

1

00:00:00,000 --> 00:00:05,000

Please, don't try anything that you're about to see us do at home. Ever.

2

00:00:30,000 --> 00:00:34,000

Fire Liar pants on fire. You're not a thief, right? No. Good.

3

00:00:34,000 --> 00:00:42,000

When Carrie Grantontori embark on some crime and punishment to test mythical ways of beating the lie detector.

4

00:00:42,000 --> 00:00:44,000

Yes! Yes! Yes!

5

00:00:47,000 --> 00:00:51,000

Who are the misbusters? It's time to blow some stuff up!

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00:00:51,000 --> 00:00:55,000

Adam Savage and Jamie Heineman.

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00:00:55,000 --> 00:00:57,000

That was fun.

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00:00:57,000 --> 00:01:01,000

Between them more than 30 years of special effects experience.

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00:01:01,000 --> 00:01:03,000

This is the kind of thing I do on the weekend.

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00:01:03,000 --> 00:01:06,000

Joining them, Carrie Byron.

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00:01:06,000 --> 00:01:08,000

Come over here, you smell that?

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00:01:08,000 --> 00:01:09,000

Grant Imahara.

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00:01:09,000 --> 00:01:10,000

He's alive!

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00:01:10,000 --> 00:01:12,000

And Tori Bellachy.

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00:01:12,000 --> 00:01:14,000

This is starting to feel like a bad idea.

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00:01:14,000 --> 00:01:19,000

They don't just tell them this, they put them to the test.

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00:01:27,000 --> 00:01:38,000

Suck your gut in there, soldier. I detect a Civil War myth on the way.

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00:01:38,000 --> 00:01:42,000

Sir, that's correct, sir! I'd like you to picture the following in your head.

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00:01:42,000 --> 00:01:47,000

In the Civil War, the main thing they used for all their cannons and their guns was Blackpattern,

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00:01:47,000 --> 00:01:50,000

but the Confederate Army was running on the Blackpattern towards the end of the Civil War

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00:01:50,000 --> 00:01:55,000

and so decided to design a steam-powered machine gun, sir!

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00:01:55,000 --> 00:01:59,000

Well, hold on a second. Haven't we already been down that road with steam cannons?

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00:01:59,000 --> 00:02:00,000

They didn't work too well.

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00:02:00,000 --> 00:02:03,000

Sir, that's correct! We did build a steam cannon, sir!

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00:02:03,000 --> 00:02:05,000

But this is not a cannon powered by pressure!

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00:02:05,000 --> 00:02:09,000

This is a machine gun powered centrifugally by a spinning disk that flings the projectile

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00:02:09,000 --> 00:02:13,000

like a slingshot out of the gun that's up to us to build one, sir!

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00:02:13,000 --> 00:02:15,000

Gee, that sounds like fun.

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00:02:15,000 --> 00:02:18,000

Stand easy, Private Savage. There's a graphic coming.

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00:02:18,000 --> 00:02:24,000

Modern machine guns work using explosive force to fire bullets at a rapid rate.

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00:02:24,000 --> 00:02:29,000

But incredibly, this Civil War gun worked more like a slingshot.

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00:02:29,000 --> 00:02:33,000

A slingshot uses centrifugal force to propel a projectile.

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00:02:33,000 --> 00:02:37,000

Replace the sling with a barrel, an atom with a steam engine,

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00:02:37,000 --> 00:02:41,000

and you've got yourself a mythical steam machine gun.

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00:02:41,000 --> 00:02:44,000

You know, machine guns are complicated. This is going to be a tough build.

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00:02:44,000 --> 00:02:47,000

Yeah, and right now there are way too many unknowns.

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00:02:47,000 --> 00:02:50,000

We don't even know if this thing existed, let alone if there are any plans,

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00:02:50,000 --> 00:02:53,000

if it was ever used in battle or if it was just some propaganda machine.

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00:02:53,000 --> 00:02:57,000

Yeah, we can't just go inventing something. We need more information about it.

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00:02:57,000 --> 00:03:01,000

More facts is what I've got for you, because the researchers have gotten us a Civil War expert,

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00:03:01,000 --> 00:03:05,000

specifically on this gun. I'm going to go talk to him, find out what he knows,

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00:03:05,000 --> 00:03:08,000

and that should give us a real leg up to getting started.

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00:03:08,000 --> 00:03:09,000

Okay.

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00:03:12,000 --> 00:03:16,000

Down at Fort Point in the foggy shadow of the Golden Gate Bridge,

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00:03:16,000 --> 00:03:20,000

Adam meets Civil War weaponry expert John Lamb,

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00:03:20,000 --> 00:03:24,000

who hasn't just heard of the mythical device, he's studied it.

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00:03:24,000 --> 00:03:27,000

Tell me about this thing. Tell me everything. Tell me everything.

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00:03:27,000 --> 00:03:31,000

The most important place to start is the one in Steam Gun. It did exist.

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00:03:31,000 --> 00:03:33,000

It's a real device. It did exist.

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00:03:33,000 --> 00:03:39,000

And he's brought along the original plans to prove there's nothing mythical about this gun,

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00:03:39,000 --> 00:03:41,000

which begs the question,

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00:03:41,000 --> 00:03:44,000

Now, can you tell me how it actually worked?

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00:03:44,000 --> 00:03:50,000

The best way to describe it for you is a barrel with the opening at the top,

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00:03:50,000 --> 00:03:53,000

and then it comes down in a curve and goes out like this.

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00:03:53,000 --> 00:03:58,000

So as it turned around, it would snap one piece of shot out, keep going, do another.

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00:03:58,000 --> 00:04:01,000

How lethal was this thing? And how fast could it fire?

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00:04:01,000 --> 00:04:03,000

That's the big mystery.

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00:04:03,000 --> 00:04:08,000

There are accounts saying it was tested and it seemed to be really deadly.

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00:04:08,000 --> 00:04:11,000

There are others that say it never worked and nobody could prove it.

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00:04:11,000 --> 00:04:12,000

So that's a big mystery.

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00:04:12,000 --> 00:04:17,000

So now that Adam and Jamie know the gun existed, their task is to build it

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00:04:17,000 --> 00:04:22,000

and get to the bottom of the disparate accounts of how effective it was.

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00:04:24,000 --> 00:04:30,000

And back at HQ, they begin by brainstorming to bring the original plans back to life.

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00:04:30,000 --> 00:04:34,000

You know, Adam, I think we need to break this down into the discrete parts.

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00:04:34,000 --> 00:04:39,000

They finally get to grips with their mammoth task by boiling it down to four key components.

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00:04:39,000 --> 00:04:41,000

The gun barrel.

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00:04:41,000 --> 00:04:44,000

Okay, so the business end is a curved barrel there.

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00:04:44,000 --> 00:04:45,000

Yeah.

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00:04:45,000 --> 00:04:47,000

A method of feeding ammo into the gun.

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00:04:47,000 --> 00:04:50,000

We're going to use a hollow axle to feed the ammo in.

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00:04:50,000 --> 00:04:53,000

A motor to spin the gun barrel.

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00:04:53,000 --> 00:04:59,000

The first thing that comes to mind for me is an air tool impeller.

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00:04:59,000 --> 00:05:03,000

At easiest of all, steam to power the motor.

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00:05:03,000 --> 00:05:05,000

Why don't we get a water heater?

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00:05:05,000 --> 00:05:07,000

Which leaves just one question.

