



# LOCK PICKING EQUIPMENT FOR BEGINNERS

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**The Best Guide on  
How to Pick Locks  
Using the Most Efficient  
Methods, Tools and Kits**

**CHARLES RUSNAK**

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# **Table of Contents**

[Introduction](#)

[Lock Picking](#)

[Introduction to Lock Picking](#)

[The Simplest Lock](#)

[The Pin Tumbler Lock](#)

[Parts of a Lock](#)

[Why We Can Pick Locks](#)

[Lock Picking Tools](#)

[A Good Starting Lock Pick Set](#)

[Getting Started With Tension](#)

[Introduction to Single Pin Picking](#)

[Introduction to Raking](#)

[The Legality of Lock Picking](#)

[Frequency Ask Lock Picking Questions](#)

[How to Pick Pin Tumbler Locks](#)

[The Legality of Lock Picking](#)

[How to Pick a Pin Tumbler Lock](#)

[How a Pin Tumbler Lock Works](#)

[Tools Needed for Picking a Pin Tumbler Lock](#)

[Lock Picking Technique](#)

[How to Stop Lock Picking and Bypassing](#)

[Here are Locks That Can't be Easily Picked or Bypassed](#)

[The Best Lock Pick Sets](#)

[Picking Practice Recommendations](#)

[Top 5 Most Challenging Locks to Pick](#)

[5 Myths of Lock Picking](#)

[Final Thoughts on Survival Skills](#)

[7 Reasons You Should Learn to Pick Locks](#)

[5 Reasons You Should Consider Lock Picking As a Hobby](#)

[The Big Rules](#)

[Types of Locks and How to Pick them](#)

[How Lock Picking Works](#)

[Picking Pin-and-tumbler Locks](#)

[Lock Picking: Wafer-tumbler and Tubular Locks](#)

[Lock Picking: Rekeying and Creating Master Keys](#)

[Lock Picking: The Picker Code](#)

[6 Easy Steps for Getting in Without a Key](#)

[Basic Lock Picking Tools](#)

[Picking Your First Lock in Six Steps](#)

[How to Open Locks With a Lockpick Gun](#)

[How to Pick a Lock With a Paper Clip](#)

[What You'll Need](#)

[Conclusion](#)

# INTRODUCTION

Lock picking allows people to open locks with only a few tools.

Most people carry five to 10 keys with them whenever they go out. On your key ring you might have several keys for the house, one or two more for the car and a few for the office or a friend's house. Your key ring is a clear demonstration of just how ubiquitous lock technology is: You probably interact with locks dozens of times every week.

The main reason we use locks everywhere is that they provide us with a sense of security. But in movies and on television, spies, detectives and burglars can open a lock very easily, sometimes using only a couple of paper clips. This is a sobering thought, to say the least: Is it really possible for someone to open a lock so easily?

In this book, we'll look at the very real practice of lock picking, exploring the fascinating technology of locks and keys in the process.

## CHAPTER 1

# LOCK PICKING

Locksmiths define lock-picking as the manipulation of a lock's components to open a lock without a key. To understand lock-picking, then, you first have to know how locks and keys work.

Ready to learn how to pick a lock?

Is that a yes?

Good because this beginner's guide to lock picking has helped thousands learn the art of lock picking and it will help you too!

Lock picking is not rocket science and if you take the time to read this lock picking book fully, you'll learn how to pick a lock very quickly. That I promise.

As you will come to see, locks are extremely stupid creatures that put up little defense against anyone trying to bypass them—with that, let us get started.

## **Introduction to Lock Picking**

So what exactly is lock picking? Simply put, lock picking is a non-destructive way to open a lock without using the original key.

This can be done through a variety of different ways, but all have the same goal in mind—to mimic the key by using something other than the key.

But in order to mimic a key, we must understand how a key works in a lock. This is done by first understanding how a lock itself works.

There are many different types of locks utilized today, but all are based on fairly simple concepts—remember, locks are stupid creatures.



For the purpose of this book, we will be focusing on the most basic and commonly used lock, the pin tumbler lock.

The pin tumbler lock makes up about 90% of locks used today and is what you will find on about every deadbolt, door lock, and padlock. They are extremely simple in their design and essentially 6,000-year-old technology.

It is also often thought that learning how to pick a lock requires some Zen-like focus. That you must sit quietly in some candlelit room for hours upon hours to find any success at the craft of lock picking.

But it is, in fact, quite the opposite. The basic concepts and techniques of lock picking can be learned and applied easily within minutes.

## **The Simplest Lock**

Imagine for a moment that you have two pieces of paper, one sitting on top of the other.

Now with very little effort, you could take that top piece and slide it along the top of the bottom piece and it would move freely with very little resistance.

However, if you took a pencil and stuck it through both pieces of paper, they would become bound to each other and would no longer be able to move independently of one another. Essentially, they would become "locked" to each other.

This little paper model, as explained above, is the simplest example of how most locks function.

But let's dive a little deeper and take a closer look at what is truly occurring. Obviously, the two pieces of paper are bound to each other because there is a pencil crammed through both of them.

However, what is also true, and more important to note, is that we have also obstructed the space between them—that is the line that separates the two pieces of paper. This line is what we refer to as the shear line and is the absolute foundation of how all locks work and, as we will soon see, the key to defeating them!

The moment that we remove that obstruction—the pencil—from the shear line, the two pieces of paper will once again be able to move freely.



But locks aren't flat and they sure as hell aren't made from paper and pencils, so let's change a few things and add a few more components to this simple lock and see what we get.

## **The Pin Tumbler Lock**

There are a ton of different types of locks roaming the world today—from the tubular locks that you find on vending machines to combination locks securing safes. But of all these different types of locks, only one is king, the pin tumbler lock!

The pin tumbler lock is an extremely simple design that makes up over 90% of the locks used throughout the world.

Additionally, if you can learn to pick a pin tumbler lock, you can essentially transfer that skill to any other type of lock in one way or another!

These two reasons alone make the pin tumbler the best type of lock to begin your lock picking journey! With that, let's dive a little deeper into how the pin tumbler lock works!

These locks are made up of 6 primary components that we affect while picking. Let's quickly go over each of them!

## **Parts of a Lock**

### **1. The Cylinder**

The cylinder of the lock is nothing more than a little container that “houses” the rest of the components. This part is typically what slides into a door or padlock. If you jump back to our simple paper lock above, the cylinder of the pin tumbler lock is the top piece of paper if it were wrapped around the rest of the lock. The cylinder creates the upper limit of the shear line and can also be referred to as the shell, housing, or body of the lock.

### **2. The Plug**

The plug is the bottom piece of paper from our simple lock. However, rather than shearing across a flat surface like in our simple lock, the plug is a cylinder that rotates freely within the housing, creating a rotational shear line. The front of the plug is also where the key is inserted and on the back is either a cam or tailpiece which retracts the latch and opens the lock when rotated. The plug creates the bottom limit of the shear line!

### **3. The Shear Line**

The shear line is nothing more than the gap between the housing and the plug. Just like in the simple lock above, it is the conceptual line in which the plug rotates in the housing. If this line is obstructed in any way, the plug and housing will become “locked” to each other – thus, the plug will not turn. Only when the shear line has been cleared of any obstructions will the plug once again be able to rotate freely. The shear line is one of the most important concepts to understand when it comes to lock picking!

#### **4. Key Pins**

In the pin tumbler lock, there are typically two types of pins. The key pins are the lower set and have the task of reading the “cuts” of the key. This is done by using a variety of different length pins and then cutting a key that matches those pin lengths. If you look at any key, you will notice that there are high spots and low spots. These spots are what we call “cuts,” and in a moment, we will see the role they play in how the lock works!

#### **5. Driver Pins**

The driver pins are the upper set of pins whose job is to obstruct the shear line.

They are basically the pencil from our simple lock above! Unlike the key pins, the driver pins are usually all the same length.

#### **6. The Springs**

Last up is the springs and they have two jobs. Their first job is to force everything down into the plug and keep the driver pins at the shear line when there is no key in the lock. Their second job is to push the key pins against the key, which helps read the cuts.

Without the springs, the pins could get stuck anywhere in the pin chamber, which could make using a key impossible.

Alright, now that you understand the core components of the pin tumbler, let's take a look at how everything works together to make a fully functioning lock!

The following animation illustrates the pin tumbler lock in action!

As you can see, when the key is shoved into the plug, it pushes upward on the key pins. Because the biting of the key and the lengths of the key pins have

been cut to match, the key pins will rise flush with the shear line causing the driver pins to exit the plug fully.

When the gap between the key pins and the driver pins is precisely that of the shear line, the key can rotate the plug to disengage the lock.

In short, the key has removed all obstructions—the pins—from the shear line!

By understanding this process, we can begin to see what we have to accomplish to pick a lock.

In essence, lock picking is simply the act of mimicking the key by manipulating the pins to the same state they would be at if the correct key were inserted.

But how do we do that? How can we hope to keep four or five pins from obstructing the shear line without the constant pressure of the key? How do we keep them from falling back into the plug?

The answer is pretty cool!

## **Why We Can Pick Locks**

No matter how hard you try, you can never create two things exactly the same. In some way, there will always be something different between them—perfection is impossible!

This also applies to the manufacturing of locks and their components. No two locks, pins, nor springs are the same. They will always vary in some way from each other and their original design. However, because of this variance, things will never fit together perfectly and there will always be some degree of slop between components.

But it is this slop that gives us the ability to pick locks and when it comes to the pin tumbler lock, the imperfect drilling of the pin chambers is what makes lock picking truly possible!

During the production of the plug, the pin chambers are drilled down an imaginary centerline so that they are lined up perfectly with each other.

But remember, nothing can be done perfectly and as a result, these pin chambers are drilled slightly off-center and are misaligned from one another.

But how do misaligned holes help us pick locks?

There is a concept that we lock pickers call "binding." Imagine sticking a screwdriver into the keyway of a lock and trying to rotate the plug like it was a key. But because the driver pins are still at the shear line they will stop the rotation of the plug and in the process become bound between the housing and the plug. This is binding.

However, because of inaccurate drilling, some pins will bind before others. The furthest pin off-center in the direction of rotation will be the first pin to bind and stop the rotation of the plug. This pin that is the first to bind is what we call "the binding pin."

**Key Takeaway:** Because perfection is impossible, the pin chambers on the plug are drilled off-center. This creates a binding defect when the plug is rotated. Because there is a binding defect, one pin will bind before the rest and with more force. This pin is called the binding pin.

If you have to, read through this section once more and be absolutely certain that you understand the concept of the binding pin. As you'll see in a moment the binding pin is the literal key to lock picking!

Before we jump into the actual process of picking a lock, let's cover the essentials of lock picking tools!

## **Lock Picking Tools**

Lock picking tools are often one of the most confusing and daunting parts about getting started in this awesome craft. With so many different types of lock picks and random-looking gizmos, choosing your first set of lock picking tools can be a real pain in the ass—but it doesn't have to be.

The truth is, you don't need very many tools to get started or progress at lock picking. Even advanced pickers only use a few different picks—even if they own hundreds of tools to choose from. Some even get away picking simple locks using simple bobby pins.

