
LOCKS SAFES AND SECURITY

The hardcover book, Locks Safes and Security by Marc Weber Tobias 2nd edition, was published in 2002. This work was followed by an electronic version called LSS+ CD a few years latter.

The LSS+ CD contains a lot more content than the book. Content has been updated as of 2004. It is released with 3 separate security levels, Public, Locksmith, and Government.

This document is a pdf version of the material extracted from LSS+. It contains material at Public, Locksmith and Government Levels

Locksmith vs Government Level Material:

Book 1 Chapters 1 thru 23 are identical

Book 2 Chapter 24 thru 30 are identical

Book 2 Chapter 31 is different (Decoding)

Book 2 Chapter 32 is identical

Book 3 Chapters 33 thru 36 are identical

Book 4 Chapters 37 thru 39 are identical

Book 4 Chapter 40 is different (Alarms)

LSS+

Electronic Infobase Edition of Locks, Safes,

and Security

Version 5.0-04185

This infobase includes the revised editions of **The Art of Manipulation**; (1) **A Treatise on Fire & Thief-Proof Depositories and Locks and Keys** (2), originally published in London, in 1850; and **Locks and Safes: The Construction of Locks** (3), by A.C.Hobs. **Locks, Safes, and Security** (4) was first published in 1970 by Charles C. Thomas Publishers, Springfield, Illinois. The Second Edition was released in 2000. Supplementary materials can be found at the website www.security.org. (5)

Created by Marc Weber Tobias, B.S., J.D.

Member: ABA, ASIS, AFTE, IAI, ALOA, SAVTA, APA, AAFS, IAIL

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LOCKS, SAFES, AND

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Electronic Infobase Version 5.0, based upon the Second Edition, published by Charles C. Thomas, Springfield Illinois, 2000. The original edition was published in 1970 and is no longer available.

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








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Figure LSS+1615 The status of driver and bottom pins in the locked and plug rotating unlocked position.



The use of a pin tray or setup tray is required for forensic disassembly of a lock. Courtesy of Hans Mejlshede.



Producing pins for cylinders. Courtesy of Hans Mejlshede.



Forensic issues regarding the bypass of security and mushroom tumblers. Courtesy of Hans Mejlshede.



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Abloy master keying theory, Courtesy of Hans Mejlshede.



Forced entry of Abloy locks, and forensic indications, Courtesy of Hans Mejlshede.



The Peter Field (Medeco) patent for a security tumbler. Courtesy of Hans Mejlshede.



Forensic analysis of the Medeco cam lock. Courtesy of Hans Mejlshede.

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Figure LSS+2326 Post office locks, including the famous Andrus lock that was patented in 1914

Figure LSS+2327 Arrow eight lever post office box lock, and lever tumbler

Figure LSS+2328 Rotary registered mail lock produced by the U.S. Postal Service



Discussion of transponder theft. Courtesy of Hans Mejlshede.



Bypass of push button locks. Courtesy of Don Shiles.



Discussion of Simplex push button lock, by Harry Sher



Use of tryout keys, courtesy of Harry Sher.



LSS202: Ross Anderson on smart card technology

Chapter 24 Investigation and Evidence Involving Locks and Keys

No Exhibits



A forensic investigation involving the theft of a BMW automobile. Courtesy Hans Mejlshede.



Doing research on different bypass techniques is important for the forensic investigator. Courtesy of Don Shiles.



Analysis of a case involving forensics. Courtesy of Don Shiles.



Case example, burglary investigation. Courtesy of Don Shiles



Case example of hotel lock bypass. Courtesy of Don Shiles.



Case example, Courtesy of Hans Mejlshede.



Analysis of a case involving forensic locksmithing. Courtesy of Don Shiles.



Mail slot bypass device. Courtesy of Hans Mejlshede.



Keys can be copied by taking a 1:1 image using a copier machine.

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Courtesy of Hans Mejlshede.



Master key records. Courtesy of Hans Mejlshede.



Investigative clues that develop during a case. Courtesy Jim Bickers.



Pickability or ease with which a lock can be picked. Courtesy of Hans Mejlshede.