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00:05:07,000 --> 00:05:09,000

What are we going to use for ammo?

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00:05:09,000 --> 00:05:11,000

I think we should go with steel balls.

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00:05:11,000 --> 00:05:12,000

This is going to be terrifying.

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00:05:12,000 --> 00:05:13,000

Good. We've got a plan.

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00:05:13,000 --> 00:05:15,000

I totally agree. Let's get to it.

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00:05:16,000 --> 00:05:22,000

So after a category five brainstorm, the guys have a plan, which looks a lot like this.

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00:05:22,000 --> 00:05:27,000

Two water heaters will generate steam, driving two motors.

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00:05:27,000 --> 00:05:32,000

These in turn will spin the curved gun barrel at 2,000 RPM.

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00:05:32,000 --> 00:05:38,000

A clockwork ammo feeder will drop the ball, and the centrifugal force will fling it out the barrel.

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00:05:38,000 --> 00:05:40,000

At least, that's the theory.

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00:05:40,000 --> 00:05:48,000

Because as this glimpse into the future confirms, this ballistic build will test the team's engineering skills to the limit.

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00:05:48,000 --> 00:05:50,000

I've never heard anything like that.

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00:05:50,000 --> 00:05:56,000

And provide another frightening example of just how dangerous being a myth buster can be.

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00:05:56,000 --> 00:05:58,000

But all that's for later.

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00:05:58,000 --> 00:06:04,000

First up is the spinning, flinging heart of the steam machine gun, the curved barrel.

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00:06:04,000 --> 00:06:09,000

Unlike the Confederates, Jamie has access to some impressive 21st century technology.

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00:06:09,000 --> 00:06:14,000

But throughout the process, the guys plan to stick to the Civil War specs.

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00:06:15,000 --> 00:06:19,000

Well, so far so good. This is actually coming together quite nicely.

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00:06:19,000 --> 00:06:24,000

I got to say, while it doesn't look like a gun barrel, it's actually really quite terrifying.

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00:06:24,000 --> 00:06:26,000

Adam, check this out.

96

00:06:26,000 --> 00:06:30,000

So the bullet goes in there, and comes out here.

97

00:06:30,000 --> 00:06:31,000

It's working.

98

00:06:31,000 --> 00:06:32,000

That is so cool.

99

00:06:32,000 --> 00:06:36,000

Now imagine that spinning at 33 times a second.

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00:06:36,000 --> 00:06:40,000

And you can see why this ballistic build is making everyone nervous.

101

00:06:40,000 --> 00:06:43,000

Yeah, I know it's fun. Let me get back to work.

102

00:06:54,000 --> 00:06:59,000

So, Carrie, have I ever told you that I sing in Adam's band the ginger tops twice a month?

103

00:06:59,000 --> 00:07:00,000

No.

104

00:07:00,000 --> 00:07:06,000

And also, he was voted in Germany the sexiest TV star, second only to David Hasselhoff.

105

00:07:06,000 --> 00:07:07,000

No.

106

00:07:07,000 --> 00:07:11,000

Have I told you that I was a small wookie in Star Wars Episode 3?

107

00:07:11,000 --> 00:07:14,000

No, you didn't because I would have seen you because I was a small wookie.

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00:07:14,000 --> 00:07:18,000

Now you get it. We're lying. You know why?

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00:07:18,000 --> 00:07:19,000

No.

110

00:07:19,000 --> 00:07:23,000

Because the fans have asked us to test out mythical ways to beat the polygraph machine.

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00:07:23,000 --> 00:07:29,000

Once we're done with that, we're going to go up against the latest in lie detecting technology, the fMRI.

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00:07:30,000 --> 00:07:33,000

Awesome. I haven't been this excited since my last cage match.

113

00:07:33,000 --> 00:07:35,000

Yeah, I want a rematch.

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00:07:37,000 --> 00:07:41,000

Oh, and Lighty, the polygraph has been shrouded in controversy.

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00:07:41,000 --> 00:07:50,000

Some say it's infallible, but the Mythbuster fansites are awash with claims it can be beat first time every time.

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00:07:50,000 --> 00:07:54,000

Okay, mythical ways to beat the polygraph. How are we going to do this?

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00:07:54,000 --> 00:07:57,000

Well, it sounds like there's two different ways to beat the polygraph machine.

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00:07:57,000 --> 00:07:59,000

And that's physical and mental.

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00:07:59,000 --> 00:08:04,000

Now the physical, you apply pain while you're telling the truth, whether you're biting on your tongue or stepping on a tack.

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00:08:04,000 --> 00:08:09,000

So that way when you're telling the lie, it seems like you're relaxed and they think you're telling the truth.

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00:08:09,000 --> 00:08:15,000

And the mental way is to think of very stressful thoughts while you are telling the truth.

122

00:08:15,000 --> 00:08:19,000

And when you tell a lie, you think of very happy thoughts.

123

00:08:19,000 --> 00:08:24,000

Well, we've used a polygraph before, but we are not remotely qualified to do it for something this serious.

124

00:08:24,000 --> 00:08:29,000

I think we need to find an expert, somebody who works with the police or the FBI or something.

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00:08:29,000 --> 00:08:35,000

Well, we have a few friends in law enforcement. Let's go down to the South San Francisco PD and ask them for a few tips.

126

00:08:37,000 --> 00:08:40,000

So first up, it's off to the cop shop.

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00:08:40,000 --> 00:08:48,000

Because if they're going to test techniques to beat the lie detector, they want to know the optimum conditions for a real polygraph test.

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00:08:48,000 --> 00:08:53,000

Lieutenant Varney's recipe for polygraph success has four key ingredients.

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00:08:53,000 --> 00:08:59,000

Two long hours in a sterile, distraction-free location cover the first two.

130

00:08:59,000 --> 00:09:06,000

The third issue is that is of bias. We really don't want the examiner to meet our subject before the test.

131

00:09:06,000 --> 00:09:10,000

So far so good, but it's the final factor that's the most critical of all.

132

00:09:10,000 --> 00:09:15,000

It needs to be a big lie. It needs to be a reward versus punishment aspect to it.

133

00:09:15,000 --> 00:09:19,000

If you wanted an accurate test of this, you would need to commit a crime.

134

00:09:19,000 --> 00:09:28,000

It slowly dawns on the guys. If they want to test this myth properly, they'll have to actually commit a crime.

135

00:09:28,000 --> 00:09:40,000

And that's because a lie detector works by measuring the physiological changes to the human body

associated with stress, including heart rate, blood pressure and sweat.

136

00:09:40,000 --> 00:09:49,000

So committing a crime with consequences stressful enough to sweat over is the only way to really put the polygraph through its paces.

137

00:09:49,000 --> 00:09:53,000

Back at the shop, the team begin by building the interrogation chamber.

138

00:09:53,000 --> 00:09:58,000

But remember, if you can't do the time, don't do the mime.

139

00:09:58,000 --> 00:10:07,000

Despite the clowning around, following Lieutenant Varney's advice, they've soon got the perfect location for their lie detector tests,

140

00:10:07,000 --> 00:10:10,000

including the obligatory two-way mirror.

141

00:10:10,000 --> 00:10:16,000

You ever get the feeling people are watching us work? All the time.

142

00:10:16,000 --> 00:10:21,000

Coming up on Metsbusters, we make a scene with Steve God!

