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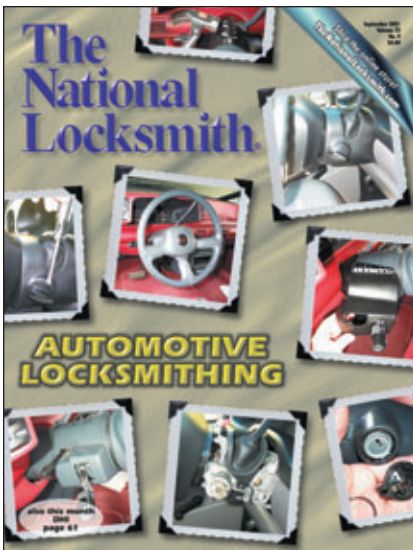
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AUTOMOTIVE LOCKSMITHING



On The Cover...



The term "automotive locksmithing" encompasses a number of service possibilities. With vehicle security being one of them, Steadfast offers security collars that are unique and formidable.

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by
**Richard
Allen
Dickey**

Locks, Safes, and Security.

**The little black
book of locks,
safes, and
security that
won't fit in
your pocket**

Marc Weber Tobias is one of those rare people that can do just about anything. He has more credentials than you can shake a stick at and is known around the world by corporations and governments as a consultant and technical fraud investigator.

Marc Weber Tobias has authored four law enforcement textbooks dealing with criminal law, police communications, and security. Tobias received a Bachelor's Degree in 1970 from the University of Nebraska-Omaha, and a Juris Doctor Degree from Creighton Law School in 1973. He is an attorney in Sioux Falls, South Dakota, with Investigative Law Offices, P.C.

As part of his practice, he routinely conducts technical fraud investigations and consults with corporations and government agencies throughout the world regarding the bypass of locks, analysis of design defects, and security liability issues.

He has been granted two United

States patents and several foreign derivative patents for bypass tools relating to locks. He is a member of the Associated Locksmiths of America (ALOA), Safe and Vault Technicians Association (SAVTA), American Society for Industrial Security (ASIS), American Academy of Forensic Sciences (AAFS), International Association for Identification (IAI), American Polygraph Association (APA), and American Association of Police Polygraphers (AAPP).

Tobias is also a technical advisor to the Association of Firearms and Tool Marks Examiners (AITE). Tobias has provided technical support and investigative services involving surveillance, covert entry, interrogation, polygraph, and crime scene documentation to many law enforcement agencies throughout the world.

His latest book "Locks, Safes, and Security," published on December 27th 2000, is a 1400 page work of art. (See photograph 1.) It covers every conceivable aspect of physical security. The book has well over a million words and a r o u n d 5 5 0 photographs and illustrations.

It would be unfair to simply say that this book is great without mentioning what is covered. Below is a list of how the book is laid out and what type of information is included.

To start with, the book is divided into four parts. They are:

1. Fundamentals of locks, safes and security.
2. Methods of entry.
3. Locks, safes, vaults and secure areas.
4. Security.

In Part I, Fundamentals of locks, safes and security, you start with:

A. General introduction to locks and keys:

- The Lock: Four Thousand Years of Technology
- The Last Twenty-five Years
- Definitions of Terms
- Tools and Supplies
- Materials and Processes

B. Keys and Keying Systems:

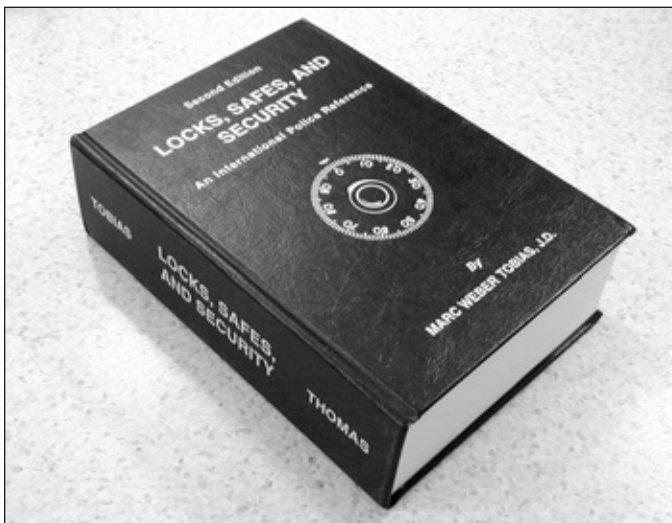
- The Development of Keys
- Processes and Materials for Producing Blank Keys.
- Methods of Producing Cut Keys
- Producing Keys for Specific Locks
- High-Security Locks and Keys
- Keying Systems
- Basic Lock Configurations: Hardware

C. Introduction to Basic Locking Mechanisms:

- The Warded Lock
- Lever Tumbler Locks
- Wafer Locks
- Pin Tumbler Locks

D. Specialized Locking Systems and Applications:

- Traditional Mechanical Locking Systems
- Electromechanical Locks



1. Locks, Safes and Security is a 1400 page work of art that covers every conceivable aspect of physical security.

- Magnetic Locks
- Wireless Exchange of Coded Information
- Intelligent Keys and Locks
- Programmable Locks and Keys
- Specialized Industry Applications