When it comes to picking the pin tumbler lock, there are only three different types of tools:

1. Hooks
2. Rakes
3. Tensioning Tools

Every tool out there falls under one of these three categories. So let's briefly

cover each and look at a good beginner set that has everything you need to get a running start at lock picking!

## **1. Hooks**

Hooks are narrow and pointy types of lock picks that are very pinpoint and precise within the lock. This precision makes them ideal weapons for single pin picking where you are required to locate and manipulate one pin at a time.

There are a variety of different styles of hooks that range from different lengths to different shapes. However, all perform the same task of manipulating individual pins one at a time.

The absolute best hook to start with is the standard short hook.

## **2. Rakes**

Rakes are basically the opposite of the hook. They are typically erratic looking and are designed with a ton of humps and bumps that helps them manipulate as many pins as possible in the shortest amount of time. This makes them ideal for raking where you rapidly and randomly pull them across the pins with the goal of setting multiple pins at once.

Just like the hook, there is a wide variety of rakes. However, all perform the same task of manipulating multiple pins at the same time.

The absolute best rake to start with as a beginner is the Bogota.

## **3. Tensioning Tools**

Funny enough the most important lock picking tool is one very few non-pickers know about.

It's called a tensioning tool!

The tensioning tool is used to apply torque to the plug and bind the pins. Without this tool, lock picking is impossible.

There are several different styles of tensioning tools that all perform the task of applying "tension" to the lock's plug. However, the absolute best type to start with is called the "straight tension wrench" as shown above. I highly

recommend grabbing several different sizes for different sized locks and keyways!

## **A Good Starting Lock Pick Set**

If you are looking for your first lock picking set, my recommendation is the GSP Ghost Set.

It provides you with an excellent selection of lock picks and tensioning tools—all of which are in surgical grade 420 stainless steel.

The lock picks also include plastic molded handles that will keep the picks from digging into your fingers.

If the *GSP Ghost set* doesn't tickle your pickle, I would highly suggest looking for a set that has a similar setup!

Before we move on I do wish to note that it's far better to own a few high-quality lock picks than it is to own a bunch of crappy ones.

You can get a quality set of pick for cheaper from manufacturers like Peterson, Sparrows, or SouthOrd that will serve you far better!

You now have your lock pick tools, it's time to get down and dirty!

## **Getting Started With Tension**

It's finally time to learn how to use your first tool—the tension wrench!

This little guy does two very important things:

1. Firstly, it gives you the leverage you need to rotate the plug and create a binding pin. Remember, the binding pin is the key to lock picking.
2. Secondly, it holds the pins that you lift with your pick above the shear line—much like the key!

Here is how it works!

You begin by placing the tension wrench into the bottom of the keyway and applying a very light degree of force in the direction that the key would turn to disengage the lock—typically clockwise.

Also, by light force, I mean something similar to the amount of force that it takes to press a key on your keyboard. It's that light.

This light degree of force—or tension—is typically enough to create a binding pin. This is where you learn the importance of the binding pin!

If you take a pick and lift that binding pin to the shear line—or the height that the correct key would lift it to—the bind will break and the plug will continue to rotate ever so slightly until it binds on another pin—the next binding pin.

However, something really cool also happens!

Because the plug slightly rotates when the driver pin passes the shear line, there is a small ledge that is produced by the plug that the driver pin can set on. This is called "setting a pin" and as a result, the driver pin stays above the shear line and out of the plug!

Lock picking is simply the act of creating binding pins and setting them at the shear line. It really is as simple as that!

So now that we fully understand the purpose of the binding pin and what we are trying to accomplish within the lock, we can finally start cramming our picks into some keyways and learn once and for all how to pick a lock!

## **Introduction to Single Pin Picking**

Alright, now that all the conceptual crap is out of the way, we can finally take a crack at actually picking a lock with our first style of lock picking – single pin picking!

Single pin picking, or SPP for short, is the style of lock picking in which you locate and set one pin at a time and is considered the purest form of lock picking.

While SPP is not always the quickest method of bypassing a lock, it is the most reliable and most skillful. If you truly wish to get good at lock picking, focusing on single pin picking is the quickest route to developing your lock picking skills.

With that, let's learn single pin picking!

### **Step 1: Use Tension to Create the First Binding Pin**

Remember, to set pins at the shear line and successfully pick a lock, you have to apply a light rotational force to the plug and create your first binding pin

To do so, start by inserting the short end of your tension wrench into the bottom of the keyway and applying very light tension to the plug. Be certain



to maintain this force on your tension wrench throughout the entire process of picking the lock.

### **Step 2: Locate the First Binding Pin**

Now that you have created your first binding pin, you have to find it! But how?

Because the binding pin will have more "binding" force on it than the other pins, the binding pin will be stiffer and harder to lift than the other non-binding pins. So basically, you are just looking for a pin that is not loose!

Insert your hook type pick all the way into the lock and locate the rearmost pin. Very gently begin to lift each pin and gauge how it feels.

Continue to probe each pin until you find the pin that doesn't feel like the others and is more difficult to move.

### **Step 3: Lift and Set the First Binding Pin**

Now that you have found the first binding pin, you have to set it!

Gently lift the binding pin until you feel a slight rotation on the plug or hear an audible click. Either of these two indicators typically indicates a successfully set driver pin!

### **Step 4: Locate and Set the Second Binding Pin**

You have located and set your first binding pin, but now the lock is binding on a new pin.

Repeat the same steps of gently lifting each pin until you once again locate another pin that feels stiff and difficult to move. As before, gently continue to lift that pin until you feel a slight rotation on the plug or hear an audible click.

### **Step 5: Repeat the Process of Locating and Setting Binding Pins**

Continue the process of locating binding pins and lifting them to the shear line. Once every pin has been set, there will no longer be any obstruction to the shear line the plug will fully rotate and the lock will open!

You have just picked your first lock!

*Note: If you can no longer find a binding pin, you have likely overset or underset a pin. Release the tension to let the pins drop and restart the process over again. If you still can't find a binding pin, try applying slightly more*

*force to the plug!*

## **Introduction to Raking**

Up next is our second style of lock picking—raking!

Raking is a very volatile and radical style of picking whose goal is to bump as many pins to the shear line as possible in the quickest amount of time.

While it can be a lot of fun and is a very quick method of bypassing many basic locks, it will only get you so far and can become almost worthless when you start getting into locks with additional security features such as sidebars and security pins.

There are several different types of raking. The method we are going to cover is called scrubbing and is basically the same motion as brushing our teeth!

### **Step 1: Apply Tension to Create a Binding Pin**

The first step is once again creating a binding pin.

Insert the short end of your tension wrench into the bottom of the keyway and apply a very light force to the plug!

### **Step 2: Insert Lock Pick and Scrub the Pins**

Next, insert your rake all the way to the rear of the lock and gently lift upward so that your pick slightly lifts the pins.

With a decent amount of speed begin to scrub the pins as if you are scrubbing the top of your teeth with your toothbrush. Change the angle, the height, and the speed of your pick as you rake

If the lock doesn't open with 10 seconds, release tension to reset the lock begin again. It's very common to have to reset the lock several times before you successfully rake a lock.

Continue to scrub the pins until the plug fully rotates and the lock opens!

If you still can't manage to rake your lock, try to apply slightly heavier or lighter tension. Raking is truly more about applying the right tension than it is about lock pick control!

*Note: Be careful with your tension with raking. While you can get away with heavier tension during single pin picking, too much tension while raking can result in a broken pick.*

## **The Legality of Lock Picking**

The greatest deterrent of those interested in lock picking is not the skill itself, but its legality. In the eyes of society, lock picking has an extremely negative bias attached to it.

It is because of this bias that many people believe that owning lock picks must be unlawful. But in truth, owning and utilizing a set of lock picks is legal in most states and countries, so long as you have permission from the owner of the lock.

## **Frequency Ask Lock Picking Questions**

Alright, with the main lock picking instructions out of the way, let's answer some other lock picking related questions that many beginners have—but let's do so in a rapid-fire format.

### **1. How Easy Is It to Pick a Lock?**

Lock picking is a very easy skill to learn and with a dozen or so hours of practice, you will find that most basic locks are very easy to pick.

However, the journey into learning lock picking doesn't stop here. There are hundreds, if not thousands, of different types of pin tumbler locks out there in the world. Many of these locks pose different challenges for you to learn and overcome. So while learning lock picking is easy, mastering it takes dedication and practice!

### **2. What Is the Easiest and Quickest Way to Pick a Lock?**

The quickest and easiest way to pick a lock is by raking—which is covered in this lock picking guide. Raking requires far less time and practice to learn and use than other methods of lock picking.

Raking is an awesome and extremely important skill to develop as a lock picker, but it is important to note that not all locks can be raked. So while it is the quickest and easiest method of lock picking, it is also one that is best used on basic lock without any additional security features—such as security pins.

### **3. What Household Items Can You Pick a Lock With?**

Homemade lock picks can be made out of anything that is thin enough to fit into the keyway of a lock and strong enough to lift pins without bending.

Great examples of such materials are bobby pins, paperclips, or even the wire

off an old bra.

However, while these improvised materials work great in a pinch, they don't always work on all locks nor do they help you develop your skill as effectively as a real set of lock picks.

#### **4. How to Pick a Lock Without Tools?**

Sadly it is not possible to pick a lock without any sort of tool. To pick a lock you need at minimum something to use as a tension wrench and something to use as a pick. As discussed in the answer above, these tools don't need to be professional lock picking tools. But to pick a lock, you absolutely need something to use as tools.

#### **5. What Types of Locks Can I Pick?**

With this lock picking book, you easily learn to pick any pin tumbler lock—padlocks, door locks, lockboxes—that doesn't include any additional security features such—such as security pins.

#### **6. How to Pick a House or Apartment Door Lock?**

The fact is that you should never pick locks that are in use—such as home or apartment locks. Locks are not designed to be picked and sometimes picking them can damage them. It's far cheaper to buy a practice lock than it is to pay a locksmith to fix one.

The one exception to this rule is if you are locked out of your home and:

1. You own the lock.
2. You have accepted the possibility that you might break the lock.

Additionally, **ONLY** pick locks that you have the permission from the owner to pick. A less obvious example of breaking this rule is picking apartment locks. Unless you have permission from the landlord that owns that lock, legally and ethically, you do not have the right to pick it.

Follow these two rules and you should never run into any legal issues!

#### **7. How Many Different Ways Can You Pick a Lock?**

In this chapter, we only covered the two main styles of lock picking—single pin picking and raking. However, there are quite a few other ways to pick a lock—such as reverse picking, bitch picking, zipping, & over lifting to name

a few.

### **8. How to Pick a Padlock vs a House Lock?**

Really the only difference between picking padlocks and door-based locks is that one is mounted on a door and one can be held and angled in your hand.

Each takes a slightly different approach but is picked in the exact same way!

### **9. What can I pick a lock with?**

Your best bet is a lock picking set that includes a tension wrench a set of rakes. My favorite is the set from SEREPick. In a pinch, you could fashion some lock pics with a paper clip, bobby pin, or even windshield wiper blades. In my experience, picking a lock with a paperclip is much more difficult because the paper clips have a tendency to break in the lock.

### **10. Is lockpicking legal?**

Depends on which country or state you live in. In most instances, as long as you're picking a lock and don't have criminal intent, you're fine. In some states, owning a set of lock picks is prima facie evidence of criminal intent and things get more complicated. Be sure to check local laws before buying a lock pick set.