143

00:10:22,000 --> 00:10:39,000

During the Civil War, the Confederates spurred on by dwindling gunpowder stores designed and built a steam machine gun.

144

00:10:39,000 --> 00:10:43,000

But did it actually work? And what was it capable of?

145

00:10:43,000 --> 00:10:49,000

Questions Adam and Jamie intend to answer by building their very own steam machine gun.

146

00:10:50,000 --> 00:10:52,000

That is so cool.

147

00:10:52,000 --> 00:10:59,000

Jamie has completed the crucial curved gun barrel, and he's welded it into the heavy-duty frame.

148

00:10:59,000 --> 00:11:01,000

Oh, that's lovely.

149

00:11:01,000 --> 00:11:05,000

What they need now is a motor to drive it.

150

00:11:05,000 --> 00:11:15,000

This is an air impact wrench, and because we're making a steam machine gun, I figure a good place to start is to use an air impeller and an air motor.

151

00:11:15,000 --> 00:11:24,000

Driven by compressed air, it's perfect, because after they incorporate it into their design, it can simply replace the air with steam power.

152

00:11:24,000 --> 00:11:32,000

Adam cuts a steel safety collar. It encircles the barrel of the gun, ensuring the bullets can exit in just one direction.

153

00:11:32,000 --> 00:11:40,000

And that means the guys are on track. The barrel is spinning smoothly, and the motor is firing at the target speed.

154

00:11:40,000 --> 00:11:45,000

The next component in this beast of a build is Adam's ammo feeder.

155

00:11:45,000 --> 00:11:51,000

This right here is the clockwork that will pace out the bullets being dropped into the barrel.

156

00:11:51,000 --> 00:11:59,000

So this complicated clockwork design can be dialed to drop the ammo into the rotating barrel at just the right moment.

157

00:11:59,000 --> 00:12:07,000

If it works, the bullet will be flung with maximum speed and in the correct direction.

158

00:12:07,000 --> 00:12:19,000

This, it may look like a simple clockwork, but I think of it as a map of the most complex clockwork.

159

00:12:19,000 --> 00:12:31,000

I like the planets. It is not a planetary gear, but I think of it as a planetary gear, because each thing, like a planet, moves in its place and goes where it should.

160

00:12:31,000 --> 00:12:39,000

It is not only a map of the planets, it is also a map of the atom. In this vein, the microcosm is the macrocosm.

161

00:12:39,000 --> 00:12:47,000

And phylogeny recapitulates ontology. I call it my orary.

162

00:12:47,000 --> 00:12:52,000

After fighting his lost marbles, Adam adds his masterpiece to the rig.

163

00:12:52,000 --> 00:12:54,000

This is real. It's working now.

164

00:12:54,000 --> 00:12:59,000

Which means the guys are ready to put the steam into their steam machine gun.

165

00:12:59,000 --> 00:13:09,000

And for that, they'll need a household hot water heater, a plumbing necessity the guys recently discovered as the explosive potential of a bomb.

166

00:13:09,000 --> 00:13:19,000

If the pressure is kept below the failure point of 350 psi, they should be ideal to power the gun.

167

00:13:19,000 --> 00:13:26,000

There's a lot of energy in steam and in water heaters, and that's why we're going to use one for this job.

168

00:13:26,000 --> 00:13:28,000

Perfect. That ought to do.

169

00:13:28,000 --> 00:13:35,000

And with the last nut, bolt and ballistic shield in place, the guys are finally ready for a test fire.

170

00:13:35,000 --> 00:13:39,000

Alright, I'm putting in one of our target bullets.

171

00:13:39,000 --> 00:13:46,000

So Adam feeds the ammo feeder, Jamie hits the power, and the water heaters are on the boil.

172

00:13:46,000 --> 00:13:53,000

But as the tanks heat up and the pressure increases, an eerie hum rings out over M5.

173

00:13:53,000 --> 00:13:55,000

What do you think that is?

174

00:13:55,000 --> 00:13:59,000

I have a clue. It seems to be coming out of this one more though.

175

00:13:59,000 --> 00:14:07,000

The boys are baffled, and while they search for the sound source, the pressure and heat slowly but surely rise.

176

00:14:07,000 --> 00:14:14,000

We've got water at 260 some odd degrees. It's at 167 psi. It's a huge amount of energy.

177

00:14:14,000 --> 00:14:19,000

But with a whole heap of homemade plumbing involved, there's an element of doubt.

178

00:14:19,000 --> 00:14:21,000

That is so creepy.

179

00:14:21,000 --> 00:14:23,000

And Adam is feeling the pressure.

180

00:14:23,000 --> 00:14:26,000

Can we just go away from the steam and do only air pressure?

181

00:14:26,000 --> 00:14:36,000

At a complete loss as to the source of the mysterious sound, they open up a release valve to let off some steam.

182

00:14:36,000 --> 00:14:43,000

And to everyone's relief, the eerie end of the world humming stops.

183

00:14:43,000 --> 00:14:53,000

Cue a relieved, adrenaline-fueled Adam, waxing miracle about his industrial steam engineering, Breedler.

184

00:14:53,000 --> 00:14:57,000

Doing this, I feel a total kinship with the guys who invented this thing.

185

00:14:57,000 --> 00:15:03,000

This was made during the steam age. Steam was the power, and it is an incredible power.

186

00:15:03,000 --> 00:15:10,000

Counter-intuitively, after letting off all that steam, their prototype has maintained its pressure.

187

00:15:10,000 --> 00:15:14,000

And here's our resident steam lover to explain why.

188

00:15:14,000 --> 00:15:21,000

The moment we release pressure, all the water that isn't steam is being turned to steam to help keep that pressure up.

189

00:15:21,000 --> 00:15:23,000

It's very exciting. It's actually...

190

00:15:23,000 --> 00:15:25,000

Yeah, stop talking. What's the psi?

191

00:15:25,000 --> 00:15:26,000

171.

192

00:15:26,000 --> 00:15:27,000

Okay.

193

00:15:27,000 --> 00:15:37,000

With Adam doing his best kid in a candy store impression and the rig holding its pressure, the guys are finally ready to unleash the steam power and fire up their gun.

194

00:15:37,000 --> 00:15:42,000

Alright, so this is first test of Adam and Jamie's steam machine gun.

195

00:15:44,000 --> 00:15:49,000

With the team safely behind the ballistic shield, Adam remotely releases the ball.

196

00:15:53,000 --> 00:16:01,000

Incredibly, 100 years after it was designed, this steam powered gun works.

197

00:16:01,000 --> 00:16:03,000

What did it do to our...

198

00:16:03,000 --> 00:16:08,000

That worked beautifully. We're at 155 psi. I can see where it hit.

199

00:16:08,000 --> 00:16:09,000

Look at that.

200

00:16:09,000 --> 00:16:11,000

Is there a dent on the outside metal?

201

00:16:11,000 --> 00:16:12,000

Yes.

202

00:16:12,000 --> 00:16:26,000

It put a dent in a quarter inch of steel, and that means to me that if we get a tuned ride and the ball doesn't hit the steel, instead it comes out of the gun the way it's supposed to, it'd probably go through a person.

203

00:16:26,000 --> 00:16:29,000

So it is in fact lethal as it stands now.

204

00:16:29,000 --> 00:16:38,000

Despite a timing issue resulting in a slingshot firing into the safety collar and not through the gap, Adam and Jamie have a proof of concept.