Chapter 25 Forensic Examination: Specifications, Operations, and Security

Figure 25-1 Partially picked axial pin tumbler lock

Figure LSS+2501 Forensic investigation forms

Figure LSS+2502 Forensic evidence log-in report by Hans Mejlshede

Figure LSS+2503 Sample forensic analysis form by Hans Mejlshede



Art Paholke is the father of modern forensic locksmithing. Courtesy of Hans Mejlshede.



Many car thefts are simulated for insurance claims. Courtesy of Hans Mejlshede.



It is essential to save the pins from a lock that has been the subject of a burglary attack. Courtesy of Hans Mejlshede.



Pressure will often be applied to the forensic locksmith during the course of an investigation to change the results of a report. Courtesy of Hans Mejlshede.



A clean work area for the forensic locksmith is a necessity. Courtesy of Hans Mejlshede.



Care must be exercised in cleaning of components. Courtesy of Hans Mejlshede.



The Forensic locksmith is often called upon to investigate covert entry. Courtesy of Hans Mejlshede.



The forensic investigator must prepare detailed reports. Courtesy of Hans Mejlshede.



Evidence in car theft investigations. Courtesy of Don Shiles.



Analysis of vehicle locks. Courtesy of Hans Mejlshede.



Analysis of vehicle theft cases. Courtesy of Hans Mejlshede.



Simulation of vehicle theft. Comments on investigation. Courtesy of Hans Mejlshede.



Investigations involving vehicle fires. Courtesy of Hans Mejlshede.



Analysis of marks produced by a slimjim bypass tool. Courtesy of Hans Mejlshede.



Use of rubber or silicone-coated tweezers. Courtesy of Hans Mejlshede.



Discussion regarding microscopes for use in forensic analysis. Courtesy of Hans Mejlshede.



Issues regarding crime scene sketches. Courtesy of Don Shiles.



Evidence handling techniques. Courtesy of Don Shiles.



Methods of forensic analysis. Courtesy of Don Shiles.



The investigative locksmith as a witness. Courtesy of Don Shiles.



Required background of the forensic locksmith and investigator. Courtesy of Don Shiles.



Definition of a forensic locksmith.



Use of photograph. Courtesy of Don Shiles



What is an investigative locksmith? Courtesy of Don Shiles.



An introduction and summary of forensic locksmithing. Courtesy of Hans Mejlshede.



Forensic locksmithing history and the role of Art Paholke. Courtesy of Hans Mejlshede.



Was the lock picked? Courtesy of Don Shiles.



Macro lens, Courtesy of Hans Mejlshede.



Data back for documentation of images. Courtesy of Hans Mejlshede.



Photographic equipment requirements. Courtesy of Hans Mejlshede.



Ring strobe is a necessity for forensic photography. Courtesy of Hans Mejlshede.



Use of plastic tweezers. Courtesy of Hans Mejlshede.



Recovering stamped numbers from keys and locks. Courtesy of Hans Mejlshede.



Opinions of examiner, and certainty of their opinions. Courtesy of Hans Mejlshede.



Logging receipt of evidence. Courtesy of Hans Mejlshede.



Issues regarding investigative reports. Courtesy of Hans Mejlshede.



It is difficult to bypass laser track locks through the use of jiggle keys. Courtesy of Hans Mejlshede.



Definition of an Investigative locksmith. Courtesy of Don Shiles.



Forensic marks and their observation with proper lighting. Courtesy of Don Shiles.



The investigative locksmith gets involved in insurance fraud cases. Courtesy of Hans Mejlshede.



Marks on the back of the lock from bypass. Courtesy of Hans Mejlshede.



Use of WD-40 to clean and lubricate. Courtesy of Hans Mejlshede.



Oxidation and dating of marks in a forensic examination. Courtesy of Don Shiles.



Forensic implications of using a shim to open a lock prior to analysis. Courtesy of Hans Mejlshede.



An attempt may be made to mask pick marks so that the perpetrator is not identified. Courtesy of Hans Mejlshede.



Obtaining all keys that fit a particular cylinder. Courtesy of Hans Mejlshede.



Removal of cylinder and its analysis must be done correctly. Courtesy of Hans Mejlshede.



Changing or removal of top pins. Courtesy of Hans Mejlshede.



Preliminary issues in the examination of a lock. Courtesy of Don Shiles.



Examination of a lock and disassembly. Courtesy of Don Shiles.



Examination of a lock and marks that are visible. Courtesy of Don Shiles.

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