### **11. Can you pick a lock with a credit card?**

Not tumbler locks. But some locks on internal doors can be opened jimmying a credit card between the lock the door.

## **CHAPTER 2**

# HOW TO PICK PIN TUMBLER LOCKS

Some of you might be thinking, “why should I learn how to pick a lock if I don’t plan on breaking into people’s homes?”

Great question.

There are a few good reasons why law-abiding citizens should learn how to pick a lock:

Lock picking opens your eyes to the “illusion of security.” We all lock our doors to keep our loved ones safe at night and to secure our possessions during the day. After I picked my first lock within two minutes of learning how to do it, I realized that locks don’t really do much except provide the illusion of security. Locks make us feel safe, but if someone really wanted to get in your house, they could easily pick the lock on your front door. If they didn’t know how to do that, they could find another way in. You can’t just rely on a lock to keep you and your family safe. You need to utilize other tools and tactics and create multiple layers of security.

Realizing how little locks actually keep you and your stuff safe was both terrifying and surprisingly heartwarming. Terrifying because I saw that someone could easily enter my house and walk off with a crap-load of stuff without having to break a window; heartwarming because seeing how easy it is to pick a lock and yet how rarely people get burgled, made me realize that most people don’t break into homes because, well, most people are good people.

It makes you handy. If you've ever been locked out of your house or car, you know how annoying it is to be standing there like a chump, waiting for someone to show up with a key or a professional locksmith to arrive. Wouldn't you love to be able to jimmy your way in yourself?

Not only can this skill save you a lot of time and money, being able to solve a problem like that on your own is pretty dang satisfying. Plus, you can help out all your friends when they get locked out too.

Knowing how to pick a lock may even help you save a life one day. There are a few instances in which someone picked their way into an older parent's home because they weren't answering the phone, only to find their parent collapsed on the floor. Could they have kicked the door down or broken a window? Sure. But picking a lock just takes a few seconds and doesn't leave any damage. So why wouldn't you do that if you could?

It's cool and fun skill! There's simply a "cool" factor of knowing how to pick a lock. Of all the Jason Bourne-esque skills every man wishes he had, it's one of the most attainable. The idea that I can surreptitiously enter most doors without a key makes me feel all-powerful, like some sort of super ninja-spy.

It's also a fun little hobby and something I like to do when I'm taking breaks from work or hanging out with the kids while they do their kid thing on the carpet. If you get really into lock picking, you can actually go to events and contests to test your skills against other lock pickers.

Below we walk you through basic lock picking techniques for tumbler locks.

## **The Legality of Lock Picking**

There's a common misconception that the only people who can legally own lock picking tools are first responders or licensed locksmiths. The reality is that in most states, as long as you're not trying to illegally enter someone's home with your lock pick set, you can legally own, carry, and use lock picking tools.

There are, however, some states that have laws that make owning lock picking tools *prima facie* evidence of criminal intent. If you're caught with picks in these states and you want to avoid criminal charges, you have to prove that you didn't plan on committing a crime.



# HOW TO PICK A PIN TUMBLER LOCK

Pin tumbler locks are the most common locks found on the front doors of homes. So it makes for a good first lock to learn how to pick.

## **How a Pin Tumbler Lock Works**

You don't really need to understand how a basic pin tumbler locks work to successfully pick them, but it does help.

The design of the basic pin tumbler lock has been in use since 4000 BC. Of course, it's gotten more complex over the millennia. The design that is used in most cylinder locks – like the one on your front door, has been around since 1861 and it hasn't changed much. Basically, most of the world is using a technology that's been around for a century and a half to keep their most prized possessions safe and secure.

Here's the anatomy of most run-of-the-mill pin tumbler locks:

Pin tumbler locks consist of an outer cylindrical casing (colored green) in which a plug is housed. The small gap between the outer casing and the plug is called the shear line. Remember that. It will come in handy here in a bit.

The plug has an opening for the key. When the proper key is inserted into the plug, the plug can rotate, thus unlocking the lock. On top of the plug, a series of five or six holes are drilled. The holes contain key pins (colored red) of different lengths. They're called key pins because they touch the key when you insert a key into the plug. Above each key pin is a driver pin that's spring-loaded. Pins are also sometimes referred to as "binding pins."

If you put a wrong key into a lock, the notches on the key won't lift up the key pins at the right height, causing them to protrude through the shear line.

In order for the plug to rotate, you need to lift each of the key pins and driver pins to the correct height -- until the gap between the key pins and driver pins reaches the shear line. When all of the pins reach this position, the plug can rotate. That's what happens when you put a properly cut key into a lock:

Pretty simple, huh?

When you pick a lock, all you're doing is using tools, instead of a key, to line up the gap between the key pins and driver pins with the shear line between the outer casing and the plug. That's it. And it's super easy to do.

## **Tools Needed for Picking a Pin Tumbler Lock**

There are various tools you can use to pick a lock. For this chapter we're going to focus on using the most common lock picking tools: a tension wrench and pick rakes.

If you're looking for something a littler sturdier and robust, you can find lock picking sets several places online (even Amazon). If you want to be even more of a MacGyver, you could even make your own picks from a windshield wiper.

## **Lock Picking Technique**

Lock picking is more art than science. You definitely have to develop a "feel" for it. Each lock is different, but the same basic principles apply. The easiest way to pick a lock is to use the fast and dirty method: scrubbing.

### **1. Insert Tension Wrench into the Bottom of Key Hole and Apply Slight Pressure**

The tension wrench is the key (no pun intended) to successfully picking a lock. Thanks to video games, people wrongfully think it's the pick, because that is the thing that's actually lifting the key pins to line up with the shear line.

Here's why the tension wrench is so important: as you're lifting the pin sets with your pick you need to apply tension on the plug. If you're applying the right amount of torque on the plug, once the driver pin passes the shear line, the plug will rotate slightly. When you pull your pick out, the key pin will drop back down, but the driver pin will catch the edge of the plug, thus

staying above the shear line.

You'll keep lifting pins with your pick and applying pressure with your tension wrench, until all the driver pins have cleared the shear line.

So far so good? Alrighty.

So take your tension wrench and place it in the bottom of the key hole. Apply slight pressure in the direction you would turn the key if you had it. And by slight I mean slight. If you apply too much pressure, you're just going to cause the driver pins to bind below the shear line. You need to have enough give to let the driver pins rise above the shear line, but have enough torque that when they start dropping down, an edge of the drive pin catches the plug as it starts to rotate.

How much is too much pressure? If your tension wrench is bending a lot, then you're probably applying too much pressure. So lean on the side of applying less pressure than more.

## **2. Insert Pick at Top of Lock**

Pick your pick. I prefer the Bogota rake that has three ridges. This one has picked every lock that I've used it on very easily.

Slide the rake all the way to the back.

## **3. While Applying Slight Torque to Your Wrench, Scrub Your Pick Back and Forth in the Key Hole**

Keep applying that slight pressure on your tension wrench. I use my left hand for that. With your right hand, scrub or rake the inside of the plug with your pick. As you pull the pick back, simultaneously lift up in order to apply pressure on the pins.

## **4. Repeat Until All the Pins Set**

Keep applying torque on your wrench and scrubbing the pins until they all set. You may need to apply more torque and pressure on the pins with your pick as you get near the last one or two pins that need to set. If you're not making any progress, you probably applied too much torque with the wrench. Relax, let the pins reset, and start over again, focusing on not using too much

pressure.

That's it! Really. That's all there is to it. You can successfully pick most pin and tumbler locks using this scrubbing method.

You may run across locks that require a little bit more finesse by picking each pin set one at a time. In these trickier locks, you may need to get more methodical by looking for the pin stack that resists the most and picking it first and then repeating the process until all the pins are successfully picked.

Practice, Practice, Practice

Like I said above, lock picking is more art than science. The best way to learn how to do it is to simply pick locks as much as possible. Buy yourself different pin and tumbler locks at the hardware store and keep them on your desk or by your couch. When you're taking a break from work or while you're watching TV, practice picking. I've got three or four locks in my drawer that I'll bust out during the day for practice sessions.

You're one step closer to becoming Jason Bourne. Remember, use this knowledge for fun or for legal entries.

## **How to Stop Lock Picking and Bypassing**

Think about lock picking prevention as a 90/10 rule. 90% of the locks out there today can easily be bypassed by someone with limited skills. It may be lock picking or it may be using a bypass tool or other technique to get past the lock, but nearly all can be bypassed.

What's the other 10%? These are the locks that would either require a lot of skill to pick or they are the locks that can't be picked and require a lot of other types of effort to get past (drilling for example).

If you want locks that are in the 10%. Forget about buying anything you can get at a big box store. You need a locksmith and a specialty product or high security lock.

## **CHAPTER 3**

# HERE ARE LOCKS THAT CAN'T BE EASILY PICKED OR BYPASSED

Here are your out favorite pick-resistant (or pick proof) locks.

## **1. High Security Locks.**

Most locks rely on a simple set of pins that align when a key is inserted to spin a cylinder. High security locks use other techniques in addition to the pins. Side bars and side dimples are the most common. These locks use keys that don't look like your regular keys. Just about all high-security locks will offer you protection beyond what a common criminal will know.

*Mul-t-lock High Security on Amazon*; Our favorite most-secure brand is by Mul-t-lock. Their interactive lock has been bypassed using a custom specialty tool and by extremely practiced and skilled locksmith, but both are VERY rare and require an extreme amount of practice and patience. Most professional locksmiths will work their entire lives practicing their skills and not be able to pick these locks.

You most-likely won't run into someone trying to get into your property that has either. Your local locksmith may carry the Mul-t-lock product and that is the best place to get it since you'll have a local source for the high-security keyway required, but you can also find Mul-t-lock priced extremely well on Amazon.

## **2. Half Deadbolts – Pick Proof Lock.**

This is a great way to make your door 100% pick proof. However, unless you have experience prepping doors for new locks, you will want to hire a local locksmith to install it.

Half deadbolts have NO keyhole on the outside of the lock. In fact, there is no indication from the outside of the door that a lock is even installed!

### **3. Add On Security – Pick Proof After Market Product.**

*Add-On Security;* There is an add-on product that will turn any existing deadbolt into a pick-proof deadbolt. It works by locking the thumb turn of a deadbolt in place.

Most people aren't aware that when you use a key to turn a cylinder the thumb turn on the inside of the door rotates. When you lock the deadbolt thumb turn in place, the lock cannot be opened. It can be picked, and it can't be opened even with a working key!

### **The Best Lock Pick Sets**

1. Lokko Complete Lock Pick Set with Guide
2. Dangerfield Praxis Dual-Gauge Lock Pick Set
3. Dangerfield Serenity Starter Set
4. Southord PXS-14 Beginners Set
5. Goso Starter Piece Lock Pick Set
6. Multipick Elite 37 Professional Lock Pick Set
7. Southord 22 Piece Lock Pick Set
8. Peterson Just Picks Stainless Steel Set
9. Multipick Pocket Blackline Edition JackKnife Set
10. Sparrows Vorax Lock Pick Set

### **Picking Practice Recommendations**

Don't forget that practice makes perfect - and what better way to get started than to include a good selection of practice locks to go with your picks. This way, you'll learn how to better visualize the inside of the mechanism and be able to pick locks much more successfully.