205

00:16:38,000 --> 00:16:43,000

Nice. Very pleased and terrified.

206

00:16:43,000 --> 00:16:45,000

Next up, the team turned criminal.

207

00:16:45,000 --> 00:16:47,000

Wasn't you who stole that cash?

208

00:16:47,000 --> 00:16:48,000

No.

209

00:16:48,000 --> 00:16:50,000

And hit the polygraph hot seat.

210

00:16:50,000 --> 00:16:52,000

It's got the third degree.

211

00:17:00,000 --> 00:17:04,000

Last time the MythBusters played with a polygraph...

212

00:17:04,000 --> 00:17:06,000

Alright Grant, I got our guinea pig.

213

00:17:06,000 --> 00:17:10,000

They attempted to get in touch with a plant's feelings.

214

00:17:10,000 --> 00:17:17,000

But this time the team is tackling mythical techniques to beat the rap by perplexing the polygraph.

215

00:17:18,000 --> 00:17:29,000

But before the interrogation comes the crime, and Adam, our criminal mastermind has all the details.

216

00:17:29,000 --> 00:17:34,000

In these three envelopes I have a crime which two of you will commit and one will not.

217

00:17:34,000 --> 00:17:41,000

After handing over the sealed envelopes, Adam leaves the team to individually open their instructions.

218

00:17:41,000 --> 00:17:43,000

Burglar Balachy is first.

219

00:17:43,000 --> 00:17:46,000

Alright, so here are the directions.

220

00:17:46,000 --> 00:17:51,000

Enter Jamie's office next to the computer on the top shelf of a tall white bookshelf.

221

00:17:51,000 --> 00:17:54,000

You will find a tanned cash box.

222

00:17:54,000 --> 00:17:56,000

Inside the box you will find a wallet.

223

00:17:56,000 --> 00:17:59,000

Open the wallet and remove \$50.

224

00:17:59,000 --> 00:18:03,000

Grant is next and his task is identical to Tori's.

225

00:18:03,000 --> 00:18:09,000

And with the cash safely stashed, he slips away to spend his ill-gotten gains.

226

00:18:09,000 --> 00:18:11,000

Last up, Carrie.

227

00:18:11,000 --> 00:18:13,000

You are the innocent party.

228

00:18:13,000 --> 00:18:16,000

Carrie, do not search the room. Do not disturb anything.

229

00:18:16,000 --> 00:18:19,000

So Carrie is the all-important control.

230

00:18:19,000 --> 00:18:21,000

She didn't steal any cash.

231

00:18:21,000 --> 00:18:26,000

And during the interrogation, we'll answer all questions truthfully.

232

00:18:26,000 --> 00:18:30,000

Which means it's time to meet the man with the machine.

233

00:18:30,000 --> 00:18:38,000

Dr. Michael Martin has been a polygraphist for over 15 years and has conducted over 8,000 lie detection tests.

234

00:18:38,000 --> 00:18:42,000

There's a lot of people out there that think the polygraphs are total buck.

235

00:18:42,000 --> 00:18:44,000

How would you respond to that?

236

00:18:44,000 --> 00:18:46,000

Well, first of all, let's look at the research.

237

00:18:46,000 --> 00:18:54,000

The federal government has done quite a few studies and each study, the test results fall anywhere from about 80% to about 99% in accuracy.

238

00:18:54,000 --> 00:19:02,000

Before the guys test the reality of those impressive numbers, ringmaster Adam has one more trick up his sleeve.

239

00:19:02,000 --> 00:19:11,000

If you are able to conceal whether or not you did this crime from our polygraphist, the next time you fly for Mythbusters, you'll be flying first class.

240

00:19:11,000 --> 00:19:12,000

Yes!

241

00:19:12,000 --> 00:19:24,000

However, if you fail to conceal whether or not you did this crime from the polygraphist, you will be washing, waxing and polishing every single crew member's car on Mythbusters.

242

00:19:24,000 --> 00:19:28,000

This sucks. This went from fun to not fun.

243

00:19:28,000 --> 00:19:29,000

Yeah.

244

00:19:29,000 --> 00:19:34,000

With the threat of some real work hanging over their heads, the pressure is on.

245

00:19:34,000 --> 00:19:42,000

Burglar Bellachy will be the first to face the music, but how exactly will he attempt to outwit the polygraph?

246

00:19:42,000 --> 00:19:56,000

My secret weapon. I'm going to stick the tech in my pocket like this, point it at my leg and whenever I'm telling the truth, I'm just going to press down on my leg. It should hurt.

247

00:19:57,000 --> 00:20:14,000

Remember, the polygraph works by measuring the stress of lying. So the theory is, by stressing your body with pain on the truthful answers and relaxing on the lies, the machine can't tell the difference.

248

00:20:14,000 --> 00:20:20,000

To begin the test, Dr. Martin asks a bunch of simple calibration questions.

249

00:20:20,000 --> 00:20:22,000

Is your first name Salvatore?

250

00:20:22,000 --> 00:20:24,000

Yes.

251

00:20:24,000 --> 00:20:29,000

Remember, every time he answers truthfully, he presses in the tack.

252

00:20:29,000 --> 00:20:34,000

Did you steal that cash discovered missing from Jamie's office today?

253

00:20:34,000 --> 00:20:35,000

No.

254

00:20:35,000 --> 00:20:41,000

But the sensors on the seat and floor catch even the slightest suspicious movement.

255

00:20:41,000 --> 00:20:44,000

Okay, that's a movement. Please keep your eyes straight ahead.

256

00:20:44,000 --> 00:20:51,000

I tried going for the tack and he called me out, so I had to go straight to biting my tongue.

257

00:20:51,000 --> 00:20:56,000

So it's plan B. Torey's new, painful countermeasure is tongue biting.

258

00:20:56,000 --> 00:21:01,000

During your entire life, did you ever see anyone stolen from a cash fund or white envelope?

259

00:21:01,000 --> 00:21:03,000

Did you steal that cash?

260

00:21:03,000 --> 00:21:04,000

No.

261

00:21:04,000 --> 00:21:10,000

After a further 80 minutes of intense scrutiny and deliberately confusing questions.

262

00:21:10,000 --> 00:21:12,000

That's it. It's nice to meet you.

263

00:21:12,000 --> 00:21:14,000

Yeah, it's nice to meet you.

264

00:21:14,000 --> 00:21:18,000

Torey and his tongue finish the interrogation close to breaking point.

265

00:21:18,000 --> 00:21:20,000

He's got the third degree.

266

00:21:20,000 --> 00:21:23,000

I felt like the screws were being tightened down on me.

267

00:21:23,000 --> 00:21:28,000

Grant's next and for his technique, rather than getting physical, he's going mental.

268

00:21:28,000 --> 00:21:37,000

My happy slash erotic thoughts are puppies licking my face and scantily clad women.

269

00:21:37,000 --> 00:21:39,000

Okay.

270

00:21:39,000 --> 00:21:43,000

So Grant will use the power of his not inconsiderable mind.

271

00:21:43,000 --> 00:21:50,000

By thinking stressful thoughts of getting caught when being honest and happy thoughts when lying,

272

00:21:50,000 --> 00:21:53,000

the test results are supposedly rendered inconclusive.

273

00:21:53,000 --> 00:22:01,000

Regarding that cash report, did you ever break the question, did you who stole that cash?

274

00:22:01,000 --> 00:22:02,000

No.

