

*All About Handcuffs...  
and Handcuff Keys*



# Our German Friends

Ray from SSDeV





# Our German Friends

## Dutch Police LIPS Cuffs



## Dutch Police LIPS Key





# Our German Friends

## Dutch Police LIPS Key



# Our German Friends

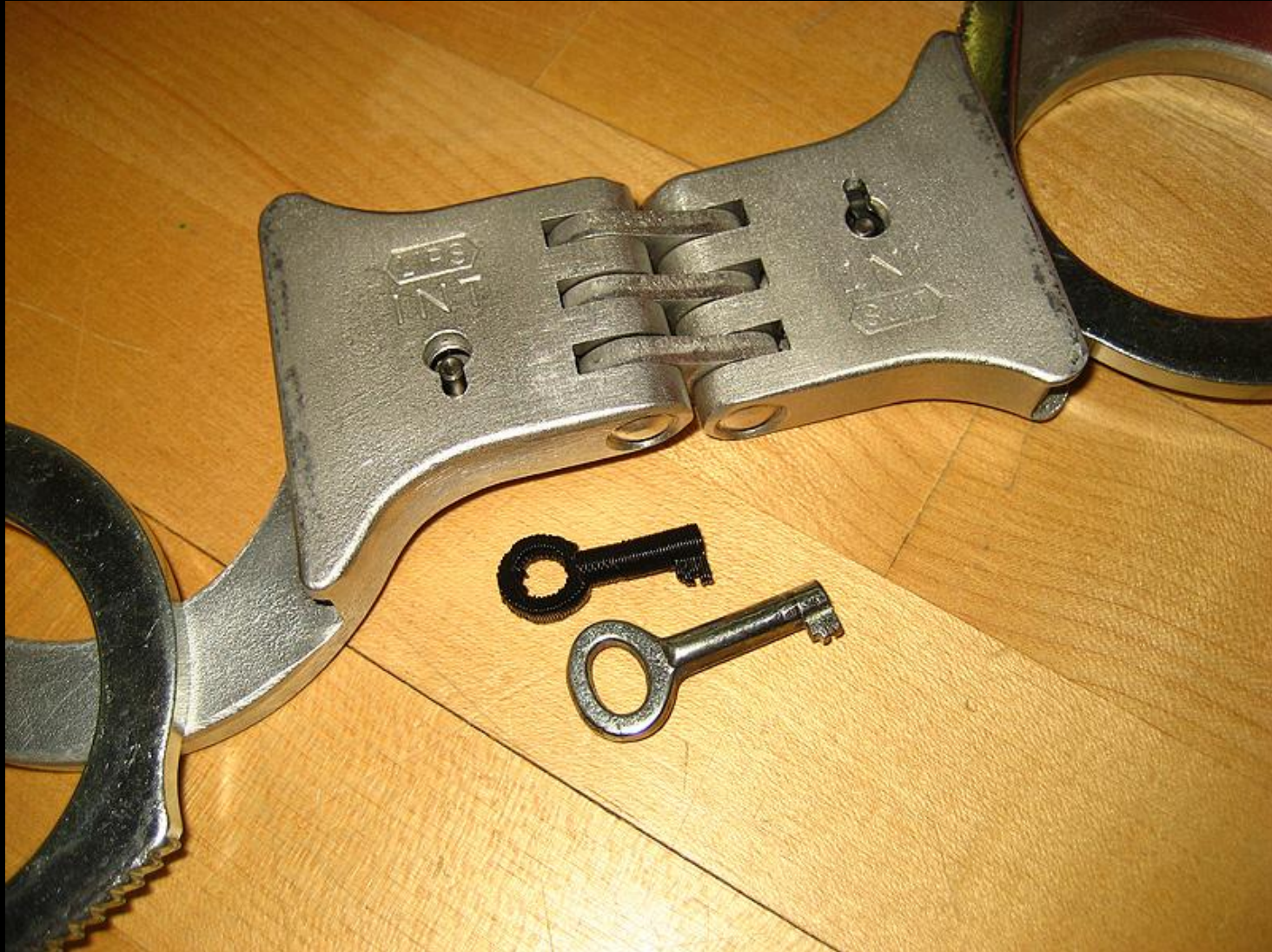
## Dutch Police LIPS Key





# Our German Friends

Download your own copy! <http://ke.y.nu>



# Our German Friends

## Airline Restraint Systems





# Our Dutch Friends

## Dutch Police LIPS Cuffs



07:00

# The Deal with Heavy Handcuffs





# Heavy Duty Handcuffs

## Clejuso Model 13s



# Heavy Duty Handcuffs

## Clejuso Model 13s





# Heavy Duty Handcuffs

## Clejuso Model 13s



# Heavy Duty Handcuffs

## Clejuso Model 13s





# Heavy Duty Handcuffs

## Clejuso Model 13s



# Heavy Duty Handcuffs

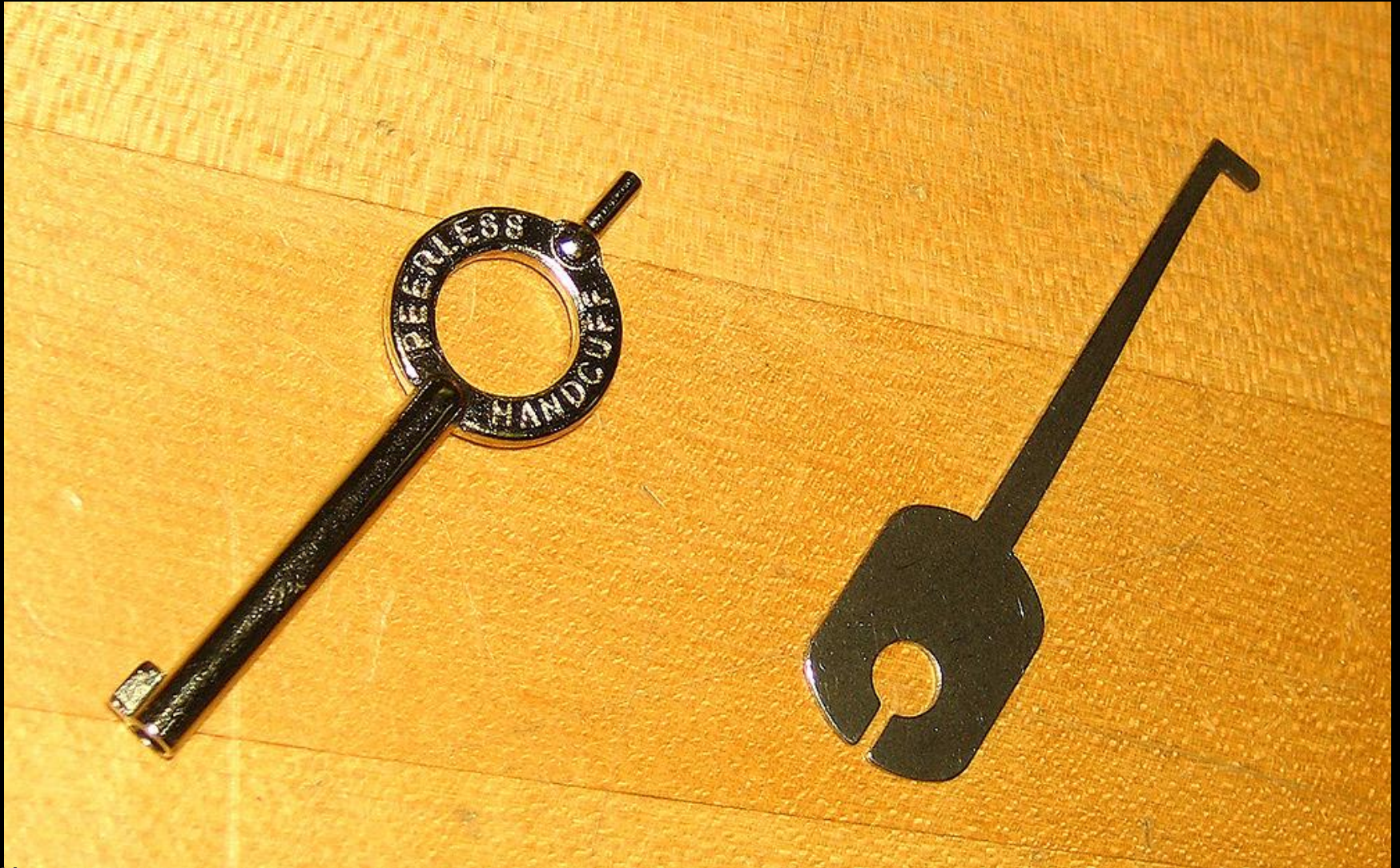
## Clejuso Model 13s





# Heavy Duty Handcuffs

Clejuso Model 13s



# A Look at “Typical” Handcuffs



# Typical Handcuffs

Simple Design





# Typical Handcuffs

Few Moving Parts



# Typical Handcuffs

Ratchet Arm



# Typical Handcuffs

Pawl





# Typical Handcuffs

Spring



# Typical Handcuffs

## Double Lock Bar



# Typical Handcuffs

That's all, people





# Typical Handcuffs

Videos explain further



[Opening & Closing](#)