# TOP 5 MOST CHALLENGING LOCKS TO PICK

It's rare for a lock to be so challenging to pick that it leaves the locksport community stumped.

You may have heard whispers of certain brands and models of locks that are challenging to pick; names like Banham, Abloy, Evva.

You may also understand that all locks have weaknesses, and these weaknesses can be exploited.

First:

1. It's true that all locks have weak points
2. Some weaknesses are less exploitable than others

No matter how clever the locksport community might be, a few ultra-challenging locks do exist that have continued to frustrate and fascinate lock pickers. In fact, these locks are so challenging to pick that some successful pickings were found to be potentially faked.

In no particular order, here is our list of 5 Most Challenging Locks to Pick.

## **1. Master Lock Speed Dial 1500iD**

Seasoned Lock Picker Bosnian Bill goes over the components of the Master Lock Speed Dial 1500iD on his YouTube channel. It can be hard to imagine a



Master Lock that's impossible to pick. The Speed Dial is a combination lock that challenges those assumptions.

As Redditor Derpserf said, "To the best of my knowledge, nobody has figured out how to crack these yet. The mechanism is completely mind-boggling."

The Speed Dial lock cannot be shimmed. And if you want to guess the combination, you'll want to start with the frequently used Konami code (Up Up, Down Down, Left Right, Left Right). If that doesn't work, there are hundreds of possible combinations left to try. But nobody has time for that.

So, what methods can you use to crack the code?

## **2. The ASSA Abloy Protec2**

The Abloy Protec2 is a disk detainer lock. The fact that it's not a pin tumbler lock will already throw off some pickers since disk detainer locks work differently from pin tumbler locks. Namely, disk detainer locks don't use springs.

But the fact that it's a disk detainer lock isn't what makes the Abloy Protec2 so challenging to pick. The lock uses a special disk blocking system that locks the disks together to prevent the manipulation of individual disks.

That said, it is possible to open.

## **3. Evva MCS Gen 2**

"There it is, the mighty EVVA MCS, a fantastic magnetic lock with 8 rotors operated by magnets on the key." So this lock is described by YouTube creator Geo before the lock is ultimately picked and gutted.

The MCS Gen 2 features two mechanical encoding features plus a magnetic encoding feature for triple security.

The magnetic encoding feature is particularly impressive: Each side of the keyway has 4 magnetic rotors, which are diametrically charged. A plate is glued to each magnet. The inner sidebar has three pins, and the outer sidebar has an additional pin, all of which interact with the magnet. Both sidebars must slide forward for rotation.

#### **4. HYT Chain Key Lock**

What makes the HYT Chain Key Lock unique is that the key is made of a flexible chain, and the keyway itself is also curved. These locks have been discontinued, but if you can get your hands on one and enjoy feeling frustrated, it might be worth taking on the challenge.

Once deemed unpickable, this lock was eventually picked by GreenGrowLocks.

#### **5. Banham M2002**

I tried to write a description that would accurately convey the terror of the Banham M2002. But I found myself returning to the same intimidating words of YouTuber Tumbl3r:

“This lock has twelve pins which are directly opposed and penetrate entirely through the key to touch in the middle. At any time six pins extend into the shear line, keeping the lock closed. I had to develop a "reverse picking" technique to finally get it opened.”

There you have it. This lock is so challenging that it required a new picking technique.

So, certainly, there are a lot of locks out there that fit the bill of challenging, many of which might be just as difficult to find as they are to open.

I left out some of these more obscure locks, like the bizarrely designed Shi-He Chi-Me U-Lock.

## CHAPTER 5

## 5 MYTHS OF LOCK PICKING

You can tell just how important lock picking is to survival by how it is used as a plot device in pop culture. It is taken for granted that a lock that is in the way can be picked if you need to get in. But that is simply not the case. And just as you should know how to build a fire, you need to know how to pick locks and not just think you will figure it out in the moment.

Lock picking will allow you to get into a shelter, regain access to locked supplies, and help you escape from illegal restraints. But using lock picking reliably means being aware of some of the big myths centered around this skill.

Lock picking is any method used to open a lock without the proper key. It is also a covert method of entry, meaning it does not damage or mark the lock in an obvious way (though lock picking, done poorly, can do both of these things). In the case of survival, lock picking allows you to regain entry into a shelter after you have lost your keys. Whether it is a car, or some other structure, getting inside can protect you from the elements, animals, and anything else that could do you harm. So you can add lock picks to the list of great survival gifts.

### **Where do the myths come from?**

Most of the myths and misrepresentation around lock picking come from good intentions. Some sources even purposefully misrepresent lock picking. People are concerned that having such a tactic being widely understood will increase crime. But in the age of the internet, the mysterious art of lock picking has been demystified, and it is very easy to learn the finer points of

the skill and buy tools. For those reasons, among others, this concern is largely unfounded.

### **1. Lock picking is predominately used for criminal activity**

Publications, news outlets, and other places that depict lock picking do not want to educate the public on what is widely considered to be a burglary tactic. However, lock picking is rarely ever used as a tactic for burglary. The exceptions you will see to this often revolve around instances like Watergate, where highly paid and specialized agents are involved.

Most criminals overcome locks or security through destructive entry. This is because there is almost no skill or knowledge needed to reliably use such tactics. Only security professionals, hobbyists, and survivalists learn how to pick locks. If the talent is mastered, there is more opportunity for legal and legitimate ventures. It is also a great skill to have in your survival arsenal, even if you have no interest in professional usage.

### **2. Lock picking is instantaneous**

In many movies and television shows, a person will pick a lock instantaneously by inserting the tools and making one or two movements. This is rarely the case. Even on very low-security locks, it could take 10 to 15 seconds to open the lock.

For more complicated locks, it is more likely to take minutes. But all of this takes skill and success is not a given simply by virtue of using lock picks. In a professional setting, this time frame is not an issue, but it can be devastating in a survival scenario.

Add the stress of severe weather or the threat of an animal attack, and picking the lock is likely to take much longer. Using this skill practically means being calm and being able to focus on what you are doing. You have to be meticulous and consistent with your approach, or else you are leaving the picking to chance. When lock picking is done wildly, there is no way to reliably predict how long it will take.

### **3. Lock picks can open any lock**

I see many survivalists discuss standard lock picks to the exclusion of many other tools. Standard lock picks will not open every lock. The tension wrenches and picks often highlighted are ideal for basic locks, called pin tumbler locks. But for older locks, you may need warded lock picks. If you lose keys to some briefcases/gun cases, you may need a tubular lock pick. There are also disk detainer locks that must use a particular type of tool to open. Even automotive locks will need special considerations.

Another aspect of this myth is that padlock shims can open any padlock. You will see many videos online claiming that with a pair of scissors and an aluminum can you have a universal key. This is not true. For every bypass or lock picking technique, there is a product that has taken steps to protect against that vulnerability.

Without knowing certain things about the lock, many lock picking techniques will be fruitless. For example, if you are illegally restrained in handcuffs, you will need a handcuff key or handcuff shim. And without the proper proportions for those tools, you are not picking the lock.

#### **4. If you can't pick a lock, you should break in**

Many survivalists scoff at lock picking because, as the popular quote goes, "Why pick a lock when there are windows and rocks?" This is a bad idea. Breaking into a shelter compromises the shelter. In movies, there will often be materials within the shelter to patch the damage done by kicking in a door or breaking a window, but repairing the damage (even when possible) will take much longer than safely unlocking the shelter.

In the extreme, and an unlikely scenario where you are being pursued by people who wish to do you harm, breaking your shelter is going to do a couple undesirable things. A damaged structure is going to compromise your security. Now someone else will have an easier time getting it. Also, you will have given away your position.

#### **5. It is easy to make improvised lock pick tools**

This is the myth that is most dangerous. It is very difficult to make

improvised lock picking tools on the fly while contending with the stress of survival. You will also need certain tools and materials to make your lock picks. The materials will have to be strong yet malleable enough to shape. Finding the right materials can be near impossible in the wilderness even if you have tools like scissors or needle nose pliers.

If you look at a film like the second Terminator, Linda Hamilton did successfully pick the lock her character picks in the scene where she escapes captivity. However, the paperclip used for the lock picks changes to one that is longer, thicker, and shaped expertly in a way she would not have been capable of doing in her situation. Also, the actual picking was said to have taken all night (even though she had been trained and practiced extensively). This little example is to show you how difficult it is to use improvised tools, even when you cheat.

### **Final Thoughts on Survival Skills**

There are a lot of things that survivalist believe because it makes it possible to overlook an obstacle. But just as you should not eat snow, you should not take lock picking for granted. It is not going to be something you can learn when you are trying to survive against all odds. You need to train. You need the right tools. And you need to unlearn all the myths surrounding this survival skill.

## **CHAPTER 6**



# 7 REASONS YOU SHOULD LEARN TO PICK LOCKS

It's time to let go of the antiquated idea that only criminals and locksmiths know how to pick locks.

If you've ever locked yourself out of your house or your car, if you've ever found yourself in a potentially dangerous situation or seen someone else struggling to enter their own locked house or vehicle and wished you could help, it should make sense to you why some knowledge of lock picking is so much more than a pastime for criminals. Here are ten reasons why you need to learn how to pick locks:

## **1. It's a marketable skill**

Looking at something in military, law enforcement, security, etcetera? A thorough knowledge of how lock picking works is a great skill to show off.

## **2. You'll be better equipped to help others**

It's a useful survival skill for not only yourself but for others who may need help.

## **3. Get yourself out of hairy situations**

Live or work in a sketchy area? The last thing you need is to be stuck outside of safe shelter at night.

## **4. Stop spending money on locksmiths**

Never again spend hundreds of dollars getting back into your car or house.

## **5. Take responsibility for your property and personal safety**

Don't rely on someone else to rescue you if you get locked out. You will gain a great deal of confidence knowing that you can take care of yourself.

## **6. Cultivate patience and sensitivity to detail**

Lock picking is a delicate and often complicated pastime that requires a great deal of patience. You have to develop muscle memory and sensitivity in your hands to recognize the minute tactile feedback of a lock that you can't see the inside of. Learning to pick locks doesn't just give you a helpful skill, it builds honorable character traits.

## **7. Join a clever and ethical community of lock picking enthusiasts**

Spend a little time amongst the online lockpicking community and you'll quickly discover that it's a community that prioritizes integrity and is filled with intelligent people happy to share their passion and expertise.

## **5 Reasons You Should Consider Lock Picking As a Hobby**

The art of lock picking is no longer a skill used exclusively by the dregs of society. In fact, most criminals have given up on lock picking all together. In the absence of criminality, an amazing hobby has taken hold. I know a lot of people think that it is illegal to own lock picks. I would refer you to our article on the legality of owning lock picks, but this is not the case in very many places in the United States. And just as an FYI, if you don't have to consult a lawyer before getting into a hobby, then that hobby is most likely lame.

Cool hobbies are the things that people consider as going against the grain of society, but still not illegal. You want your hobby to be like a nice leather jacket. Rugged but still approachable. Practical, but without losing the cool factor. Forget about model trains. Forget about wine tasting. And try your hardest to forget about competitive dog dancing. There will be no need for any other hobbies once you get bit by the lock picking bug. But this bug is a werewolf! And it is going to turn you into a security bypassing beast. If you still aren't convinced, let's explore the topic a little further.