275

00:22:02,000 --> 00:22:07,000

Grant's technique requires absolute focus and concentration.

276

00:22:07,000 --> 00:22:08,000

No.

277

00:22:08,000 --> 00:22:14,000

But the intensity and length of the interview are designed to counter Grant's countermeasure.

278

00:22:14,000 --> 00:22:15,000

Come here.

279

00:22:15,000 --> 00:22:17,000

That's going to do it.

280

00:22:19,000 --> 00:22:22,000

Last up is innocent little Carrie.

281

00:22:22,000 --> 00:22:27,000

I don't like people throwing unexpected questions at me like that.

282

00:22:27,000 --> 00:22:31,000

I've seen Montell. I know how they take people off guard.

283

00:22:31,000 --> 00:22:33,000

Is your first name Carrie?

284

00:22:33,000 --> 00:22:34,000

Yes.

285

00:22:34,000 --> 00:22:36,000

Here's the question.

286

00:22:36,000 --> 00:22:39,000

She's the control and didn't steal any cash.

287

00:22:39,000 --> 00:22:45,000

But despite her innocence, the stressful environment and questioning takes its toll.

288

00:22:45,000 --> 00:22:47,000

Was that money stolen from a white envelope?

289

00:22:47,000 --> 00:22:48,000

Jenny's chair.

290

00:22:48,000 --> 00:22:50,000

The cash reported missing from Jamie.

291

00:22:50,000 --> 00:22:54,000

I was waiting for that moment where I was going to break down.

292

00:22:54,000 --> 00:22:55,000

No.

293

00:22:55,000 --> 00:23:01,000

The question is, will her nerves confuse the polygraph and lead to a false accusation?

294

00:23:01,000 --> 00:23:03,000

That's the worst.

295

00:23:03,000 --> 00:23:07,000

Find out exactly who will be charged with the crime and who won't.

296

00:23:07,000 --> 00:23:11,000

Dr. Martin gathers the suspects for the results.

297

00:23:11,000 --> 00:23:14,000

Well, first of all, the good news is that no one's test was inconclusive.

298

00:23:14,000 --> 00:23:16,000

We have conclusive results on everyone.

299

00:23:16,000 --> 00:23:17,000

Really?

300

00:23:17,000 --> 00:23:18,000

Absolutely.

301

00:23:18,000 --> 00:23:19,000

Great.

302

00:23:19,000 --> 00:23:22,000

Later, crime and punishment takes its toll.

303

00:23:22,000 --> 00:23:24,000

This is not funny anymore.

304

00:23:24,000 --> 00:23:29,000

But first, the guys get fired up with the steam machine gun.

305

00:23:29,000 --> 00:23:32,000

Actually fired for the first time out in the wild.

306

00:23:32,000 --> 00:23:33,000

Let's go.

307

00:23:42,000 --> 00:23:46,000

Adam and Jamie are involved in a steamy affair.

308

00:23:46,000 --> 00:23:49,000

Working on these machines is great for my stand.

309

00:23:49,000 --> 00:23:56,000

Using the Civil War specs and modern materials, they've built a steam powered machine gun.

310

00:23:56,000 --> 00:24:01,000

It may not look like it, but it's working.

311

00:24:01,000 --> 00:24:10,000

With Jamie drawing the line at firing automatic weapons in the shop, it's off to the wide open spaces of the Alameda runway.

312

00:24:10,000 --> 00:24:15,000

Here, the team will tackle the central unresolved question of this myth.

313

00:24:15,000 --> 00:24:19,000

Did it function effectively as a weapon of war?

314

00:24:19,000 --> 00:24:20,000

That's it.

315

00:24:26,000 --> 00:24:29,000

There are a lot of conflicting stories about this machine gun.

316

00:24:29,000 --> 00:24:30,000

Absolutely.

317

00:24:30,000 --> 00:24:34,000

We have reports of it firing distances between 100 yards and 300 yards.

318

00:24:34,000 --> 00:24:39,000

We have reports of it firing 200 rounds a minute, 300 rounds a minute, 400 rounds a minute.

319

00:24:39,000 --> 00:24:45,000

And we have Corporal James Whitaker's account that balls the size of a walnut's cut a target completely in twain.

320

00:24:45,000 --> 00:24:51,000

To test these conflicting reports, Adam and Jamie will use these three standards.

321

00:24:51,000 --> 00:24:58,000

A range of 300 yards, a rapid fire capability of 400 rounds per minute, and of course, lethal force.

322

00:24:59,000 --> 00:25:03,000

Past these best case scenarios, and it's myth confirmed.

323

00:25:03,000 --> 00:25:10,000

With an eye on the range test, Adam marks out 800 yards of runway with a series of 2x4s.

324

00:25:10,000 --> 00:25:14,000

And with everything plumbed in, they put the water heaters on to boil.

325

00:25:14,000 --> 00:25:16,000

Ha! That's it.

326

00:25:16,000 --> 00:25:20,000

And the heat and pressure head rapidly for the butter zone.

327

00:25:20,000 --> 00:25:24,000

We've got a tachometer set up so we know exactly when it reaches 2000 RPM.

328

00:25:24,000 --> 00:25:30,000

We've got the pin on pull, drop the ball in, and we're going to see this thing actually fire for the first time out in the wild.

329

00:25:30,000 --> 00:25:31,000

Let's go.

330

00:25:31,000 --> 00:25:37,000

This is it. The mythbusters are about to fire a single round from their steam powered gun.

331

00:25:37,000 --> 00:25:43,000

Here we go. We should hear it clang. The second light pole is three, two, one.

332

00:25:45,000 --> 00:25:49,000

That was it. It happened a little bit later.

333

00:25:50,000 --> 00:25:55,000

Just like the proof of concept test back at M5, there seems to be a timing problem.

334

00:25:57,000 --> 00:25:58,000

Can you see the mark?

335

00:25:58,000 --> 00:26:00,000

I can. There's a new mark.

336

00:26:01,000 --> 00:26:04,000

The bullet is hitting the collar and not firing through the gap.

337

00:26:05,000 --> 00:26:07,000

I don't know what the heck we're going to do about that.

338

00:26:07,000 --> 00:26:11,000

I don't know what to do about that except line up five balls and see what happens when I drop them all.

339

00:26:11,000 --> 00:26:15,000

Maybe they'll all whoop, whoop, whoop, just let each other go. What do you think?

340

00:26:15,000 --> 00:26:18,000

Want to try that one? Let's try that one.

341

00:26:18,000 --> 00:26:24,000

It's a ballsy plan that has Adam bouncing around like a cartoon character on caffeine.

342

00:26:24,000 --> 00:26:27,000

A test fire with multiple rounds.

343

00:26:27,000 --> 00:26:28,000

Let's fire this puppy.

344

00:26:31,000 --> 00:26:34,000

My detection is no laughing matter.

345

00:26:34,000 --> 00:26:39,000

If you want to find out more about polygraph machine, go to discovery.

346

00:26:39,000 --> 00:26:42,000

Come play with me, the Busters.

347

00:26:42,000 --> 00:26:46,000

Okay. I'll tell you whatever you want to know.

348

00:26:47,000 --> 00:26:53,000

Our fun loving criminals have been testing mythical ways to beat the polygraph and the results are in.

349

00:26:53,000 --> 00:26:56,000

The good news is that no one's test was inconclusive.