Part II: METHODS OF ENTRY

A. Investigations:

- Investigations and Evidence Involving Locks and Keys
- Forensic Examination: Specifications, Operation, and Security
- Forensic Examination: Tool Marks and Trace Evidence
- Forensic Examination: Keys

B. General Introduction to Bypass: Non-destructive Silent Entry:

- General Introduction to Bypass
- Picking
- Impressioning
- The Decoding of Locks: Theory, Procedures, and Technologies

C. Destructive Entry:

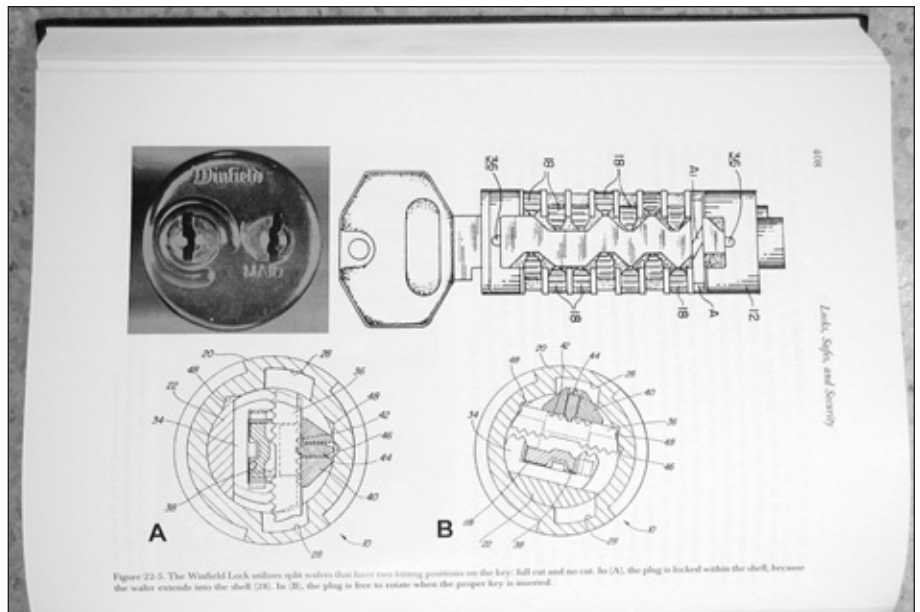


Figure 22-5. The Winfield Lock utilizes split wafer that have two fitting positions on the key: full cut and no cut. In (A), the plug is locked within the shell, because the wafer extends into the shell (24). In (B), the plug is free to rotate when the proper key is inserted.

3. Here is an exploded drawing of a Winfield hotel lock and a picture of the face of the lock.

- Destructive Entry: Tools and Techniques

Part III: LOCKS, SAFES, VAULTS, AND SECURE AREAS:

- The Origins, Development, and Design of Safes, Vaults, and Strong Rooms
- Combinations Locks

- Destructive Entry of Safes: Tools and Techniques

- Non-destructive Methods of Entry

Part IV: SECURITY:

- Standards and Testing
- Security: Analysis and Reduction of Risk
- Security: Physical and Protective Measures
- Alarm Systems

This is a lot of material in one place. You may think that some of the above topics are of little or no use to the locksmith. I would have to disagree.

Forensic investigation, for example, is something that most of us will never deal with.

However, to know that it is possible and to what extent results can be expected, may be of great value to one of your customers some day. If you have a customer in need and you let that customer know that these things can be done, they won't forget you.

As mentioned earlier, there are approximately 550 illustrations and photos in the book. *Photograph 2*, is an example of the photographs in the book. Here we have an Ikon conventional pin tumbler key with a microprocessor in the bow, along with a Medeco system and two Smart Keys.

Photograph 3, shows an exploded drawing of a Winfield hotel lock and a picture of the face of the lock. This is a 10 wafer lock that can be instantly rekeyed by using a control key. The Winfield Lock Company received three patents (4069694, 4966021, 4376382) for this new lock in 1978.

An ABA Axial Lock is shown in a detailed drawing. (*See photograph 4.*) This is an imported Taiwan lock that actually has a high degree of resistance to picking due to a keyway plug that pivots after the key is inserted.

