of key and shape of the key head to Hexagon (Photo No.4). These were embossed "AA" "Property of the Automobile

-2-

Association" on one side and "Made by Yale" and "Finder will be rewarded by the AA" together with the member's Registration on the reverse side. This design was used until 1967 when the latest design was introduced (Photo 5), this key was interchangeable with the previous design but went to a diamond shaped head embossed with minor variations to the basic design "AA" on one side and "Property of the Automobile Association" "Made by Yale" on the reverse side. When first issued, the AA logo was stamped into the key head with the two A's level with the key surface. On the reverse there was an embossed border with embossed lettering, the YALE being in caps and using an ornate Y. Some later issues had Eaton Corpn. embossed parallel to the two top edges on the reverse side, whilst Yale was embossed in Caps and lower case all in the same type face. Eventually the AA logo was also embossed together with a raised border along all four edges of that side of the diamond head. At some point after 1967 the traditional key material of Nickel Silver was changed to Steel with a Nickel Plated finish, during this time the key also lost the members Registration Number.

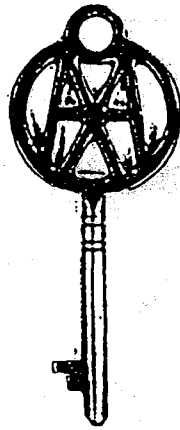
At the time of the announcement of the new key, Viscount Brentford, Chairman of the Automobile Association was presented with a gold key by Dennis C.J. Grabham the Managing Director of Yale Locks & Hardware. It marked the delivery of 10,000,000 Yale keys for A.A. telephone boxes issued to members.

Today the A.A. is more than just an innovative reliable breakdown and recovery organisation for its 7.3 million members. A.A. Service means a full range of insurance and travel facilities, financial services, technical and legal advice with a nationwide chain of high street offices, round-the-clock Breakdown and Information Centres, roadside centres and telephones, providing A.A. facilities where and when they are needed.

From 1st July 1989, all 729 AA telephone call points, including the 37 old-style sentry telephone boxes can be used without the need for the traditional key. They have gone high-tech to speed up the service, with one-touch telephones that automatically connect members to the nearest AA breakdown control centre.

HOTEL BOX

1906 -



No. 1



No. 2

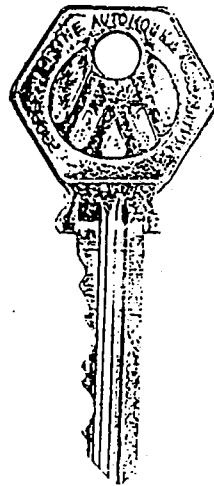
1920

1921



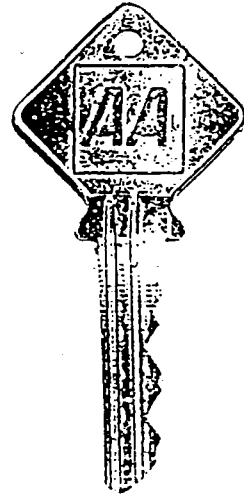
No. 3

1945 -



No. 4

1967



No. 5

(post 1921 - undated)



NO. 3
(1921 DATCO)



NO. 4



NO. 5

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.



- 1] Several persons claimed or are credited with inventing the moving bolt stump as a pick-resisting device, generally known as the 'protector' bolt stump. Can we have nominations for inventor and date, please?
- 2] Does anyone still make key blanks for Cotterill Climax or Cotterill-Wilson locks?
- 3] When did E. Cotterill begin and cease trading, and what became of the company?
- 4] When did the Bilfix Lock Company cease trading, and what became of it?
- 5] When did Hobbs & Co change to Hobbs Hart? And was this the same Thomas Hart who had been involved with lock challenges in the 1840's, or his son?

S. Mordan: locksmith inventor

An *Antiques Roadshow* broadcast in the spring of 1996 showed a small home safe made by S. Mordan & Co. The safe was concealed within a small bedside chest of drawers, nicely made in wood. The safe was lined with blue velvet, and was obviously an expensive item when new, in the middle of the last century.

The details of the safe lock were not clear, though its shape was possibly a large Denison lock. The dummy drawer-fronts were clearly fitted with Bramah 'locks'.

Mr Samson Mordan, of Castle Street, Finsbury, London, was well-known as a locksmith, and Mordan & Company made locks for several inventors, notably Mr E. B. Denison's lock.