350

00:26:56,000 --> 00:27:03,000

Remember, Grant and Tori are guilty and tried to invalidate the test with two different countermeasures.

351

00:27:03,000 --> 00:27:05,000

The screws are being tightened down on me.

352

00:27:05,000 --> 00:27:09,000

But Carrie was innocent. So did Dr. Martin pick it.

353

00:27:09,000 --> 00:27:15,000

Carrie, you were found not to be involved in the theft. Your test was truthful and honest.

354

00:27:15,000 --> 00:27:20,000

Unfortunately, the men's test didn't go as well. They both failed clearly.

355

00:27:20,000 --> 00:27:24,000

Wow, really? I knew I failed.

356

00:27:24,000 --> 00:27:31,000

The numbers don't lie. Both our crims scored a probability of guilt greater than 99%.

357

00:27:31,000 --> 00:27:37,000

Dr. Martin had no problems spotting Tori's attempt to mask his responses with pain.

358

00:27:37,000 --> 00:27:43,000

As for Grant, in your particular case, it was your skin glands were the most telling.

359

00:27:43,000 --> 00:27:46,000

You just couldn't suppress it. There's no way you could do that.

360

00:27:46,000 --> 00:27:50,000

You didn't have a chance. I'm not cut out for crime. What can I say?

361

00:27:50,000 --> 00:27:53,000

Quite simply, the boys didn't have a chance.

362

00:27:53,000 --> 00:28:00,000

Modern polygraphs, when used by experienced polygraphers, are very effective. The trick questions.

363

00:28:00,000 --> 00:28:03,000

During your entire life, did you ever break the law?

364

00:28:03,000 --> 00:28:11,000

The intimidating atmosphere and myriad of sensors mean they are very, very difficult to beat.

365

00:28:12,000 --> 00:28:19,000

Which means it's time for the boys to make like an 80's disco diva and hit the car wash.

366

00:28:19,000 --> 00:28:22,000

I didn't bring my bikini, did you bring yours?

367

00:28:28,000 --> 00:28:32,000

It's totally ridiculous. And the producers are.

368

00:28:33,000 --> 00:28:37,000

So much for beating the polygraph machine. We both failed.

369

00:28:37,000 --> 00:28:39,000

At least all the cars are clean.

370

00:28:39,000 --> 00:28:45,000

That's funny. You know what though, there is one other system of lie detecting that I think we need to test.

371

00:28:45,000 --> 00:28:50,000

They actually use brain mapping to tell whether or not you're lying. And they say it's 90% accurate.

372

00:28:50,000 --> 00:28:57,000

Yeah, actually I've heard of that. They use an fMRI and they can actually see the part of your brain that's used for lying.

373

00:28:57,000 --> 00:29:01,000

So this is less about myth busting and more about the science of lying.

374

00:29:01,000 --> 00:29:06,000

And to uncover the science of lying, they have to do some flying.

375

00:29:06,000 --> 00:29:12,000

The medical university of South Carolina is at the cutting edge of this new lie detection technology.

376

00:29:12,000 --> 00:29:15,000

Anybody know where the hell we're going?

377

00:29:15,000 --> 00:29:19,000

Whereas Grant and Tori are at the cutting edge of getting lost.

378

00:29:19,000 --> 00:29:24,000

We are looking for the medical university of South Carolina.

379

00:29:24,000 --> 00:29:28,000

Finally inside, Carrie gets to meet expert Dr. Frank Kozell.

380

00:29:28,000 --> 00:29:32,000

So the fMRI is new technology for a lie detector.

381

00:29:32,000 --> 00:29:38,000

Correct, Carrie. We've been working on this for a while and we're looking at using fMRI to measure in the brain when people are lying.

382

00:29:38,000 --> 00:29:39,000

So how's it work?

383

00:29:39,000 --> 00:29:42,000

We think that when people are lying, their brains are working harder.

384

00:29:42,000 --> 00:29:47,000

And so we can measure the differences in blood flow and tell when people are lying versus telling the truth.

385

00:29:47,000 --> 00:29:54,000

According to Adam, in order for this test to have the proper motivation that it needs, there's going to be a reward and a punishment.

386

00:29:54,000 --> 00:30:00,000

If you're able to successfully beat the test, you get the reward of \$1,000.

387

00:30:01,000 --> 00:30:02,000

Are you kidding me?

388

00:30:02,000 --> 00:30:03,000

What?

389

00:30:03,000 --> 00:30:04,000

That's pretty good.

390

00:30:04,000 --> 00:30:10,000

However, if you're not able to successfully beat the test, you get to take a bus back to San Francisco.

391

00:30:10,000 --> 00:30:11,000

What?

392

00:30:15,000 --> 00:30:16,000

That sucks.

393

00:30:16,000 --> 00:30:17,000

A bus?

394

00:30:17,000 --> 00:30:18,000

That sucks!

395

00:30:18,000 --> 00:30:21,000

Have you ever ridden the bus long distances?

396

00:30:21,000 --> 00:30:24,000

Are you serious? This is not funny anymore.

397

00:30:24,000 --> 00:30:33,000

In the course of Mythbusters, Tori has been dragged along the ground by a horse and face planted on a bike.

398

00:30:35,000 --> 00:30:39,000

But could this be the myth that breaks Tori's back?

399

00:30:41,000 --> 00:30:43,000

I don't want to take this test.

400

00:30:43,000 --> 00:30:46,000

Can I opt to not take the test?

401

00:30:46,000 --> 00:30:49,000

After the break, Adam and Jamie turn up the heat.

402

00:30:49,000 --> 00:30:51,000

I think he's dead.

403

00:30:52,000 --> 00:30:56,000

And the team is scanned to within an inch of their lives.

404

00:30:56,000 --> 00:30:58,000

This is not going to rip my feelings out, is it?

405

00:31:06,000 --> 00:31:14,000

Adam and Jamie are in a spin testing claims that a Civil War-era steam machine gun was a lethal weapon.

406

00:31:14,000 --> 00:31:16,000

That was it!

407

00:31:16,000 --> 00:31:24,000

With range and rapid fire capability, but so far the only target in danger is the steel safety collar.

408

00:31:24,000 --> 00:31:26,000

I don't know what the heck we're going to do about that.

409

00:31:26,000 --> 00:31:28,000

Their solution? More ammo.

410

00:31:28,000 --> 00:31:31,000

Want to try that one? Let's try that one.

411

00:31:31,000 --> 00:31:37,000

So the guys are hoping the timing issue resolves itself under the weight of multiple rounds.

412

00:31:37,000 --> 00:31:41,000

The victims are these foam board figures.

413

00:31:41,000 --> 00:31:44,000

A place of about 20 feet from the barrel of our steam machine gun.

414

00:31:44,000 --> 00:31:49,000

For this test, the guys will attempt to fire five bullets in quick succession.

415

00:31:49,000 --> 00:31:51,000

Ready when you are.

416

00:31:51,000 --> 00:31:56,000

And if successful, will it match the mythical reports of 400 rounds per minute?

417

00:31:57,000 --> 00:32:00,000

Alright, here we go. Three, two, one!

418

00:32:04,000 --> 00:32:06,000

We hit the figures!

419

00:32:08,000 --> 00:32:11,000

No wonder Adam's happy. They hit their target.

420

00:32:12,000 --> 00:32:17,000

And the use of multiple rounds seems to have solved that timing problem.