[Shimming](#)

[Double Lock](#)

# Escaping Handcuffs

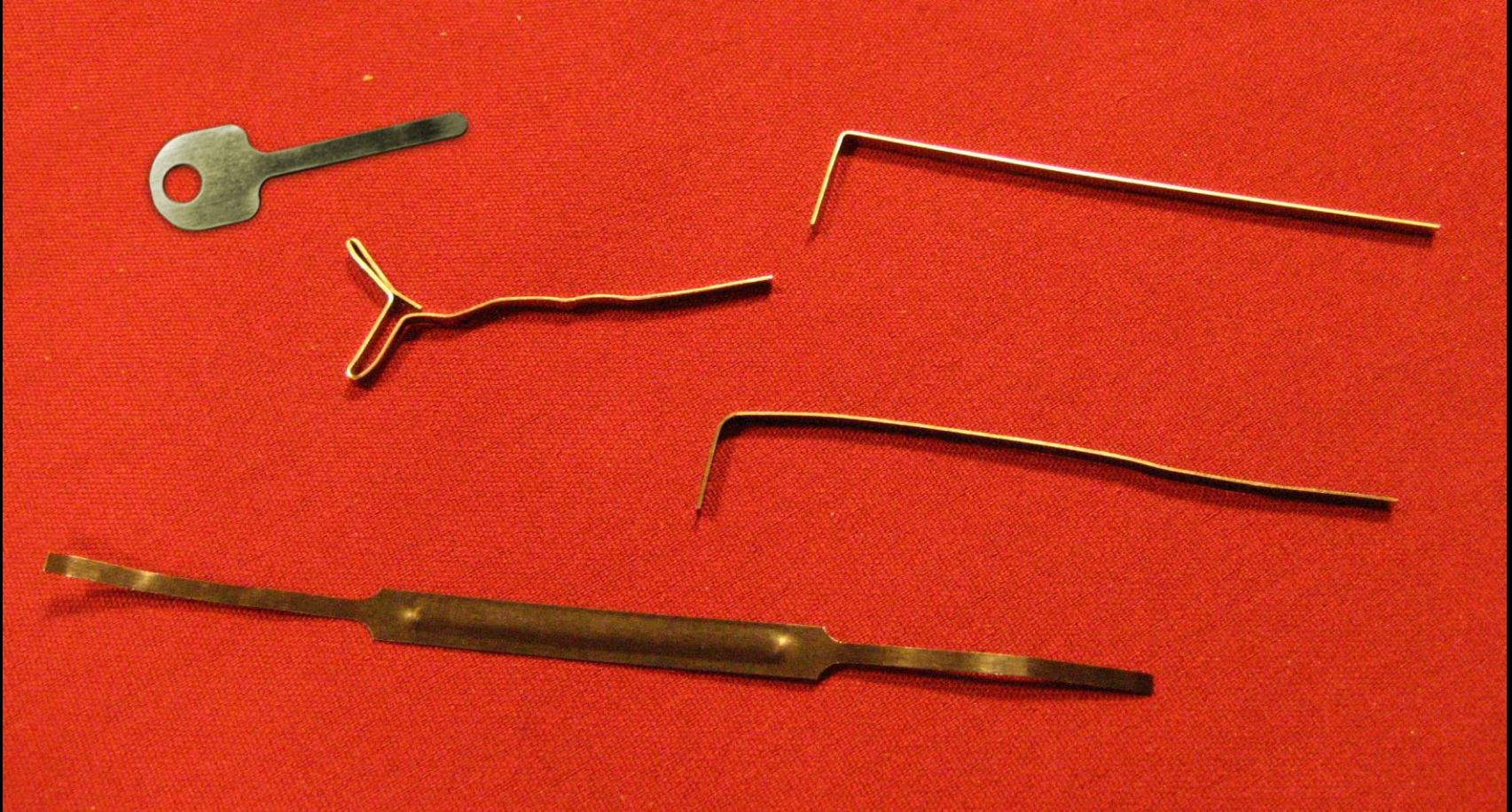
## Escape Demos





# Escaping Handcuffs

## Shimming





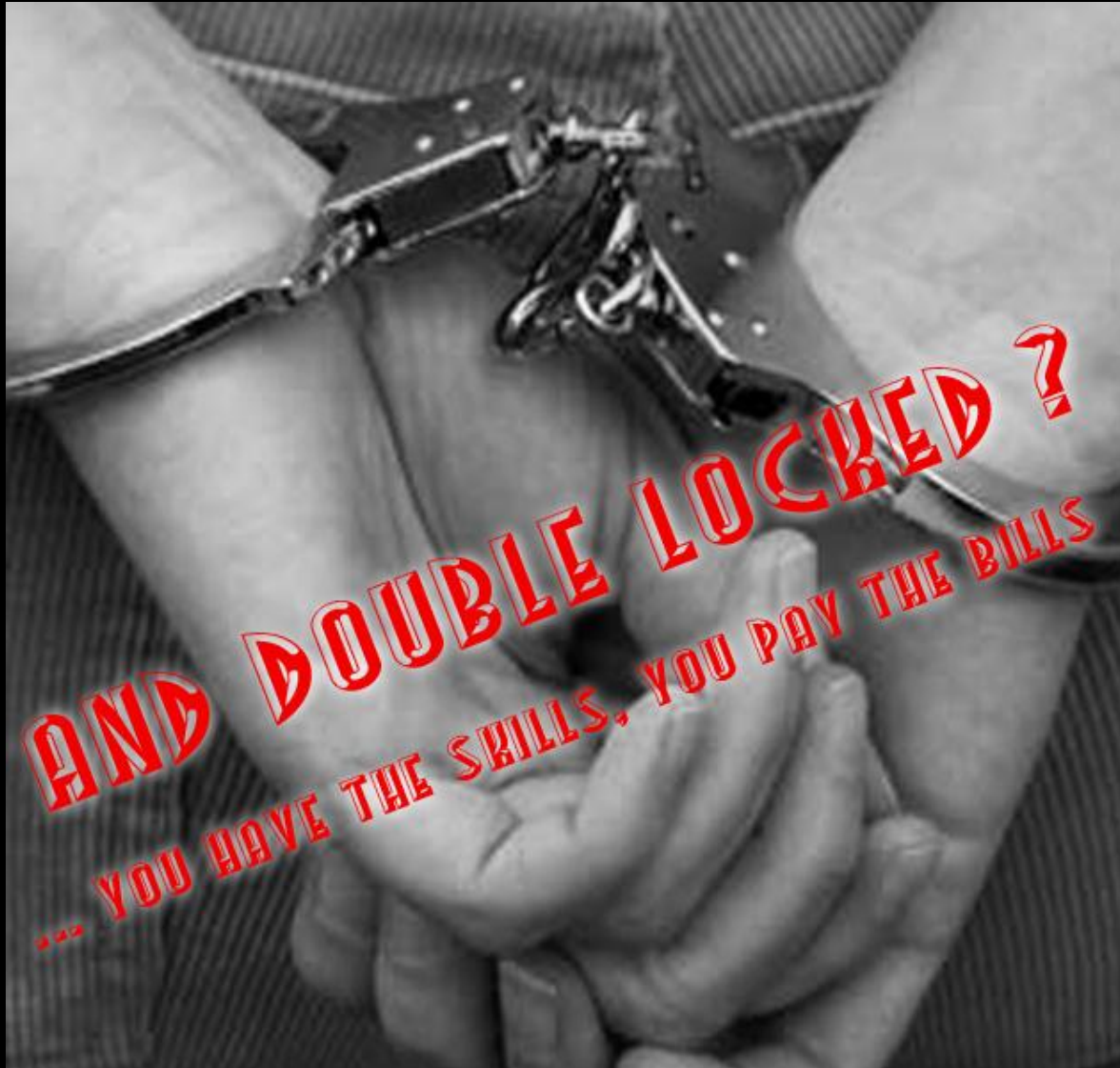
# Escaping Handcuffs

More Escape Demos



# Escaping Handcuffs

More Escape Demos



# Escaping Handcuffs

My Favorite Escape Video Ever...