## **The Big Rules**

It is important to get you familiar with the most basic ethics behind lock picking before I start giving you the sales pitch. Because lock picking gives

you powers beyond the realm of mortal men, you must abide by not only the laws of your land but also the code of the lock pickers. These rules must be followed even when the law is absent or takes no stance on the issue. The guidelines are simple and easy to remember:

1. Do not pick locks that you do not own, or have not been given permission by the owner to pick.
2. Do not pick locks that are in use.

With that basic two rule framework, you can avoid the morally gray areas of picking. The second rule can have exceptions based on your chosen profession, but the first is a hard and fast rule. Even if you want to become a locksmith or other form of security professional, you will always need the permission of the person, whose locks you are picking.

Getting this permission, as well as verifying their ownership, keeps everyone safe. It makes sure that you are not breaking the law, and it also makes sure that no one is gaining access that they should not have.

The second rule is to protect the lock itself. Excessive picking of a lock will damage it. At that point you will probably have to find a locksmith well versed in the art of damaged lock repair. That means that you should not experiment with locks while they are being used for security. Again, if you are picking locks which are in use for your work, then that is a different story. As a hobbyist, it is important to stay away from such things.

## **1. It's Marketable**

There are a lot of hobbies that people take up, which don't really transfer to a job. If you really like to pick locks, then there are actually jobs where you can do it, and get paid. It is true that there is quite a bit more to locksmithing than picking locks, but you don't have to become a locksmith to use lock picking. There are other jobs in the security field that require quite a bit of lock knowledge and manipulation facility. Businesses and companies will hire private contractors to test out penetration attacks on their security.

Usually, people think about white hat hacking, which people in movies do from a remote location, without ever stepping into the building they are hacking. In the real world, the physical protection that a company has will secure certain servers that cannot be remotely accessed. Such physical protections require physical security penetration. These jobs really do exist

and involve you being paid by companies to break in and steal their stuff. The path, to what sounds like easily the most exciting job on the planet, begins with learning the basics of lock picking and constantly practicing what you learn. From there you would move on to access code systems, and maybe even hacking. There is so much cool information that you can learn, and once you do, you are more qualified to use your abilities for legal and profitable employment.

## **2. It's Practical**

Not only is it practical because it can land you a job, but it also allows you and the people around you to save money on locksmith services. In almost every state you can have lockpicks, you are allowed to use them if given permission by the owner of the lock. Mother-in-law is locked out of her house? Head over there with your lock picks and get her back in just in time to catch Alex Trebek welcoming her to Jeopardy. This is also true for your own home. If you or any of your family members lock themselves out, then you most certainly have your own permission to pick your locks.

Essentially, nonviolent entry into a home where an elderly person is living keeps them more safe than someone having to kick the door down. Even if you are not going to go out into the world and begin helping out all the people you know with their lockout conundrums, you will have a lot of knowledge to bestow on the people you meet. Being a resource for information will keep your loved ones safe from locksmith scams. If they think that something is fishy, all they have to do is give you a call.

Some scammer is claiming that a basic Kwikset deadbolt (not the SmartKey cylinder) needs to be drilled open because it is "high security". You are going to be able to tell your friends to send that conman on his way. Hopefully, you will also convince your friends to get better and new locks installed.

## **3. It's Impressive**

Lock picking is essentially magic to the general public. People do not understand it, and a part of them does not want to understand it. (Ignorance being bliss, and all that.) That means that when you have a couple pieces of metal and a padlock, you are a magician. People have fun and are entertained by the prospect of seeing something out of the norm. A person picking a lock and then passing it around is outside of the realm of basic social interactions. Being knowledgeable about subjects that have real world applications is also

pretty cool. I have been at all kinds of parties where people wanted to know about locks and picking them. I once had an incredibly long conversation about how to decode a master key system.

At first, I thought that no one would be interested in the nerdy lock knowledge that you pick up from being in this community, but people love learning weird things. Though I have never met someone that is not interested in learning a bit about locks, I still make sure that they are not bored to death by the subject. It is a subject that everyone has some preconceived notion about because they deal with locks every day. So everyone always has questions. I will often use this as a way to move the conversation on to movies.

For example, how the most recent Mission: Impossible (Rogue Nation) shows you a bit of how locks work. Their cell phone lock pick makes no sense, but it still shows how a basic pin tumbler locks on the inside. Then they ask, “Well why wouldn’t it work?” That answer is a whole different blog post, but essentially this breaks the ice and moves the conversation along. All the while, people are impressed.

#### **4. It’s Fun**

This may sound subjective, but in my experience, it is a pretty universal truth. Granted, unless the person is very lucky, or naturally adept, the hobby will begin as frustrating. But the fun will come! As soon as you open up a lock you will get an amazingly rewarding sensation of euphoric accomplishment. I can only guess at the reasons for the seemingly across the board reaction to opening a lock, but whatever the reason, the sensation is addicting. Once a person gets a lock open, they rarely give it back. They will lock it back up and try again. This is the obvious reaction. Most people are in disbelief and riding high on wonder. They have done the impossible. After all that talk of how lock picking is not as easy as it looks in the movies, they have completed the same task as James Bond. I remember the first time I picked a lock.

A friend was passing around his picks and a deadbolt. Everyone was giving it a try, and then I got it open. I reluctantly passed it on to the next person, but I wanted to keep going. It may seem, from my example, that addicting is a little more apt than fun, but don’t let my personal lack of impulse control turn you off. There is no sickness that lock picking gives you. It is more like being

bitten by a love bug. It is hard to shake. Even as I talk about it I am smiling. If you find it half as fun as I do, you are going to have a great time.

## **5. It's Perfect for You**

I mean you specifically. Doesn't it sound perfect? I mean you somehow ended up here with this book, then you started reading the book. Then you got down to the last reason and started to read it. And for those who this doesn't apply to, they will never see it. So you might say, "Well what if I have only read this part of the book, and haven't read the rest?"

First off: I appreciate the imagination and thought crafting, and even think that your contemplation of this fact shows a level of critical thinking which lends itself perfectly to lock picking.

Secondly: I need you to back off. You are coming at me with a lot of hostility, and frankly, I am not in the mood for this level of sass. Are you cooled down? Good.

You should really pick locks. The hobby really compliments the way you live your life. It is going to open up so many different avenues for experience and financial opportunity. You were made to do this! Born into the fate that you would be a great lock picker. And there is no need to act against your destiny. The only thing waiting for you at the end of this path is happiness and treasure beyond your wildest dreams. And your dreams are huge, so that is a lot of treasure and happiness. It is going to be great, just you wait and see.

So, between the marketability and the practicality, you would think that I didn't need to keep going, but there are just so many reasons to take up lock picking.

Sure, you are going to open yourself up to having some of the coolest jobs on the planet Earth (perhaps even the universe), but more importantly, people are going to think you are a wizard. With the power to open any locks you can get your picks on, and the moral fortitude to keep yourself from using your powers for evil, you will become a real life superhero.

Am I perhaps blowing things out of proportion? Maybe. You, however, will definitely be blowing people's minds with your veritable "Alohomora" charm. Blowin' minds and havin' a grand old time. Truly you will be enjoying yourself at the same time as you are becoming a more rounded and contributing member of your community. The hobby of lock picking just

seems to make people better, and you were so great to begin with. Join us, and together we will rule the galaxy.

## CHAPTER 7



# TYPES OF LOCKS AND HOW TO PICK THEM

Here's How to Pick a Lock and Pick the Set You Need

It's the question I get asked the most "What lock pick do I need for this lock," next to "How to pick a lock?" In this chapter, I'm going to explain the necessary tools to pick a lock, so you understand precisely what lock picks work for which locks!

First of all, let's look at the different lock types before learning how to pick them. While there are many locks, I think we should focus on the most popular, the type of locks you're likely to encounter in the real world, and will probably recognise from having seen around. One of these locks may well be your first lock to pick.

Things can get a little bit complicated because we need to establish whether we're talking about the locking mechanism, or the lock housing. For instance, the word 'padlock' refers to the housing of a lock mechanism, but padlocks can use many different locking mechanisms. In this guide we're going to focus on the locking mechanism, the way the lock works inside, and more importantly, the picks you'll need to pick a lock given its internal mechanism.

While there are many different types of specialist lock mechanisms, of the ones you'll likely encounter in your everyday life, and moreover ones that can be picked with tools, there are five main types you can learn how to pick:

1. Pin Cylinder locks

2. Lever locks
3. Wafer locks
4. Warded locks
5. Disc Detainer locks

To understand the distinction more clearly, let's consider padlocks. You can get padlocks that use all five of these mechanisms. So, when I am asked "what picks do I need for a padlock?" I need to know what type of padlock, meaning - what is the locking mechanism?

Let's look at each of these locking mechanisms in detail. How to recognise them, how their configuration works (e.g., do they have pins, wafers, levers, or discs), and how to pick such locks to open them without the key.

### **Pin Cylinder:**

The pin cylinder locking mechanism is probably the oldest of locking mechanisms. The Pyramids of ancient Egypt had wooden locks that most resemble pin cylinder locks. However, they were popularised by Linus Yale Jr., who drew on the Egyptian design and patented his pin cylinder in 1851. His locks were so successful many people today refer to pin cylinder locks simply as 'Yale' locks, due to the success of that brand. Pin Cylinders are the most widely used locks in use today.

The principle is simple. There's a central core or 'plug' that needs to rotate to open the lock. The plug is prevented from turning by a series of pins, which obstruct the plug. The series of pins are in pairs. The top, or 'driver pin', and the bottom, or 'key pin'. When the correct key is inserted, the split between the pairs of driver pins and key pins lines up along the edge of the plug where it meets the housing of the lock. This is called the 'shear line'. Once this has happened, it allows the plug to turn and the lock is open. For lock pickers, we need to get the split in the pin pairs, or 'stacks' to line up along the shear line, get the plug to turn or rotate, and open the lock.

Since pin cylinders are the most popular locks, as we lock our front doors with them after all, there's a wealth of tools and techniques we can use to pick them non-destructively without using the key.

### **What About Pin Tumbler Locks?**

A pin tumbler lock refers to a mechanism that uses pins of different lengths to keep it locked unless the right key is inserted. The pin tumbler lock

mechanism figures commonly in cylinder locks, also referred to as cylinder pin tumbler locks or pin-tumbler cylinder locks. Euro cylinders, as shown above, are an example of a pin tumbler lock.

Like the famous Yale lock, the pin tumbler lock has driver pins and key pins which have to be aligned in the shear line for the plug to turn and the door to open. You can refer to the above diagram to visualise the inner workings of a pin tumbler lock.

As it is, the sets most people recognise as lock picks – long, flat pieces of steel with a variety of different lock picking tips – are designed mainly to pick pins in those cylinder locks. The two main techniques for how to pick a lock of this kind are:

- Single Pin Picking
- Raking

**Single Pin Picking (SPP)** is a method where each pin is picked individually, and is known among lock pickers as proper lock picking.