421

00:32:17,000 --> 00:32:20,000

One, two, three, four, five!

422

00:32:20,000 --> 00:32:21,000

You know what?

423

00:32:21,000 --> 00:32:22,000

What?

424

00:32:22,000 --> 00:32:24,000

That is a machine gun.

425

00:32:24,000 --> 00:32:28,000

Yep, with the five rounds leaving the gun in approximately one second,

426

00:32:28,000 --> 00:32:32,000

they're close enough to the mythical specs to get a pass mark.

427

00:32:32,000 --> 00:32:37,000

Next, Adam and Jamie want to know if those rapid fire rounds can kill.

428

00:32:38,000 --> 00:32:42,000

And for that, they'll need a ye olde control.

429

00:32:42,000 --> 00:32:46,000

I just want to do a comparison shot with a black powder rifle into the Ballistics Gel Guy.

430

00:32:46,000 --> 00:32:49,000

And then fire our steam machine gun and see how the two compare.

431

00:32:49,000 --> 00:32:53,000

Adam sets his sights on the Ballistics material bust.

432

00:32:53,000 --> 00:32:57,000

And three, two, one!

433

00:32:58,000 --> 00:33:00,000

He didn't stand a chance.

434

00:33:02,000 --> 00:33:04,000

I think he's dead.

435

00:33:05,000 --> 00:33:08,000

They went right through him and through the board.

436

00:33:09,000 --> 00:33:11,000

There's no doubt about it.

437

00:33:11,000 --> 00:33:15,000

The period accurate black powder rifle packs a deadly punch.

438

00:33:16,000 --> 00:33:19,000

So that's what the guys are expecting from their machine gun.

439

00:33:19,000 --> 00:33:23,000

Let's try three balls this time. Bang, bang and bang.

440

00:33:26,000 --> 00:33:30,000

Alright, let's leave the ball these tests in three, two, one!

441

00:33:34,000 --> 00:33:36,000

That's great!

442

00:33:36,000 --> 00:33:41,000

Bang, bang and bang was exactly what the Ballistics bust got.

443

00:33:42,000 --> 00:33:45,000

But was it, as per the myth, lethal?

444

00:33:45,000 --> 00:33:47,000

I gotta say, I think that's a kill man.

445

00:33:47,000 --> 00:33:52,000

It's not quite all the way through the man in the plywood, but it's definitely under the skin.

446

00:33:52,000 --> 00:33:53,000

I agree.

447

00:33:53,000 --> 00:33:57,000

Yep, and a look at the high speed gives Adam and Jamie a visual confirmation

448

00:33:57,000 --> 00:34:03,000

that a point blank range staring down the spinning barrel of this gun is fatal.

449

00:34:04,000 --> 00:34:05,000

Yes!

450

00:34:06,000 --> 00:34:07,000

Isn't that awesome?

451

00:34:08,000 --> 00:34:15,000

So far so good for the myth, but to be sure, we need a more realistic flesh and bone target.

452

00:34:34,000 --> 00:34:41,000

The idea here is that I need to either steal the watch or the ring from this drawer.

453

00:34:41,000 --> 00:34:47,000

And I need to take whichever object I choose, put it in my locker with all of my belongings,

454

00:34:47,000 --> 00:34:52,000

then I'll go into fMRI and they're going to ask me a series of questions about which item I took

455

00:34:52,000 --> 00:34:54,000

and some baseline truth and lie questions.

456

00:34:54,000 --> 00:34:57,000

I'm going to steal the ring.

457

00:34:57,000 --> 00:34:59,000

I'm going to steal the ring.

458

00:34:59,000 --> 00:35:06,000

With the ring stashed safely among Carrie's belongings, she heads for the MRI,

459

00:35:06,000 --> 00:35:09,000

where she's prepped for her futuristic interview.

460

00:35:09,000 --> 00:35:11,000

This is an intense.

461

00:35:11,000 --> 00:35:16,000

The questions appear on a screen and Carrie answers with the press of a button.

462

00:35:16,000 --> 00:35:19,000

Just try to keep your head as still as possible, okay?

463

00:35:19,000 --> 00:35:24,000

Carrie's attempt to beat this lie detector involves thinking happy, relaxing thoughts

464

00:35:24,000 --> 00:35:29,000

when lying and scary thoughts on the truth.

465

00:35:29,000 --> 00:35:33,000

But can you fool a machine looking directly at your brain?

466

00:35:33,000 --> 00:35:37,000

Next up is Tori and he's also taking the ring.

467

00:35:37,000 --> 00:35:39,000

I'm going to go with the ring.

468

00:35:39,000 --> 00:35:45,000

After safely stowing his booty in his locker, he's ready for the Mythbusters Magnetron.

469

00:35:45,000 --> 00:35:48,000

I'm on clear metal. This is not going to rip my feelings out, is it?

470

00:35:48,000 --> 00:35:49,000

No.

471

00:35:49,000 --> 00:35:55,000

Tori's attempt to beat the mind machine involves the same mind game as Carrie.

472

00:35:55,000 --> 00:36:00,000

And after answering the question, he escapes with his feelings intact.

473

00:36:00,000 --> 00:36:03,000

Last but not least is Grant.

474

00:36:03,000 --> 00:36:08,000

Okay, so I've chosen to take the watch and I don't know why.

475

00:36:08,000 --> 00:36:12,000

It's just shiny and look like something fun to take.

476

00:36:12,000 --> 00:36:16,000

With Grant's shiny eyes, he's trying to get the ring out.

477

00:36:16,000 --> 00:36:18,000

It looks like something fun to take.

478

00:36:18,000 --> 00:36:23,000

With Grant's shiny secret under wraps, he too heads into the donut of doom.

479

00:36:23,000 --> 00:36:30,000

Now my technique for beating the FMRI is to put my brain in a state of constant activity.

480

00:36:30,000 --> 00:36:35,000

And I'm actually going to psychologically create for myself a feeling of fear,

481

00:36:35,000 --> 00:36:40,000

hoping to stimulate the blood flow all around my brain so that they won't know

482

00:36:40,000 --> 00:36:43,000

when I'm lying or when I'm telling the truth.

483

00:36:43,000 --> 00:36:50,000

So the sci-fi cross-examinations are complete and the technicians begin to sift through the scans.

484

00:36:50,000 --> 00:36:55,000

Remember, if our thieves are successful in confusing the test,

485

00:36:55,000 --> 00:36:59,000

they get a thousand bucks and avoid a long bus ride home.

486

00:36:59,000 --> 00:37:04,000

We found that all three of you took the ring.

487

00:37:04,000 --> 00:37:06,000

Yes! Yes! Yes!

488

00:37:06,000 --> 00:37:10,000

As you can tell by the reactions, Grant beat the MRI.

489

00:37:10,000 --> 00:37:12,000

Carrie and Tori didn't.

490

00:37:12,000 --> 00:37:18,000

Well, it looks like we get to take that cross-country trip we've been talking about for so long.

491

00:37:21,000 --> 00:37:23,000

Oh well, what are you going to do?

492

00:37:28,000 --> 00:37:34,000

Grant's smug, Carrie's cursing and refusing to even talk to the producer.

493

00:37:34,000 --> 00:37:36,000

I'm not speaking to you.

494

00:37:36,000 --> 00:37:39,000

I can't believe Grant beat that freaking test though.

495

00:37:39,000 --> 00:37:41,000

That's unbelievable.