17:00

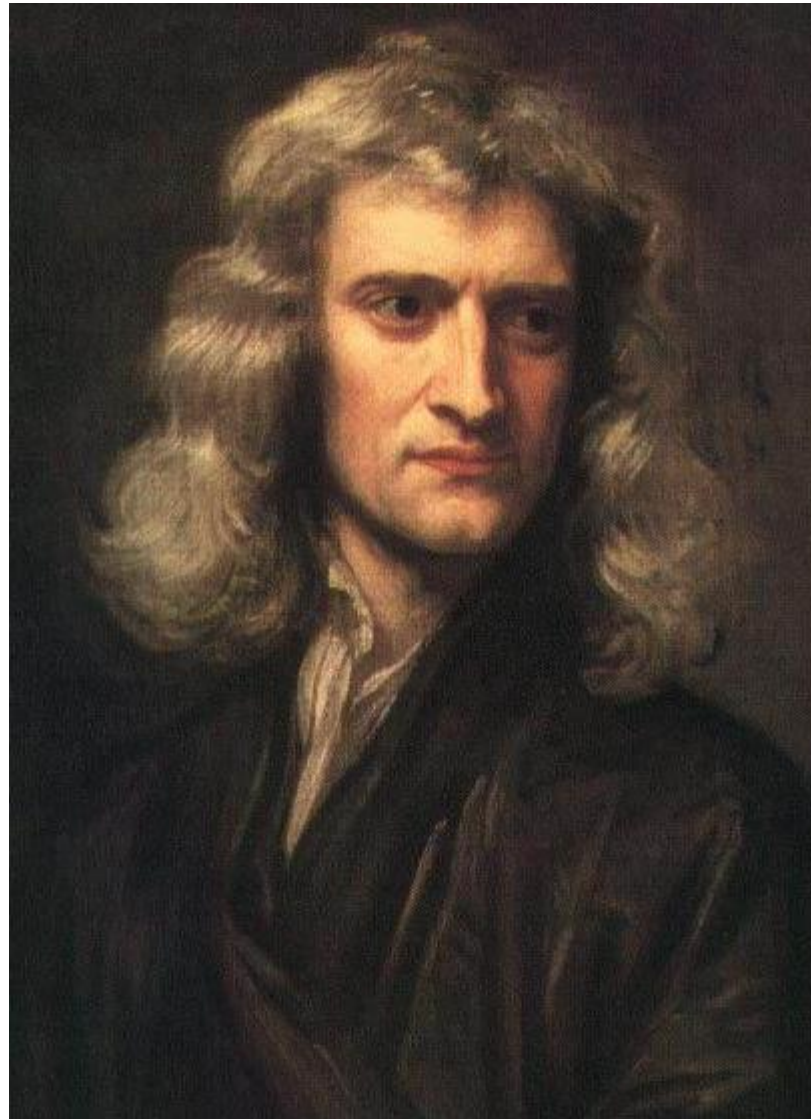
# About That Double Lock...



# About that Double-Lock



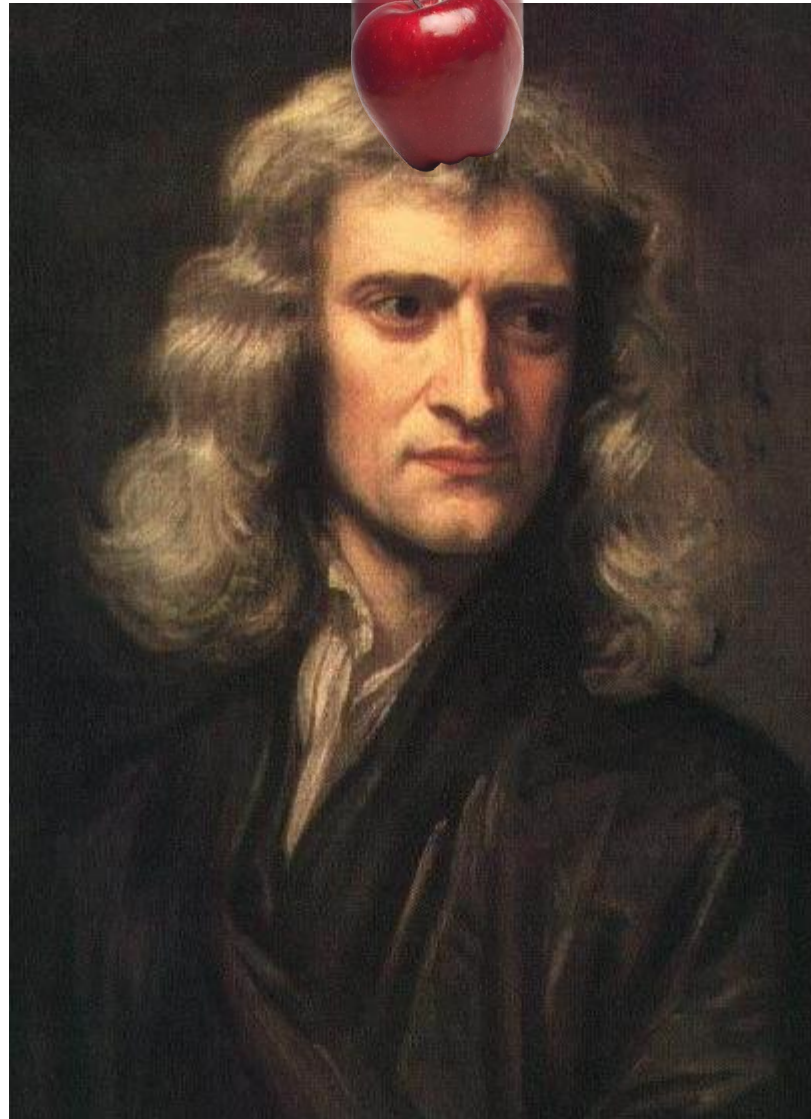
# About that Double-Lock...