Denison's lock was made in a large size suitable for safes. The shape was long and narrow; a small key was used, and the bolt moved by a handle when unlocked. (This is described in HOBBS, A C; *Construction of locks and safes*, Kingsmead Reprints, 1970, pp. 142-147.)

Mordan made considerable use of Bramah locks. The device described below on page 8 of this issue is possibly the first invention of the keyhole-blocking lock. This one is made for rim locks fitted to a wooden door, and has a Bramah lock adapted to the invention.

In the 1970's, keyhole-blocking locks were quite widely available. They used small pin tumbler mechanisms, and were designed for use in lever mortice lock keyholes.

Many were also used as utility locks, incorporated into various devices, such as locking petrol filler caps, and for locking deep freezers.

It would be interesting to know how much they were actually used for locking keyholes.

Richard Phillips

LOCK PROTECTOR.

No. XVI.

The Thanks of the Society were voted to Mr. S. MORDAN, Castle Street, Finsbury, for his Lock Protector; one of which has been placed in the Society's Repository.

TRAVELLERS' chambers at inns are sometimes robbed because the locks on the doors are generally very insecure, and all on the same construction, so that a key which will open one lock will open them all. In order to prevent this, Mr. Mordan has invented a very portable scutcheon, by means of which a traveller may secure the door of his room from being opened during his absence, unless actual violence be used. This scutcheon, or protector, has a short pipe, which, after the door has been locked, is thrust into the key-hole, and is furnished with a small lock, on the principle of Bramah's or of any other equally good, so contrived that, on turning its key, two lancet-shaped pieces fly out laterally and bury themselves in the wood; thus preventing the removal of the protector unless its own key is applied.

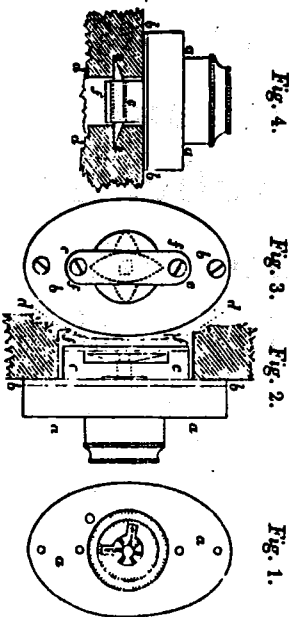


Fig. 1 is the top or front of the lock; fig. 2 a side view; fig. 3 a back view; and fig. 4 an end view. *a a* the cap or case; *b b* the back plate, from which rises a projection or pipe *c c*, formed to enter a key-hole with but little shake: fig. 2 shews it merely introduced but not secured in the key-hole *d d*, which is in section; fig. 4 shews it secured.

In vol. 37 is a full description of a Bramah lock, with its application to liquor cocks; therefore its modification for the present purpose is all that needs to be described. Within the case *a a* and its cylindrical prominence is a barrel or cylinder containing seven sliders; it ends in a strong central pin which passes through the projection *c* into a recess, where it is squared to receive on it the steel-piece *e e*, fig. 4, which is pointed at each end like a strong short penknife with a thick back; the cutting edges are, of course, on opposite sides so as to follow: over this, and but just touching it, is screwed the steel plate *f f*, to guard its cutting edges when out of use, and keep it from coming off. When this is put into a key-hole, as fig. 2, and pressed close, its key is introduced with the nib in the lower opening of fig. 1, and turned till it comes out of the side opening; it will then have turned the double cutter *e e* from its longitudinal position under the plate *f* to a cross one, both of which are shewn by dotted lines in fig. 3, and it will be secured to the lock by the two blades having cut their way into the wooden sides of the key-hole, as shewn in fig. 4, and cannot be pulled out till its own key has returned the cutters *e e* into their sheath &c.

*Transaction of the Royal Society
of Arts 1831 vol 48 p 132-3*

*See also PRICE, C Fire and Lightproof
deposition... M 444-448*

CRIME PREVENTION ADVICE

The dread and anxiety, which every inhabitant of the metropolis and its environs must feel in the reflection that he sleeps with no other assurance of safety, but the hope that chance ... might direct the invaders of the night to some other victim, is an evil which cannot be contemplated without horror.

To secrete objects of temptation, and to prevent access to them by every possible security, seems therefore to promise more towards lessening the number of robberies, which bring daily disgrace on the police, and disturb the peace of the cities of London and Westminster, than the dread of any punishment, which the law of England can inflict.

Joseph BRAMAH: A dissertation on the construction of locks. London, 1784