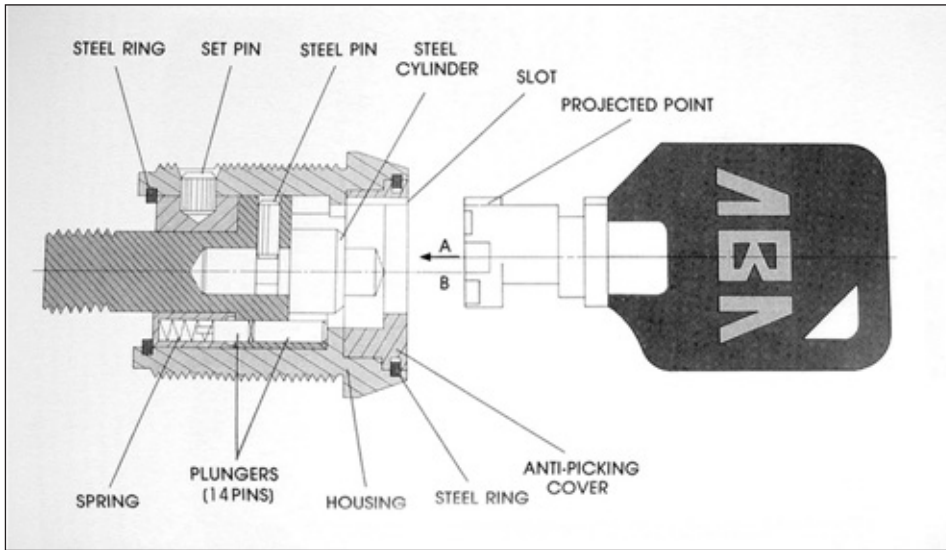
Chapter 30 on impressioning is 64 pages long. It could be a book in its self. It covers everything from basic impressioning, to the use of composite blanks, foil impressioning, plasticine systems and a new conductive material impressioning system which Tobias received a patent for in 1994.



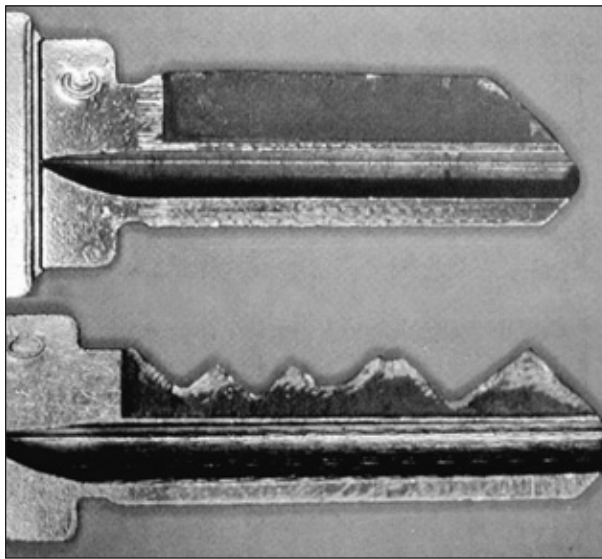
Figure 21-1. An Ikon conventional pin tumbler key with a microprocessor for enhanced security and control. Courtesy of Ikon.

Figure 21-2. Medeco Electronics was one of the first high-security lock companies to incorporate electronics with their lock. This system required that the proper PIN be entered after the correct key is inserted into the lock. Courtesy of Medeco.

2. This is an example of some of the photographs in the book.



4. An ABA Axial lock is shown in a detailed drawing.



5. Here we have a before and after of the Martin composite blank impressing system.

Photograph 5, shows a before and after of the Martin composite blank impressing system. The Martin system uses a lead replacement for the bitting area of the blank. This is supposed to be one of the easiest methods of impressing because of the ease of reading the marks. The book not only covers numerous methods of impressing, but goes into detail about the steps involved for each method.

Some of the photographs in the book are a little dark, however they are all very usable. Overall I can't say enough good things about this mass of reference material.

There is one more really neat

feature about the book. Because there is so much information, most things will show up in more than one place. An index is the usual answer to this problem and the book has a good one that is 85 pages long. However, to make things really easy, Tobias has set up a search function on the security.org web site.

There are two ways to do the search. An index search and a text search. An index search will return a list of hits. You can scroll through the list and click the one that best fits your description. It will tell you the chapter, section and page number along with approximately 300 words of text as well as illustrations and photos as they appear in the book.

A text search will search the text of the book and/or the database to find things that match your request. I typed in "axial" and I got 179 hits. The ones that are in the book are identified, and display the chapter and section. The word "wafer" returned 267 hits. Like the index search, the text search will give you around 300 words of information as well as photographs and drawings.

I have tried to give you an idea of the depth of information in this book by listing the contents and throwing a few of the drawings and photographs your direction. There are so many different areas to cover that there is no possible way that I can do the book justice in only a few pages.

The cost for Locks, Safes and Security is \$199.95 and is only available in hard cover. All of this information will be available on CD-Rom sometime during the fourth quarter of this year. However, to get the CD-Rom, you have to buy the book. By the way, this monster weighs in at 7 pounds 14 ounces. About the same as a healthy baby. There is one advantage to the book over the baby. The book doesn't drool and when you bring it home it will never cost you another dime!

Locks, Safes and Security is available from two different sources. The first choice would be through one of four distributors. They include:

- MBA USA (Mark Bates Associates)
- Lockmasters
- MSC located in Hamburg Germany

The second source is the Internet. By going to www.security.org, you will be able to place an order on line.

If you would like to contact the author, there are several ways you can do it.

Marc Weber Tobias welcomes feedback from readers. His e-mail address is mwtobias@security.org He may be contacted toll free utilizing Internet telephony or video conferencing through <http://www.security.org>. What would we do without technology!

I hope your day was as good as mine. See you next month.