*Tran*



# About that Double-Lock...



# About that Double-Lock...

## The “Whack Attack”



# About that Double-Lock...

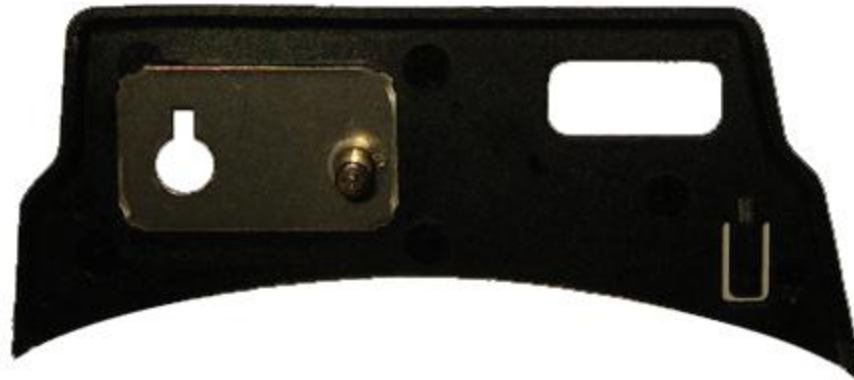
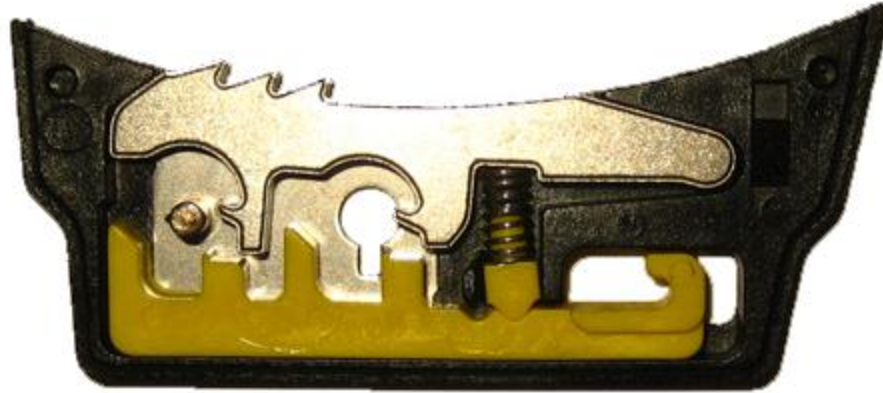
## ASP Handcuffs





# About that Double-Lock...

## ASP Handcuffs



# About that Double-Lock...

## Yuil Handcuffs



# “High Security” Through Keys?

Medeco or ASSA Desmo

Peerless





# About that Double-Lock...

## Clejuso German Police Issue Cuffs



# Heavy Duty Handcuffs

## Clejuso Police Cuffs



# A Korean “High Security” Cuff

Kyong Chang





# A Korean “High Security” Cuff

Kyong Chang



# Better Quality “Typical” Cuffs



# Basic Shim & Pick Resistance

Tighter Tolerances

Peerless, Smith & Wesson, Republic Arms, Safariland





# Higher Security in “Typical” Cuffs



# Better Quality Cuffs

Multiple Pawls – Hiatts/Safariland, ASP, Chicago, etc.



# Better Quality Cuffs

## Multiple Pawls – Kyoung Chang





# Better Quality Cuffs

## Multiple Pawls and Blocking Blades - Yuil



# Better Quality Cuffs

Multiple Pawls and Blocking Blades - Yuil



# Better Quality Cuffs

## Multiple Pawls and Blocking Blades - Yuil





# Better Quality Cuffs

## Multiple Pawls and Blocking Blades - Yuil



# Better Quality Cuffs

## Multiple Pawls and Blocking Blades - Yuil



# Better Quality Cuffs

## Multiple Pawls and Blocking Blades - Yuil





# Better Quality Cuffs

## Multiple Pawls and Blocking Blades - Yuil



# Better Quality Cuffs

CP & DC949



# Better Quality Cuffs

Phil801 & OnPoint Tactical





# Better Quality Cuffs

Phil801 & OnPoint Tactical





# Better Quality Cuffs

Phil801 & OnPoint Tactical



# Better Quality Cuffs

Crazy Fucking Shit - Latest Generation Yuil



# Better Quality Cuffs

Crazy Fucking Shit - Latest Generation Yuil





# Better Quality Cuffs

Crazy Fucking Shit - Latest Generation Yuil



# Better Quality Cuffs

Crazy Fucking Shit - Latest Generation Yuil



# One More Handcuff Defeat...





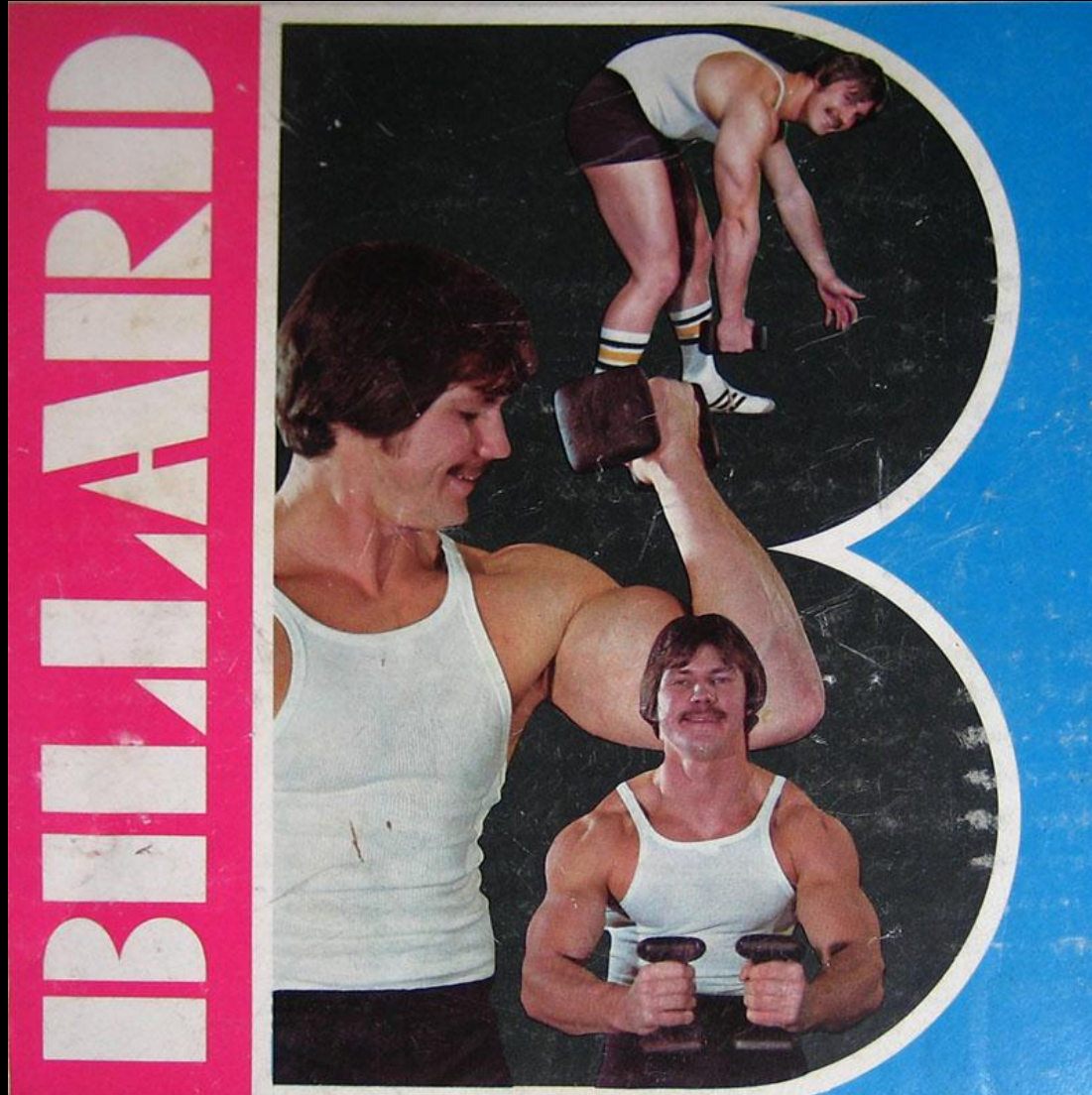
# Handcuff Breaking

Kelly Alwood - Another Fellow from OnPoint Tactical



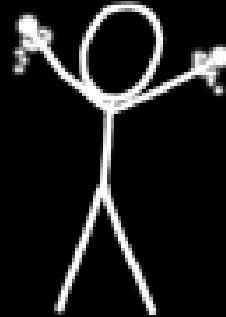
# Handcuff Breaking

You Don't Need to be This Guy



It's all Just Physics...