It's a must to learn how to pick a lock using this technique if you want to consider yourself a lock picker or an expert who knows the pins by ear (feedback). With SPP, you learn to pick locks by paying close attention to the internal mechanism of the lock, from applying the correct turning pressure or tension to the binding of the pins. This awareness about the principles behind lock picking makes it more precise and thus reduces the likelihood of damaging the lock from erratic movements. It's also the most effective technique for pin cylinders and will certainly give you the most success. However, it takes time to learn and lots of practice to master this quintessential form of lock picking.

Under this lock picking approach, you will need a hook pick to lift and set the pins, one after the other following the correct sequence or order. You will then use a tension wrench (also known as torsion wrench, torque wrench, tension tool, tension bar, tensioner, or turning tool) to apply pressure or torque to the plug while you pick the individual pins.

By using the tension wrench, you aim to create a ledge between the plug and the housing called the 'shear line,' as it's along this imaginary line that the pins sit, preventing the plug from turning. Imagine the shear line is a physical point where the plug (inner cylinder) ends and the housing (or cylinder itself)

begins.

Applying tension creates the ledge, which is a fraction of a millimetre wide. When pushed up, this enables the pins to sit. The pairs of driver pins and key pins must meet along the shear line, which happens to be the edge of the plug. Tension is a critical element in lock picking, which is why you have the wrench.

It takes practice to control and use the right amount of pressure when picking locks using the tension wrench or applicable turning tool. A rule of thumb is to avoid exerting too much pressure on the tension wrench when lifting pins because these pins can get stuck, fall below the shear line, and make this lock picking endeavour twice as difficult (you have to pick the pins one by one, after all).

In sum, this principle allows you to pick a lock pin by pin so you can turn the plug and open your door or padlock without the need for the right key.

Raking is a method where you work all the pins simultaneously.

It's a great technique for beginners learning how to pick the pins of their first lock, and with a little practice, it will reap rewards. While you can perform some raking techniques with most standard lock picks, there are now a wealth of 'rakes' available, designed especially for this technique. Most modern lock pick sets will have a couple of these specially designed rakes with a tension wrench or two to work on the driver pins and key pins to open the lock.

Like the SPP lock picking method, raking also uses a tension wrench to create a ledge, but rather than pick the pins individually, they are all raked together, until they're all sitting on the ledge of the shear line, allowing the plug to turn. The tension wrench is essential for leveraging your picking tools to rake and open the lock. To use it, insert the tension wrench into the bottom of the keyway (BOK wrench), as this is a standard way of doing things. There is, however, a top of the keyway tension wrench (TOK wrench) that is growing in preference among lock pick enthusiasts.

### **Top or Bottom Keyway for Tension Wrench?**

All good lock pick sets have a variety of decent tension tools. Look out for both Top of Keyway tension tools (TOK), and Bottom of Keyway tension tools (BOK) – as having choices with tensioning really helps.

Aside from their form, choosing between the two types of tension wrenches is a matter of purpose, such as the shape of the keyhole, and preference, as some often start with the BOK and shift to TOK.

Most lock pick manufacturers make excellent lock pick sets for Single Pin Picking and Raking, containing a wide range of picks, hooks, and rakes, as well as a suite of tension wrenches to suit all budgets and levels of commitment. Here are some examples of lock picking sets to get started into the sport of lock picking or refining one's skills in picking a lock:

- Dangerfield Praxis Picks
- Dangerfield Serenity Picks
- Multipick Elite picks
- Sparrows Vorax Picks
- Southord 22pc Picks

You can pick pin cylinder locks non-destructively using the following techniques:

- Bumping
- Pick Guns
- Impressioning
- Bypass tools

## **Lever Locks**

Lever locks are usually the next progression for lock pickers due to their popularity and the challenge they provide. After pin cylinders, lever locks are the most widely used locks. They can be attributed to another Englishman, Robert Barron, who designed his 'Double Lever Lock' in 1778. Although Chubb seemed to win the market and the popularity of Chubb lever locks has led many people to call them 'Chubb locks'.

The basic principle uses a series of levers which have cut-aways or 'gates' which need to be lifted to different heights to allow the bolt stump to move, and then unlock the door. When you insert the key and turn it, the different height cuts on the key will lift all the levers to the correct height, which aligns perfectly to provide a gap through which the bolt stump can move. One of the cuts on the key, the last one, is the bolt thrower, and as the key is turned, and the levers are raised, the bolt thrower simultaneously moves the bolt, and since the gates are correctly aligned, the bolt and stump can freely move,

retracting into the housing and opening the lock.

### **Inside of a Mortice Lever Lock**

The principle is the same regardless of how many levers there are. It's common to have two or three levers on locks inside a house, and five or more on the exterior door. Lever padlocks can also have a variety of levers, and the functioning and picking principle is the same.

Lever lock mechanisms are mainly found in domestic front doors, or in padlocks.

Simple lever locks can be picked with two pieces of wire, bent at right angles. One is used to apply pressure on the bolt, and the other is used to lift the levers. When you apply tension to the bolt using a tension wrench, you create a tiny ledge, much like the shear line in pin cylinder locks. Once the ledge is created, a fraction of a millimeter, the levers can be lifted until they sit on the ledge. However, things get more complicated when various security elements are added to the locking mechanism. For instance, some companies will use alternating high and low gates, which impedes lock picking. Five lever locks used on domestic properties (often called mortice locks) will often have a 'curtain' added, to prevent you from inserting two pieces of wire. To pick such locks we use 'Curtain picks', a special tool designed to allow you to get round the curtain, apply tension to the bolt stump, and then pick the levers individually. Lever locks without curtains can be picked with a tool called a '2 in 1 pick' and these are available in different gauges, since the locks come in different gauges.

### **RB Locktools Curtain Lock Pick**

In short, if you want to learn how to pick lever locks, you're either going to get lucky with a simple mechanism and some bent wires and an improvised tension wrench. However, be careful when you use objects at home, like a knife, bobby pin, or card credit as a pick or wrench because you may damage the object or the lock itself.

Or, you'll need a dedicated tool, designed for a specific gauge or gauges. Some examples of these lock pick sets are:

- Multi Gauge Curtain Lock Pick
- 2 in 1 Lever lock pick

More advanced lever padlocks have specific tools designed to make the job of applying tension and lifting the levers simple.

- Chubb Battleship Pick
- Chubb Cruiser Pick
- ERA Big 6 Pick
- ERA Insurance Pick

## **Wafer Locks**

Although nowhere near as popular as pin cylinder and lever locks, wafer locks are significant since they are used in literally millions of cars. Having said that, they do have other uses and you'll probably encounter them in locks on drawers, lockers, and some padlocks too.

The first recorded instance of the wafer lock was the patent lodged by Philo Felter in 1868. Felter's wafer lock was double bitted, meaning it had two sets of wafers, and the key was patterned on both edges.

The principle is quite similar to pin cylinders, in that springs are used to push obstructions into the housing of the lock which stops the plug from rotating. But instead of having pins, wafer locks use a series of flat single pieces of metal called wafers. You can get both single and double-sided wafer locks but to understand them we'll start with the single-sided wafer lock, the type you'll find on a locker.

Just three years after Felter's design, Hiram S. Shepardson invented the single-sided wafer lock, with just one set of wafers, which, being cheaper to produce and less prone to damage, was more successful in the commercial market.

The wafers are pushed by a spring right through the plug and protrude into the housing at the bottom of the lock. This stops the plug from turning and therefore the lock from opening. When the correct key is entered, the wafers are lifted, but not too much or they'll push up into the housing, obstructing the plug and preventing it from turning, but just enough that the wafers are 'floating' in the middle of the plug. So, when you turn the key, the plug is free to turn, and the lock opens.

Being very similar in design to pin cylinder locks minus the key pins and driver pins, wafer locks can be picked using the same pick sets. Accordingly, you use a tension wrench to apply the required pressure, insert a pick, and

pick the wafers one by one. The goal is to position the wafers so they are at the shear line to allow the plug to turn. Single Wafer Picking, you could say about this lock picking technique. It is also possible to rake wafer locks with some success.

There are also a few tools made specifically for wafer locks. They work by combining the tension wrench and the raking tool into the one pick. You insert the tool, apply pressure to create the ledge, and rake in and out, or jiggle up and down, left than right, etc. Take care that you apply only a slight amount of torque and refrain from using too much pressure through the wrench despite the jiggling and raking movements.

- Lock Jigglers
- Wafer Rakes

And for the more complicated wafer locks used in cars, there are very specialist picks, called ‘Lishi picks’ after the brand that produces them. Each pick is made for a particular make of wafer lock. The tool has a guide on the outside of the lock so you know where the picking tip is and when it’s on a wafer, then you continue to pick each wafer, by using the guide as you go. Inner Groove Picks use the warding in the lock as a guide of where to insert the tool, and like a rake, takes on all the wafers simultaneously, resting on the ledge as you apply turning pressure as you rake, and opening once all the wafers are ‘set’:

- Lishi Car Lock Picks
- Inner Groove Rakes

## **Warded Locks**

Although having been around since ancient Rome, warded locks are not widely used today. Most often, they’re used on historic properties and items, with the intention of maintaining the ‘old’ aesthetic. The reason for their scarcity is the lack of security they provide. A warded lock houses a very simple turning mechanism, that requires a key to turn. However, they are vulnerable to a relatively simple attack because they’re not actually locked, so to speak, and if you can get to the back of the lock, you can turn the mechanism and unlock it

To make this clear we can talk about the original ‘skeleton key’. While many other and newer tools have been called ‘skeleton keys’, the original was made



for warded locks. The name comes from the way the key was stripped of its blade, leaving just a turning tool - the key is reduced to its 'bare bones'.

It's the metal barriers, or 'wards' in the lock that prevent you getting to the back of the lock. Unlike the other locks we've discussed, there is nothing obstructing the plug to stop it turning, such as pins or wafers, rather there are obstructions in place to prevent you getting to the turning mechanism. The correct key has been cut in such a way it can be inserted into the lock and turned without hitting these obstructions, the 'wards'. However, the skeleton key exposed the security issue, because if you remove everything except the turner from the key, the wards provide no obstacle and the turner can easily reach the back of the lock, turn it and unlock the mechanism.

Many warded locks can be tackled with some bent wire, instead of tension wrench and picking tools for standard locks with pins or wafers. There's a very simple and well-known lock pick set called 'Warded Lock Picks' which will deal with most warded locks in use, which tend to be padlocks:

- Warded Lock Picks

## **Disc Detainer Locks**

Disc detainer locks were invented by Emil Henriksson in 1907, and manufactured a few years later under the Abloy brand, the company he founded. These locks use slotted rotating detainer discs. The correct key rotates these discs much like the tumblers you'll see in high security safes, until all the slots are aligned, allowing a sidebar to drop into the slots and the lock is open.

Since disc detainer locks do not use springs, like pin cylinder and wafer locks, they tend to be used in harsh conditions such as outside, where things like water, salt, or sand will not easily damage them.

Well-made disc detainer locks, which to this day tend to be manufactured by the Abloy brand are considered higher security than most locks. Although the many, many cheap copies tend to be quite easily picked, with inexpensive tools.

One can apply the principle of binding pins to that of discs in these copy disc detainer locks. You can use the usual lock picking tools for tumbler locks (pick and wrench) or use custom tools just to get a feel for what it's like to pop open a simulated disc detainer lock.