496

00:37:41,000 --> 00:37:44,000

I'm not speaking to Adam.

497

00:37:44,000 --> 00:37:47,000

I might forgive you, but not for the next two days.

498

00:37:47,000 --> 00:37:50,000

Okay guys, here's your tickets.

499

00:37:52,000 --> 00:37:54,000

Holy crap!

500

00:37:54,000 --> 00:37:57,000

3,077 miles.

501

00:38:01,000 --> 00:38:04,000

Myths about lie detectors, where do we stand?

502

00:38:04,000 --> 00:38:06,000

Where's the polygraph goes?

503

00:38:06,000 --> 00:38:10,000

The physical and mental techniques of the two you guys utilized failed pretty miserably.

504

00:38:10,000 --> 00:38:13,000

But just because you guys didn't do it doesn't mean somebody else can't.

505

00:38:13,000 --> 00:38:15,000

So we're going to have to call this one plausible.

506

00:38:15,000 --> 00:38:17,000

How is that bus ride, by the way?

507

00:38:17,000 --> 00:38:19,000

Shut up.

508

00:38:35,000 --> 00:38:47,000

Adam and Jamie are attempting to resolve the controversy that a Civil War steam machine gun was an effective weapon of war.

509

00:38:47,000 --> 00:38:51,000

It's already been proved lethal at close range.

510

00:38:51,000 --> 00:38:52,000

Isn't that awesome?

511

00:38:52,000 --> 00:38:59,000

But how will it fare at 20 yards with a more realistic target? Cue the human analog.

512

00:38:59,000 --> 00:39:02,000

The steam machine gun's about to claim its next victim.

513

00:39:02,000 --> 00:39:06,000

The ballistic gel is nice, but I want to see what happens in real flesh.

514

00:39:06,000 --> 00:39:10,000

Surrounded by the foam regiment, Porky is in Adam's sights.

515

00:39:10,000 --> 00:39:14,000

Alright, shoot the big in three, two, one.

516

00:39:20,000 --> 00:39:22,000

The gun again performed.

517

00:39:22,000 --> 00:39:26,000

But did our poor sign test target survive?

518

00:39:26,000 --> 00:39:29,000

It looks like one glad stalled for them and went through here.

519

00:39:29,000 --> 00:39:31,000

We got a hit right there.

520

00:39:31,000 --> 00:39:33,000

That probably broke some bones though.

521

00:39:33,000 --> 00:39:38,000

Yeah, but that's not a lethal hit. That's no penetration.

522

00:39:38,000 --> 00:39:48,000

So Porky was pummeled, but with not so much as a flesh wound, the claim that the steam machine gun was a lethal weapon of war is looking busted.

523

00:39:48,000 --> 00:39:50,000

I just don't think it can kill.

524

00:39:50,000 --> 00:39:53,000

That's really where the rubber meets the road with a weapon of war.

525

00:39:53,000 --> 00:39:56,000

And you don't want to just...dent the enemy.

526

00:39:56,000 --> 00:39:58,000

I want to kill them.

527

00:39:58,000 --> 00:40:03,000

So unless you're standing right at the end of the barrel, it's not a deadly weapon.

528

00:40:03,000 --> 00:40:10,000

But Adam and Jamie want to try all the angles before consigning their steam machine to the busted bin.

529

00:40:10,000 --> 00:40:14,000

They're going to test the full extent of the gun's range.

530

00:40:14,000 --> 00:40:16,000

We're now going for real distance.

531

00:40:16,000 --> 00:40:21,000

So we've angled our cannon at the steepest angle we're comfortable with, about 20 degrees,

532

00:40:21,000 --> 00:40:27,000

which tells me it ought to fire around 500 yards, and we're going to actually test this out and see.

533

00:40:27,000 --> 00:40:32,000

It's full steam ahead for the range test, and Adam amps up the ammo.

534

00:40:32,000 --> 00:40:33,000

12.

535

00:40:35,000 --> 00:40:37,000

The gun's locked and loaded.

536

00:40:37,000 --> 00:40:39,000

Everybody, we're going high.

537

00:40:39,000 --> 00:40:44,000

And Adam, keeping his Hollywood action hero dream alive, gets into character.

538

00:40:44,000 --> 00:40:48,000

This one's for distance and for glory.

539

00:40:50,000 --> 00:40:53,000

With the gun at full speed, Adam releases his balls.

540

00:40:54,000 --> 00:40:58,000

But the rig ain't happy and chaos reigns.

541

00:40:58,000 --> 00:41:04,000

Jamie kills the steam on his side and frantically signals for Adam to do the same.

542

00:41:04,000 --> 00:41:12,000

But with a machine gun spiraling out of control at 2,000 RPM, Adam's taking no chances.

543

00:41:14,000 --> 00:41:18,000

He reaches around the ballistic shield and finally shuts it down.

544

00:41:19,000 --> 00:41:22,000

I think that might be the last thing our cannon does.

545

00:41:22,000 --> 00:41:26,000

But as this high speed shows, it wasn't in vain.

546

00:41:26,000 --> 00:41:28,000

My God, what a beautiful shot.

547

00:41:28,000 --> 00:41:33,000

So at least one bullet left the barrel before the shutdown.

548

00:41:33,000 --> 00:41:35,000

But where'd it go?

549

00:41:35,000 --> 00:41:37,000

You got one.

550

00:41:37,000 --> 00:41:38,000

700 yards.

551

00:41:38,000 --> 00:41:39,000

No.

552

00:41:39,000 --> 00:41:42,000

Dude, that's just under half a mile.

553

00:41:42,000 --> 00:41:44,000

That is really nice work, man.

554

00:41:44,000 --> 00:41:51,000

Yep, unexpectedly, the gun fired a full 300 yards further than the Civil War specs,

555

00:41:51,000 --> 00:41:55,000

which leaves the myth scorecard looking like this.

556

00:41:55,000 --> 00:42:00,000

But if you add a crucial fourth category, it's not nearly as impressive.

557

00:42:00,000 --> 00:42:01,000

A dead hit.

558

00:42:01,000 --> 00:42:02,000

Soldier.

559

00:42:02,000 --> 00:42:04,000

Sir, yes, sir.

560

00:42:04,000 --> 00:42:06,000

What do you think of the steam machine gun as a machine?

561

00:42:06,000 --> 00:42:11,000

Sir, it functions effectively as both a machine and a gun, sir.

562

00:42:11,000 --> 00:42:12,000

Soldier.

563

00:42:12,000 --> 00:42:13,000

Sir, yes, sir.

564

00:42:13,000 --> 00:42:16,000

What do you think of the steam machine gun as a weapon of war?

565

00:42:16,000 --> 00:42:20,000

Sir, it's not very effective, sir.

566

00:42:20,000 --> 00:42:22,000

Okay, let's get out of here.

567

00:42:32,000 --> 00:42:34,000

Permission to speak fairly, sir.

568

00:42:34,000 --> 00:42:35,000

Permission granted.

569

00:42:35,000 --> 00:42:39,000

Sir, we are about to egg-bore gun a viewer special, sir.

570

00:42:39,000 --> 00:42:40,000

And?

571

00:42:40,000 --> 00:42:45,000

Major, one to contribute their ideas should log on to Discovery.com.

572

00:42:45,000 --> 00:42:48,000

Sir, nice work, soldier.

573

00:42:48,000 --> 00:42:50,000

Now drop and give me 20.