**STAND BACK**



**I'M GOING TO TRY  
SCIENCE**

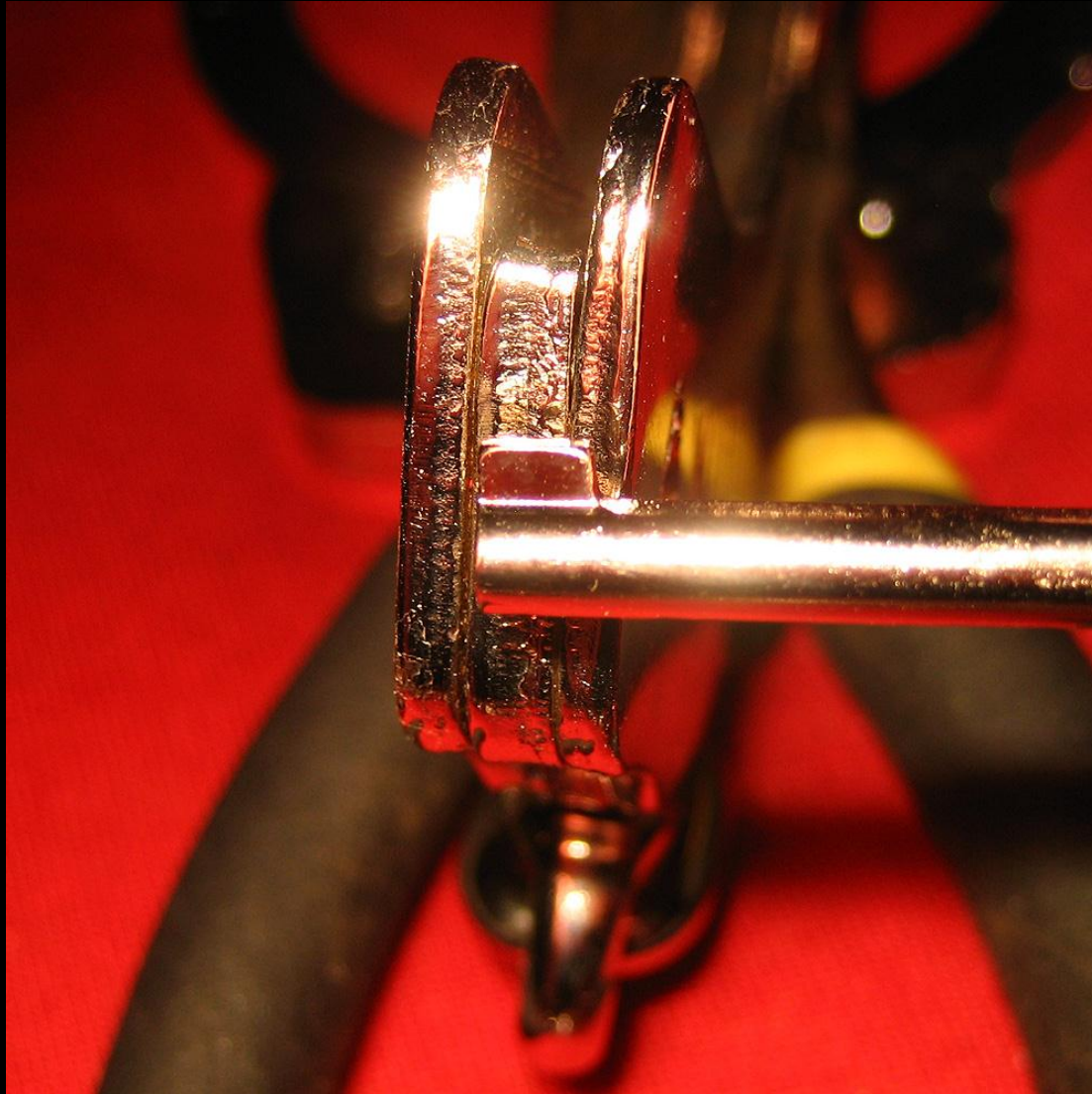


# Variations in Design Cause Trouble



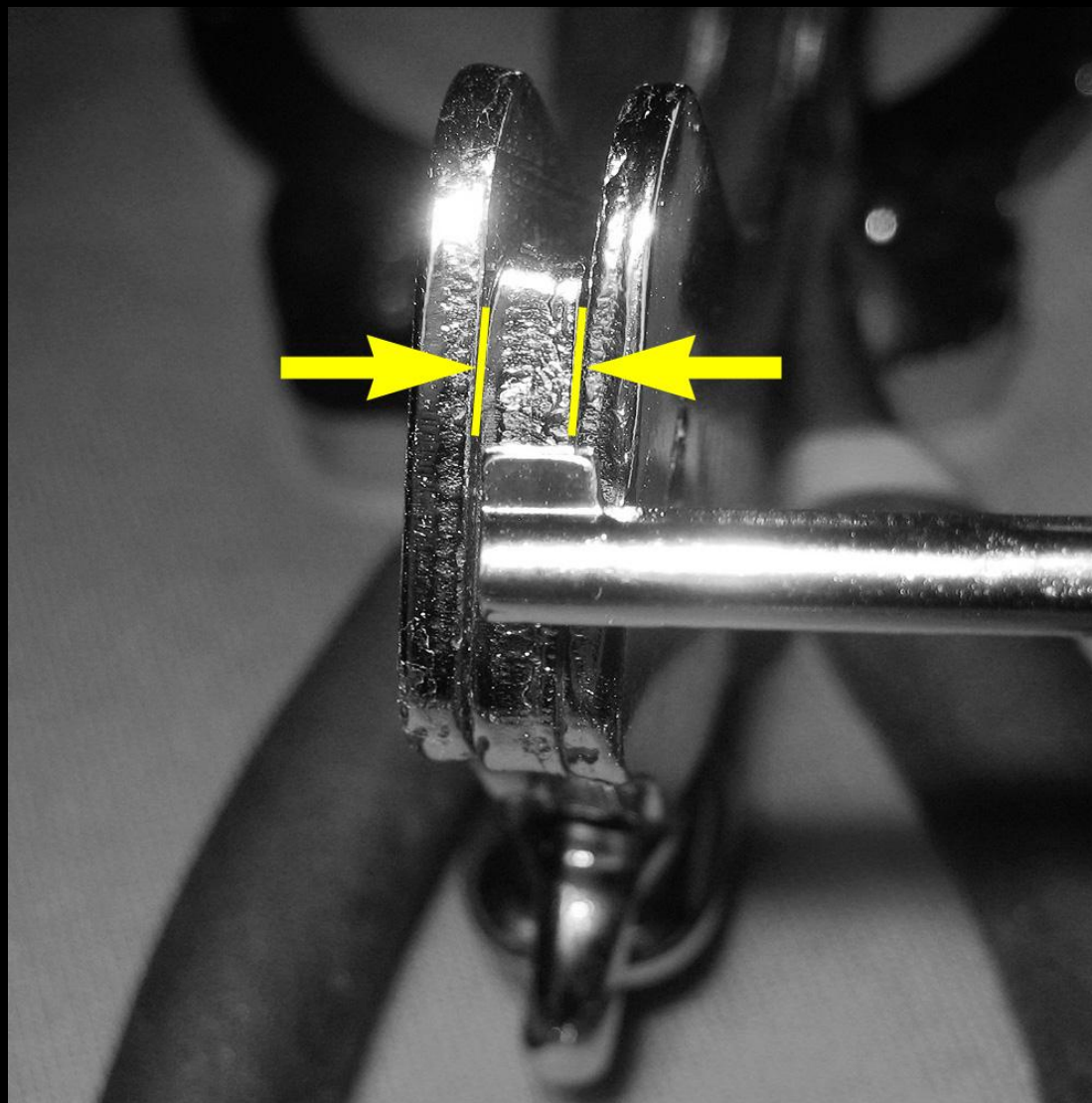
# Consider Valor Brand Handcuffs

Body is very narrow...