So, how can you pick a lock from Abloy? For authentic disc detainer locks, you need sturdier or top-notch picks to bypass their high security; otherwise, the tools can become misshapen or bent.

- Disc Detainer Pick (for copies)
- Disc Detainer Pick (for High Quality locks)

That's it, primarily - you'll aim to be dealing with pin cylinders as they're the most common - but all the others are listed above!

## CHAPTER 8

# HOW LOCK PICKING WORKS

Locks come in all shapes and sizes, with many innovative design variations. You can get a clear idea of the process of lock picking by examining one simple, representative lock. Most locks are based on fairly similar concepts.

For most of us, the most familiar lock is the standard dead-bolt lock you might find on a front door. In a normal deadbolt lock, a movable bolt or latch is embedded in the door so it can be extended out the side. This bolt is lined up with a notch in the frame. When you turn the lock, the bolt extends into the notch in the frame, so the door can't move. When you retract the bolt, the door moves freely.

A deadbolt lock's only job is to make it simple for someone with a key to move the bolt but difficult for someone without a key to move it. In the next section, we'll see how this works in a basic cylinder lock.

Most deadbolts use a cylinder lock. In the cylinder lock, the key turns a cylinder, or plug, which turns an attached cam. When the plug is turned one way, the cam pulls in on the bolt and the door can open. When the plug turns the other way, the cam releases the bolt and the spring snaps it into place so the door cannot open. In a deadbolt lock, there is no spring mechanism; the turning cylinder slides the bolt forward and backward. A deadbolt is more secure than a spring-driven latch since it's much harder to push the bolt in from the side of the door.

A cylinder deadbolt lock, in the open position (top) and the locked position (bottom)

Inside a cylinder lock, there is a sort of puzzle, which only the correct key can solve. The main variation in lock designs is the nature of this puzzle. One of the most common puzzles; and one of the easiest to pick, is the pin-and-tumbler design.

The main components in the pin-and-tumbler design are a series of small pins of varying length. The pins are divided up into pairs. Each pair rests in a shaft running through the central cylinder plug and into the housing around the plug. Springs at the top of the shafts keep the pin pairs in position in the plug. When no key is inserted, the bottom pin in each pair is completely inside the plug, while the upper pin is halfway in the plug and halfway in the housing. The position of these upper pins keeps the plug from turning -- the pins bind the plug to the housing. Here's how it works:

When you insert a key, the series of notches in the key push the pin pairs up to different levels. The incorrect key will push the pins so that most of the top pins are still partly in the plug and partly in the housing, like this.

The correct key will push each pin pair up just enough so that the point where the two pins come together lines up perfectly with the space where the cylinder and the housing come together (this point is called the shear line).

To put it another way, the key will push the pins up so that all of the upper pins are inserted completely in the housing, while all of the lower pins rest completely in the plug. Without any pins binding it to the housing, the plug moves freely, and you can push the bolt in and out.

This simple puzzle design is very effective. Since the pins are hidden inside the lock, it's fairly difficult for most people to move the plug without the correct key. But, with a lot of practice, it is possible to solve the puzzle by other means. In the next section, we'll see how a locksmith goes about picking this sort of lock.

## **Picking Pin-and-tumbler Locks**

The pins in a pin-and-tumbler lock when no key is inserted (top) and when the correct key is inserted (bottom): When the correct key is inserted, all of the pins are pushed up to the same level, flush with the shear line.

In the last section, we saw that the correct key will position the pins in a pin-and-tumbler lock so that all of the lower pins rest in the cylinder plug and all of the upper pins rest in the cylinder housing. To pick this sort of lock, you

simply move each pin pair into the correct position, one by one.

There are two main elements involved in the picking process:

- **Picks** - Picks are long, thin pieces of metal that curve up at the end (like a dentist's pick). They are used to reach into the lock and push the pins up
- **Tension wrench** - Tension wrenches come in all shapes and sizes. Functionally, they aren't very complex. The simplest sort of tension wrench is a thin flathead screwdriver.

The first step in picking a lock is to insert the tension wrench into the keyhole and turn it in the same direction that you would turn the key. This turns the plug so that it is slightly offset from the housing around it. As you can see in the diagram below, this creates a slight ledge in the pin shafts.

While applying pressure on the plug, you insert a pick into the keyhole and begin lifting the pins. The object is to lift each pin pair up to the level at which the top pin moves completely into the housing, as if pushed by the correct key. When you do this while applying pressure with the tension wrench, you feel or hear a slight click when the pin falls into position. This is the sound of the upper pin falling into place on the ledge in the shaft. The ledge keeps the upper pin wedged in the housing, so it won't fall back down into the plug.

In this way, you move each pin pair into the correct position until all of the upper pins are pushed completely into the housing and all of the lower pins rest inside the plug. At this point, the plug rotates freely and you can open the lock.

Conceptually, the lock-picking process is quite simple, but it is a very difficult skill to master. Locksmiths have to learn exactly the right pressure to apply and what sounds to listen for. They also must hone their sense of touch to the point where they can feel the slight forces of the moving pins and plug. Additionally, they must learn to visualize all the pieces inside the lock. Successful lock picking depends on complete familiarity with the lock's design.

Another technique is raking. Raking is much less precise than actually picking. To rake a lock, you insert a pick with a wider tip all the way to the back of the plug. Then you pull the rake out quickly so that it bounces all of

the pins up on its way out.

As the rake exits, you turn the plug with the tension wrench. As they're moving up and down, some of the upper pins will happen to fall on the ledge created by the turning plug. Often, locksmiths will start by raking the pins, and then pick any remaining pins individually.

We'll look at wafer-tumbler and tubular locks next.

## **Lock Picking: Wafer-tumbler and Tubular Locks**

A pin-and-tumbler cylinder lock is popular because it is inexpensive but offers fair security.

In the last section, we looked at pin-and-tumbler cylinder locks. You'll find this sort of lock everywhere, from houses to padlocks.

They are so popular because they are relatively inexpensive but offer fair security. For a typical pin-and-tumbler lock with five pins, there are about a million different pin configurations. When you consider the number of lock companies and lock designs, the chances of a criminal having the same key as you is fairly remote.

Another common type of cylinder lock is the wafer-tumbler lock. These work the same basic way as pin-and-tumblers, but they have thin wafer-shaped tumblers rather than pins. You pick the wafers exactly the same way you pick pins; in fact, it is a little bit easier to pick wafer-tumbler locks because the keyhole is wider.

A wafer-tumbler cylinder lock works like a pin-and-tumbler lock, but it has wafer-shaped tumblers instead of pins.

Some designs use single wafers rather than wafer pairs. These wafers are spring loaded so that they extend out of the cylinder, binding with the lock housing. The wafers have a hole in the center that the key will fit through.

The correct key pulls the wafers down just enough so that they are all retracted into the plug. The incorrect key will either pull the wafers down only part of the way or will pull them down too far, causing them to extend out the other side of the plug.

Double-wafer locks have wafer tumblers on both ends of the plug. To pick these locks, you work the wafers on both sides as you apply pressure with the tension wrench. Wafer locks are found in most filing cabinets, lockers and

cars, as well as in many padlock designs.

Tubular locks offer superior protection to pin-tumbler locks and wafer-tumbler locks, but they are also more expensive. Instead of one row of pins, tubular locks have pins positioned all the way around the circumference of the cylinder plug. This makes them much harder to pick. Conventional lock-picking techniques usually don't work on this type of lock.

Some pin-tumbler locks have modified pins that make picking more difficult. In the most common variation, the upper pins have a mushroom-shaped head. This odd shape causes the plug to shift early, before you have actually pushed the top pin all the way up. This makes it more difficult to put the pins in position. It also makes it very hard to get an accurate feel for what's going on inside the lock.

Next, we'll look at rekeying locks and creating master keys.

## **Lock Picking: Rekeying and Creating Master Keys**

The shafts of a pin-and-tumbler lock contain several springs and tiny pins. The shafts of a pin-and-tumbler lock contain several springs and tiny pins.

One cool thing about pin-and-tumbler locks is that you can re-configure them to fit an existing key (provided that the key is for the same lock design). The advantages of this are obvious: You can add new locks to your home or business without attaching a bunch of new keys to your key ring.

To make a new key for an existing lock, you cut a series of notches in the key so that it raises each of the upper pins just above the shear line.

Essentially, you cut a pattern in the metal that matches the pattern of the pins in the lock. To change a lock so that it fits an existing key, you simply work in the opposite direction: You change the pattern of the pins in the lock so that it matches the pattern of notches in the key. If the lock is designed with a universal keying system, any locksmith can re-key the lock in no time. You can also get locks re-keyed at most hardware stores.

The right combination of pins lines up perfectly with the notches in the key.

In this basic six-pin lock set, you can see how this re-keying works. When you open up the shafts in the cylinder and empty them out, you have six springs and 12 tiny pins. All of the upper pins are exactly the same size. The remaining six pins (the lower pins) will be of various lengths to match up

with the notches on the key.

The process of re-keying a lock is very simple. The locksmith removes all of the pins from the cylinder. Then, drawing from a collection of replacement pins of various sizes, the locksmith selects new lower pins that fit perfectly between the notches of the key and the shear line.

This way, when you insert the new key, the lower pins will push all the upper pins just above the shear line, allowing the cylinder to turn freely. (This process may vary depending on the particular design of the lock.)

It doesn't matter how long the upper pins are (since they all rest above the shear line when the key is inserted), so the locksmith simply re-inserts the six original upper pins that came with the lock. And that's all there is to re-keying. The entire process takes only a few minutes.

Master keys are an interesting technology somewhat related to lock picking (because they're means of getting past locks without the main key).

Some locks are designed to work with two different keys. The change key will open only that specific lock, while the master key will open that lock and several others in a group. In these locks, a few of the pin pairs are separated by a third pin called a master wafer or spacer.

When three pins are combined in a shaft, there are two ways to position the pins so they open the lock. The change key might raise the pins so that the shear line is just above the top of the master wafer, while the master key would raise the pins so the shear line is at the bottom of the master wafer. In both cases, there is a gap at the shear line and the key is able to turn.

In this lock design, the lowest pin would be the same length in each lock in the group, but the master wafer would vary in length. This lets one person, say a building manager, access many different locks, while each individual key-holder can open only his or her own lock.

In the next section, we'll look more closely at the differences between lock picking by locksmiths and illegal lock picking.

## **Lock Picking: The Picker Code**

Experienced lock-pickers can make do with a few paper clips and a basic screwdriver, but the job is a lot easier when they have the proper tools. A basic lock-picking kit contains a tension wrench and several different picks.



The picks differ mainly in the shape of their heads. Different heads are suited for particular sorts of locks and particular picking techniques.

Some lock-pickers will also use an electric pick gun. A pick gun basically consists of one or more vibrating, pick-shaped pieces of metal. You insert these long pieces of metal into the lock, just as you would insert a pick. As the metal pieces vibrate, they push the pins up.

This works something like raking a lock. You turn the gun as the picks vibrate, so you catch some of the pins at the shear line. Sometimes these devices will open the lock in a matter of seconds, and sometimes they won't work at all. Most recreational lock-pickers avoid these devices because they take the puzzle-solving element out of the process.