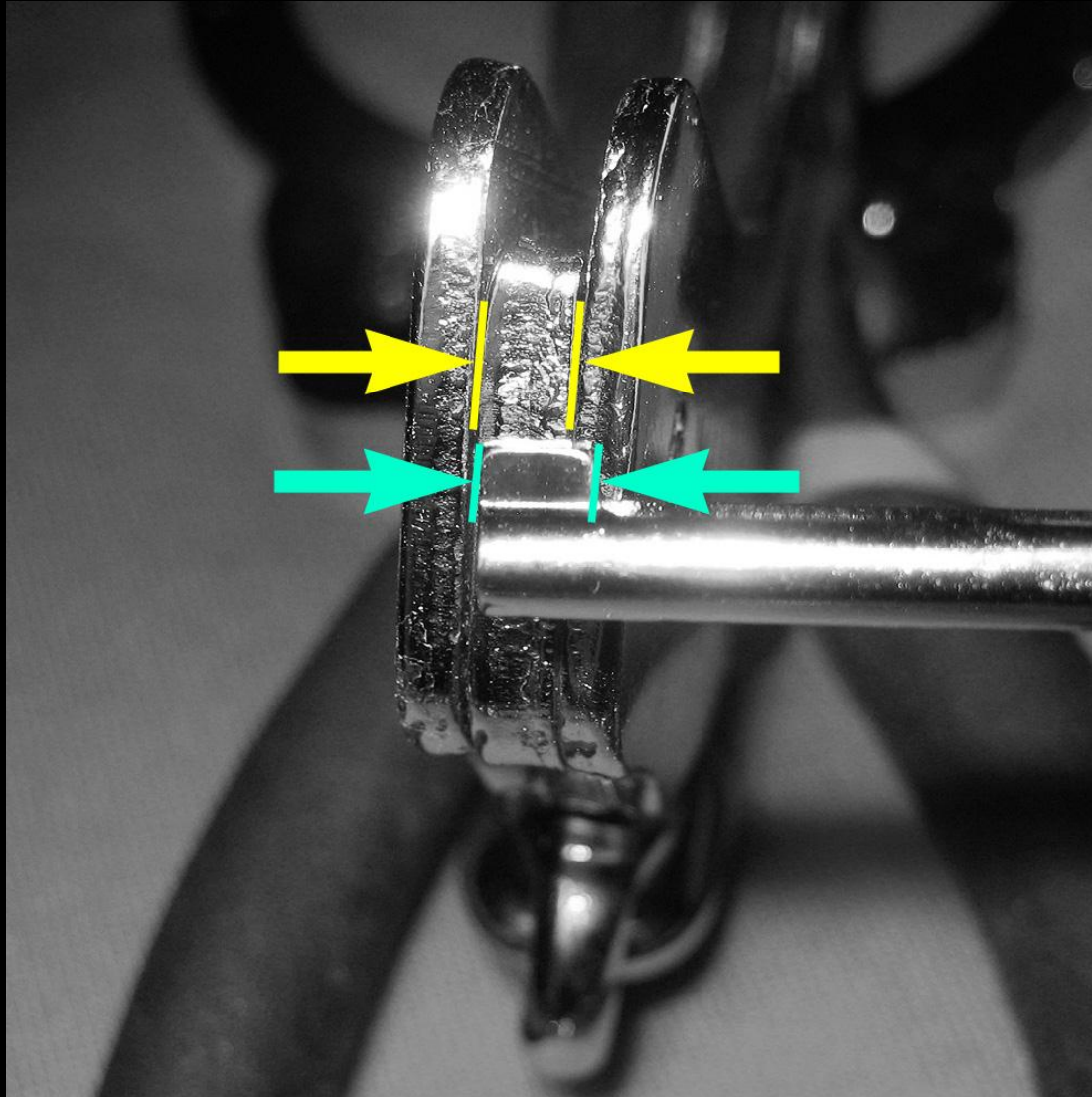
# Consider Valor Brand Handcuffs

Body is very narrow...



# Consider Valor Brand Handcuffs

Body is very narrow... Typical keys are too wide at the blade





# Narrow Handcuffs ?

## One Proposed Solution... Narrower Keys

**The Ultimate Source for Restraints**

[Home](#) » [Handcuff Keys](#)

### Handcuff Keys

We stock Smith & Wesson handcuff keys, Peerless handcuff keys, Hiatt handcuff keys, ASP handcuff keys, Safariland handcuff keys, and much more. We stock handcuff keys for all of the handcuffs we sell.



Results Per Page: [12](#) [24](#) [View All 66](#)

	<a href="#">American Universal Handcuff Key</a> Our price: <b>\$0.77</b>		<a href="#">Smith &amp; Wesson Standard Handcuff Key</a> Our price: <b>\$1.50</b>
	<a href="#">Smith &amp; Wesson Model 104K Max Security Handcuff Key</a> Our price: <b>\$3.39</b>		<a href="#">Peerless Standard Handcuff Key</a> Our price: <b>\$1.25</b>
	<a href="#">Peerless Oversized Handcuff Key</a> Our price: <b>\$8.99</b>		<a href="#">Hiatts Model SK5 Swivel Handcuff Key</a> Our price: <b>\$5.80</b>

<http://www.handcuffwarehouse.com/American-Handcuff-Key.html>

# Narrow Handcuffs ?

## One Proposed Solution... Narrower Keys



The screenshot shows a Mozilla Firefox browser window displaying the website <http://www.handcuffwarehouse.com/handcuffkeys1.html>. The page title is "Handcuff Keys - Mozilla Firefox". The browser's address bar shows the URL. The website content includes a navigation menu on the left with categories like "ASP Handcuffs", "Chicago Handcuff Company", "The Grip Restraint System", "Hiatt Handcuffs", "Humane Restraint", "Peerless Handcuff Company", "Pose:", "Ripp", "Safar", "Smith", "Thon", "(Hiat", "Wind", "Inter", "High", "Leg I", "Rest", "Gang", "Thun", "Dispo", "Handcuff Keys", "Handcuff Cases", "Zak Tool", "Accessories", "Training/Books/Videos", "Gold Handcuffs", "Darby Style Restraints", "Discontinued Items", and "What's New". The main content area features the heading "The Ultimate Source for Restraints" and "Handcuff Keys". A large product listing for "American Universal Handcuff Key" is highlighted with a white box, showing an image of the key and the price "Our price: \$0.77". Other product listings include "Handcuff Key" for \$3.39, "Peerless Oversized Handcuff Key" for \$8.99, and "Hiatts Model SK5 Swivel Handcuff Key" for \$5.80. The browser's status bar at the bottom shows the URL <http://www.handcuffwarehouse.com/American-Handcuff-Key.html>, system icons, and the date and time "32° F | 06%".

# Remember the Kyoung Chang?

Multiple Pawls, Typical Keys are Too Narrow



# So, We Had an Idea ...





# We Had An Idea...

Last TOOOL New Jersey meeting of 2009



# We Had An Idea...

We all brought our cuffs





# We Had An Idea...

We all brought our cuffs





# We Had An Idea...

We also had a lot of keys





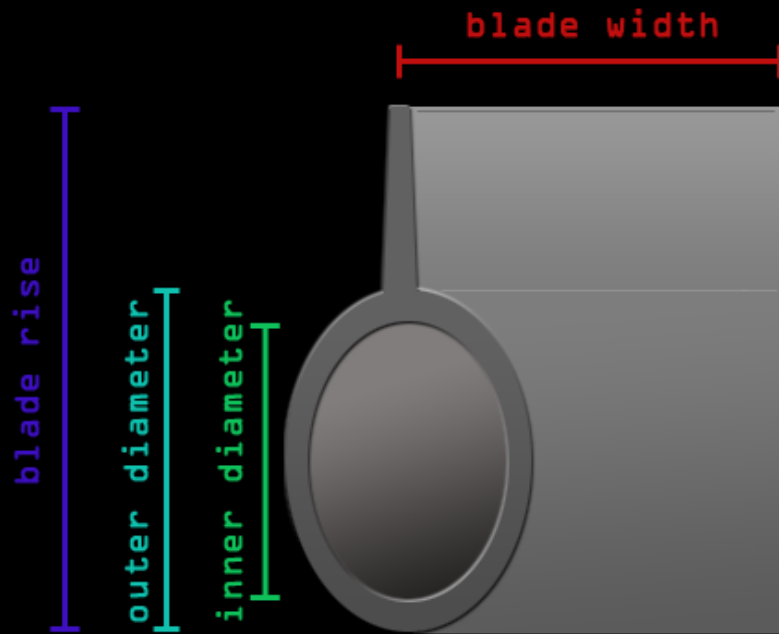
# We Had An Idea...

We started taking measurements



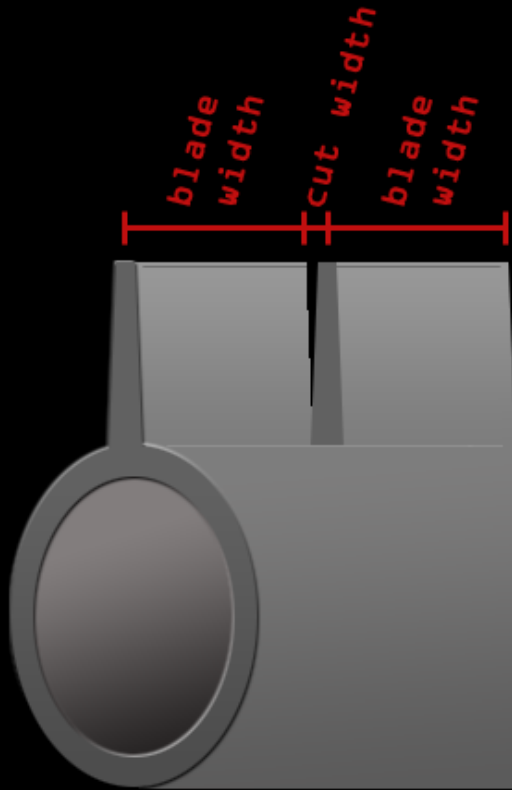
# We Had An Idea...

Four typical key properties



# We Had An Idea...

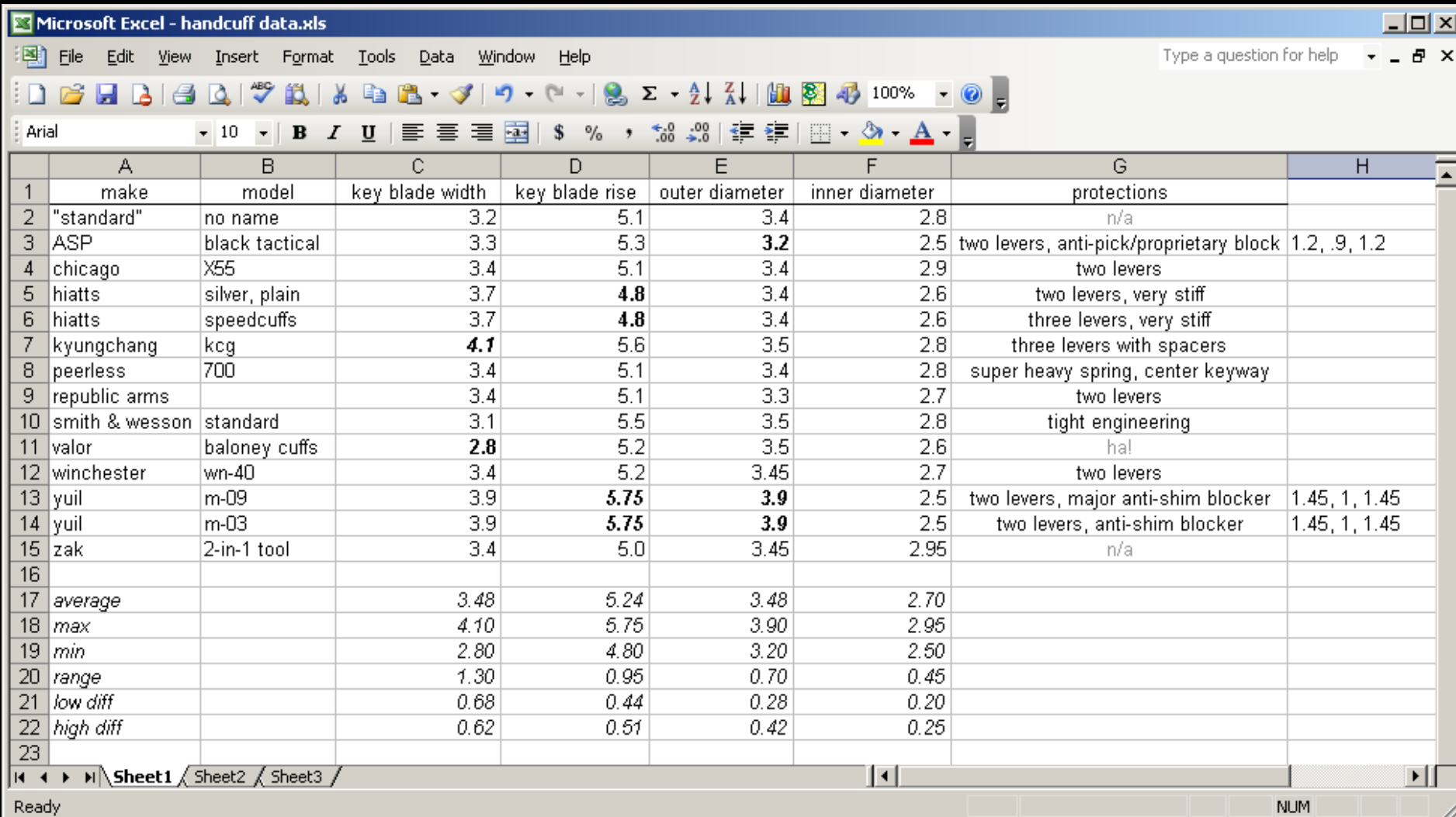
Split keys have some additional measurements





# What Did We Create ?

i made full table of all cuff and key sizes, highlighting outliers



Microsoft Excel - handcuff data.xls

Type a question for help

File Edit View Insert Format Tools Data Window Help

Arial 10 B I U

	A	B	C	D	E	F	G	H
1	make	model	key blade width	key blade rise	outer diameter	inner diameter	protections	
2	"standard"	no name	3.2	5.1	3.4	2.8	n/a	
3	ASP	black tactical	3.3	5.3	<b>3.2</b>	2.5	two levers, anti-pick/proprietary block	1.2, .9, 1.2
4	chicago	X55	3.4	5.1	3.4	2.9	two levers	
5	hiatts	silver, plain	3.7	<b>4.8</b>	3.4	2.6	two levers, very stiff	
6	hiatts	speedcuffs	3.7	<b>4.8</b>	3.4	2.6	three levers, very stiff	
7	kyungchang	kcg	<b>4.1</b>	5.6	3.5	2.8	three levers with spacers	
8	peerless	700	3.4	5.1	3.4	2.8	super heavy spring, center keyway	
9	republic arms		3.4	5.1	3.3	2.7	two levers	
10	smith & wesson	standard	3.1	5.5	3.5	2.8	tight engineering	
11	valor	baloney cuffs	<b>2.8</b>	5.2	3.5	2.6	hal	
12	winchester	wn-40	3.4	5.2	3.45	2.7	two levers	
13	yuil	m-09	3.9	<b>5.75</b>	<b>3.9</b>	2.5	two levers, major anti-shim blocker	1.45, 1, 1.45
14	yuil	m-03	3.9	<b>5.75</b>	<b>3.9</b>	2.5	two levers, anti-shim blocker	1.45, 1, 1.45
15	zak	2-in-1 tool	3.4	5.0	3.45	2.95	n/a	
16								
17	average		3.48	5.24	3.48	2.70		
18	max		4.10	5.75	3.90	2.95		
19	min		2.80	4.80	3.20	2.50		
20	range		1.30	0.95	0.70	0.45		
21	low diff		0.68	0.44	0.28	0.20		
22	high diff		0.62	0.51	0.42	0.25		
23								