Lock picking is an essential skill for locksmiths because it lets them get past a lock without destroying it. When you lock yourself out of your house or lose your key, a locksmith can let you back in very easily.

Lock-picking skills are not particularly common among burglars, mainly because there are so many other, simpler ways of breaking into a house (throwing a brick through a back window, for example).

For the most part, only intruders who need to cover their tracks, such as spies and detectives, will bother to pick a lock.

Somewhere between the locksmith and the burglar is the recreational lock-picker, sometimes called a hacker. Like expert computer hackers, their code is to pick locks for the fun of it. Of course, breaking into any private property, no matter the intent, is illegal and unethical. If a person picks a lock that belongs to someone else, chances are the person will be arrested and face serious breaking-and-entering charges.

Simply understanding the principles of lock picking may change your whole attitude toward locks and keys. Lock picking clearly demonstrates that normal locks are not infallible devices. They provide a level of security that can be breached with minimal effort. Most locks serve only to keep honest people honest and to discourage criminals. With the right tools, a determined intruder can break into almost anything.

## CHAPTER 9

# 6 EASY STEPS FOR GETTING IN WITHOUT A KEY

If you're like every other human being on this Earth, you've likely misplaced your house key once or twice.

Maybe you left them at a friends house one night and you don't feel comfortable leaving a spare under the mat. Then what? Well, learning how to pick a lock could help you through those hard times.

## **Basic Lock Picking Tools**

You'll need two tools: a lock pick and a torque wrench. The purpose of the lock pick is to push the pins to the shear line. There are of course a ton of different styles of picks that can be used and each of them utilize their own technique.

However, because this is a beginner's guide, we will be looking at the quickest and easiest method of lock picking, aka raking. This method of picking requires a "rake" style lock pick. Out of all the different styles of rake picks, the most popular is the snake rake. These picks have an elongated, jagged end that can manipulate multiple pins at once, just as a key does.

In addition to the pick, there is also the very important little tool called the torque wrench. This "L" shaped wrench accomplishes two very important tasks. Firstly, it gives us the leverage we need to rotate the plug, just as the

key does. Secondly, and more importantly, it provides the torque necessary to set and hold the pins at the shear line as we pick them. Without this torque, the pins would simply fall back into the plug and the lock would forever remain locked.

Lock picking sets like this fully loaded one (which even includes a clear padlock for practice) can be easily purchased on Amazon. However, be certain to check your local laws because some may prohibit the possession of lock picks. If you live in the United States, check out this quick and dirty guide to lock picking laws. For the Macgyvers out there, basic pin tumbler locks can be successfully picked using bobby pins as lock picks.

## **Picking Your First Lock in Six Steps**

So now that we have a fundamental understanding of the pin tumbler lock and the tools required to pick them, let us finally learn what we came here to learn. These six simple steps will guide you in how to pick a lock.

**Step 1:** Insert the short end of your tension wrench into the bottom of the lock's keyway. Using a finger, or two, apply extremely light pressure on the wrench in the direction that you would naturally turn the key (typically clockwise).

Continue to hold this pressure on the wrench throughout the remainder of these steps.

Note that understanding exactly how much pressure to apply is what separates the novice from the master. Tension is single most important technique that can only be developed through practice.

**Step 2:** Still continuing to apply slight pressure on the wrench, take your rake pick and insert it into the keyway and push it all the way to the back of the lock.

**Step 3:** Next apply upward pressure to the pins with the end of your rake and gently snap the pick out in a scrubbing motion. Be certain to bump all the pins on your way out.

**Step 4:** If a reasonable amount of tension has been applied, several pin will have set at the shear line and the lock's plug will have slightly rotated. But take note that this rotation to the novice will likely be unnoticeable.

**Step 5:** Once again, insert your pick into the back of the lock and repeat the

motion of scrubbing the pins. Repeat this process until all the pins have set. However, if after five or six scrubbings the lock doesn't open, release the tension on the wrench and take care to listen for pins to drop. If you don't hear any drop, it is a good indicator that you were applying too much pressure on the torque wrench. Start over by applying a different amount of pressure on the wrench and re-raking the pins.

**Step 6:** Once you have found an appropriate tension and set all the pins, the plug will give and allow you to fully rotate it with the torque wrench, just as if the correct key was used.

## CHAPTER 10

# HOW TO OPEN LOCKS WITH A LOCKPICK GUN

I explain how locks can be opened using a lockpick gun. A lockpick gun, also known as a snap gun, is a tool that can be used to rapidly force open a pin tumbler based lock without using the key. A thin steel rod is inserted into the lock and the snap gun briefly fires the rod against all of the lock pins simultaneously, momentarily freeing the cylinder and enabling it to be turned using a tension wrench. The snap gun is an alternative to a conventional lockpick, which requires other techniques such as single pin picking or raking to free the pins.

The first snap guns were developed to assist police officers in opening locks without the additional training required for traditional lockpicking techniques. Although lock picking is often associated with crime, snap guns are not commonly used by criminals because concealment is difficult and the device will tend to attract attention from law enforcement.

Some legal jurisdictions may classify snap guns as burglary tools or otherwise limit their possession. A person may then be required to be a police officer or locksmith by trade, or to have some other legal sanction, to be in possession of a snap gun. Make sure you can legally own one in your country before you try to buy one and only open locks you own or have permission to open.

Lock picking is the art of unlocking a lock by analyzing and manipulating the components of the lock device without the original key. In addition, ideal lock picking should not damage the lock itself, allowing it to be re-keyed for

later use, which is especially important with antique locks that would be impossible to replace if destructive entry methods were used.

Although lock picking can be associated with criminal intent, it is an essential skill for a locksmith, and is often pursued by law abiding citizens as a useful skill to learn or simply a hobby.

### **Step 1: How a Pin-Tumbler Lock Works**

A pin tumbler lock contains a set of key pins and a set of driver pins. The key pins move within pin channels inside the cylinder assembly and are cut at different lengths corresponding to the lock keying. The driver pins are installed in the lock housing and spring pressure forces them to penetrate the lock cylinder and prevent it from turning. If the wrong key is inserted, it will variously push the bottom pins either too high or not high enough, and the lock cylinder cannot turn. When the key pins are correctly aligned by the key, the top pins are exactly aligned with the barrel of the cylinder or the shear line, and it may freely turn.

### **Step 2: How a Pick Gun Works**

A traditional lock pick uses trial-and-error methods to find the correct alignment of the locking pins. The snap gun uses a primary law of physics, the transfer of energy, to momentarily burst all of the driver pins out of the lock cylinder without sending the bottom pins up into it. The snap gun strikes all of the bottom pins at once with a strong impact, and then withdraws again. The bottom pins transfer their kinetic energy to the top pins and come to a complete stop without penetrating the lock housing. The driver pins are thrown out of the cylinder body entirely up into the lock housing. Until the springs force the driver pins back into the cylinder, the lock cylinder is momentarily unobstructed.

The same physical principles are involved in lock bumping, but the snap gun automates the transfer-of-energy process. A correctly applied snap gun can open a lock very quickly compared to traditional lock picking, but the sharp impact is more likely to damage the lock mechanism than raking, which mimics normal key movements.

How to Use it:

- The pick gun needle is inserted into a key-way.

- The trigger is squeezed which cocks the mechanism and lets the needle drop. When the trigger is further pulled, an internal hammer is released which causes the needle to snap upward.
- There is a thumb wheel on the pick gun that determines how hard it snaps.
- Start with low impact, if it doesn't open after a few snaps increase the tension on the impact a little.
- Adjusting the thumb wheel just right takes a bit of getting used to. Before the hammer falls, the needle should be lightly resting on all of the bottom pins. You should have a tension wrench in place, in the key-way as in regular lock picking. The tension should be very light. When the needle snaps upward the top pins will be thrown upward at the same time, away from the bottom pins. For a brief moment, while the top pins are thrown upward, the shear line between the plug and the shell is unimpeded, and if the proper amount of light pressure (torque) is present on the tension wrench, the plug will turn and the lock will open.
- Pick guns often require several attempts to pick the lock, but are effective against most low to mid security pin-tumbler locks
- Generally, lock pick guns are simple to use and can perform the task quickly, efficiently and effectively.
- While they're not a substitution for traditional lock picking tools, they work on most standard pin tumbler locks, but they shouldn't be used on anything more complex.

**Security Pins:** The use of security pins does not hinder movement of the pins unless tension is applied prematurely. Pick guns are available in both downward and upward picking motions, depending on the orientation of the lock cylinder.

Although pick guns work regardless of the orientation it may be difficult to use one upside down

**Electric Pick Guns:** Electric pick guns use a motor or electromagnet to continuously oscillate the needle. The needle is placed under all pins and vibrates, hoping to vibrate at a resonating frequency that will cause all top pins to jump above the shear line, allowing the plug to turn.



# HOW TO PICK A LOCK WITH A PAPER CLIP

So you know how to pick a lock with a tension wrench and rake. This is an incredibly useful skill, which will allow you to get in your house if you get locked out without having to call a locksmith, and will also allow you to help others who've become locked out. You might even need to pick the lock of a door behind which someone is incapacitated and in need of emergency help.

But, what do you do if you find yourself needing to pick a lock, but you don't have your lock picks on you?

You use the manly art of improvisation and MacGyver yourself out of this tough spot with nothing but paper clips and pliers, of course.

Picking a lock with paper clips works pretty much the same way as picking a lock with a traditional tension wrench and rake. You just need to turn two paper clips into those two very same tools, and then pick the lock with them like you'd normally do.

Below I show you how.

## **What You'll Need**

- 2 metal paper clips — the sturdier the better. Don't use plastic paper clips. They'll just break.
- Pair of pliers (like you'd find on a Leatherman)

## **How to Pick a Lock with Paper Clips**

### **Make Your Tension Wrench**

Straighten out one of your paper clips but leave one end still bent. Squeeze those two parts together. This is the part that will go in the lock. Using your pliers, bend the long, straight end of the paper clip 90 degrees to form the handle of the tension wrench.

### **Make Your Rake**

Straighten out the second paper clip. Pinch the end of the paper clip with the pliers and bend the long part 90 degrees to form the first ridge in the rake. Move the pliers down on the long part of the paper clip, and bend again at 90 degrees. Keep doing this until you have 3 ridges in the paper clip.

### **Pick Your Lock**

With your jerry-rigged lock picking set, you're ready to pick your tumbler lock.

*Warning:* Paper Clip May Break Inside Your Lock

Paper clips aren't very sturdy and may break while inside your lock. This happened to me while working on one of the doors to my house. Now I've got to replace the lock. Doh! Because of this vulnerability, using a paper clip to pick a lock should be a last resort. It's far better to keep a real lock pick set on you.

## CONCLUSION

I hope this guide successfully helped you learn how to pick a lock and revealed to you that lock picking is not as difficult as it may first seem.

That lock picking is nothing more than taking advantage of manufacturing defects and mimicking the function of the key!

I hope you see that getting started in the awesome craft doesn't require a ton of tools. A high-quality lock pick set with a few good picks and tensioning tools is all you need to start slaying locks and progress at this amazing hobby.

Lock picking can be a very rewarding skill and I truly hope you pursue it beyond this simple guide.

Happy Picking!