Sheet1 Sheet2 Sheet3

Ready NUM

# So, Is There an “Ideal” Key ?



# Yes!

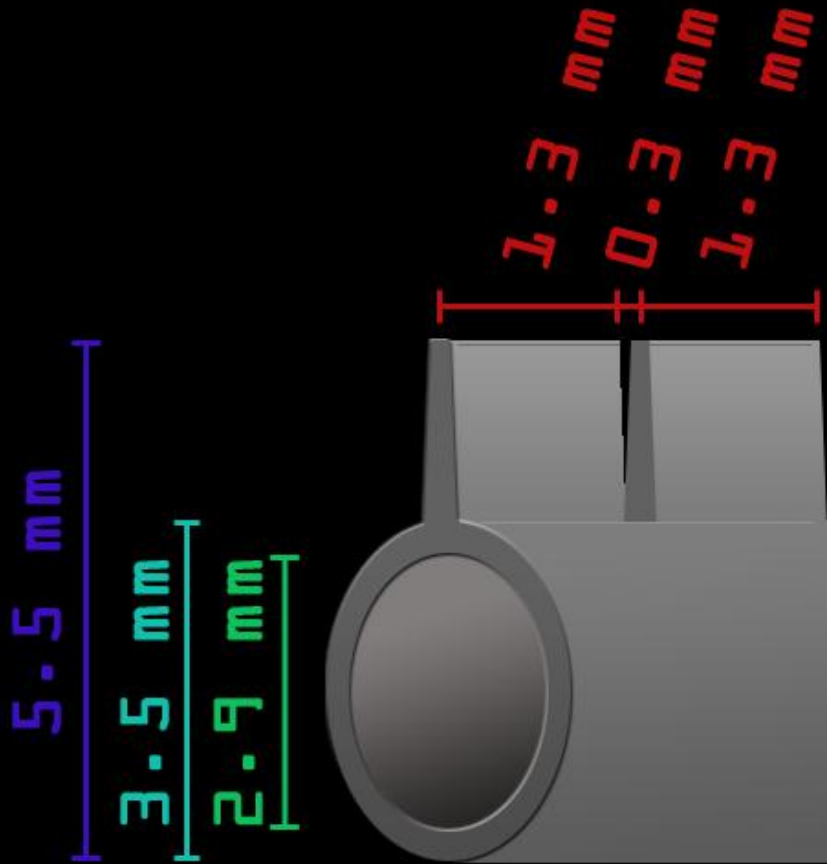




# The "Ultimate" Handcuff Key



# The "Ultimate" Handcuff Key



# The “Ultimate” Handcuff Key

TOOOL did all the research



# The “Ultimate” Handcuff Key

TOOOL holds the patent





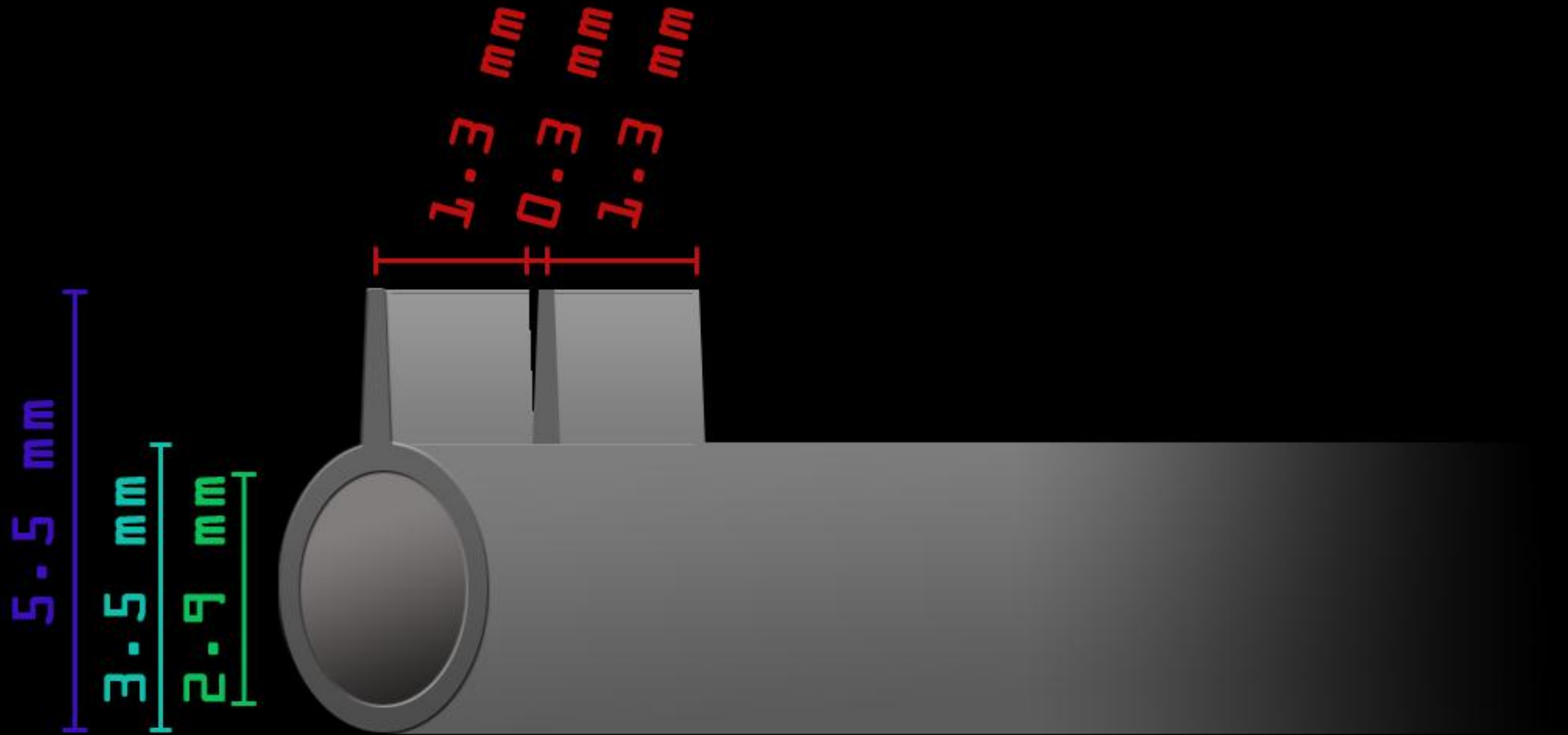
# The “Ultimate” Handcuff Key

TOOOL has no objection to personal fair use



# The “Ultimate” Handcuff Key

So, what’s the easiest way to fabricate this yourself ?



# The “Ultimate” Handcuff Key

So, what’s the easiest way to fabricate this yourself ?

make	model	key blade width	key blade rise	outer diameter	inner diameter
"standard"	no name	3.2	5.1	3.4	2.8
ASP	black tactical	3.3	5.3	<b>3.2</b>	2.5
chicago	X55	3.4	5.1	3.4	2.9
hiatts	silver, plain	3.7	<b>4.8</b>	3.4	2.6
hiatts	speedcuffs	3.7	<b>4.8</b>	3.4	2.6
kyungchang	kcg	<b>4.1</b>	5.6	3.5	2.8
peerless	700	3.4	5.1	3.4	2.8
republic arms	folding	3.4	5.1	3.3	2.7
smith & wesson	standard	3.1	5.5	3.5	2.8
valor	baloney cuffs	<b>2.8</b>	5.2	3.5	2.6
winchester	wn-40	3.4	5.2	3.45	2.7
yuil	m-09	3.9	<b>5.75</b>	<b>3.9</b>	2.5
yuil	m-03	3.9	<b>5.75</b>	<b>3.9</b>	2.5
zak	2-in-1 tool	3.4	5.0	3.45	2.95
	<b>ultimate key...</b>				

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	<b>ultimate key...</b>	<b>2.9 mm blade</b>			



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	<b>ultimate key...</b>	<b>2.9 mm blade</b>	<b>5.5 mm rise</b>	<b>3.5 mm</b>	<b>2.9 mm</b>







THANK YOU!



[HTTP://TOOOL.US](http://TOOOL.US)

[HTTP://DEVIATING.NET](http://DEVIATING.NET)



[HTTP://TOOOL.US](http://TOOOL.US)

[HTTP://DEVIATING.NET](http://DEVIATING.NET)





*catch you on the  
other side...*

*and in the  
Lockpick  
Village...*

*... see you  
next year!*