

1

00:00:00,000 --> 00:00:03,560

Remember, don't try this at home.

2

00:00:03,560 --> 00:00:09,560

We've got years of experience that keeps us safe.

3

00:00:09,560 --> 00:00:14,800

This episode of Mythbusters might best be described as high impact.

4

00:00:14,800 --> 00:00:17,440

It'll be like bling-dow!

5

00:00:17,440 --> 00:00:22,640

Adam and Jamie are hell-bent on busting three of the biggest real-life gun myths of all

6

00:00:22,640 --> 00:00:25,640

time.

7

00:00:25,640 --> 00:00:27,680

Slugs down sniper scopes.

8

00:00:27,680 --> 00:00:30,760

It's either him or me.

9

00:00:30,760 --> 00:00:32,640

I think that was the money shot.

10

00:00:32,640 --> 00:00:36,640

Backwards bullets.

11

00:00:36,640 --> 00:00:41,000

And a Civil War legend that's never been proved.

12

00:00:41,000 --> 00:00:42,000

Like this.

13

00:00:42,000 --> 00:00:45,400

And it's hammer time for Tori, Grant and Kerry.

14

00:00:45,400 --> 00:00:49,320

Could the simplest of all tools really explode in your hand?

15

00:00:49,320 --> 00:00:51,320

It'll be like cup-a-lammo!

16

00:00:51,320 --> 00:00:55,080

With danger at every turn.

17

00:00:55,080 --> 00:00:59,720

This test becomes a battle for survival.

18

00:00:59,720 --> 00:01:02,120

Who are the Mythbusters?

19

00:01:02,120 --> 00:01:05,840

Adam Savage.

20

00:01:05,840 --> 00:01:07,200

And Jamie Heineman.

21

00:01:07,200 --> 00:01:09,920

This is gonna kill you.

22

00:01:09,920 --> 00:01:13,600

Between them more than 30 years of special effects experience.

23

00:01:13,600 --> 00:01:15,760

That's what I'm talking about!

24

00:01:15,760 --> 00:01:17,760

Joining them, Tori Belleggi.

25

00:01:17,760 --> 00:01:19,560

Very excited about this.

26

00:01:19,560 --> 00:01:20,560

Kerry Byron.

27

00:01:20,560 --> 00:01:22,280

Look, he cracked into his skull.

28

00:01:22,280 --> 00:01:23,280

And Grant Imahara.

29

00:01:23,480 --> 00:01:24,480

Don't say anything.

30

00:01:24,480 --> 00:01:27,480

They don't just tell the Myths.

31

00:01:27,480 --> 00:01:32,480

They put them to the test.

32

00:01:44,480 --> 00:01:47,880

After all the gun myths that we've tested, what could be left?

33

00:01:47,880 --> 00:01:50,960

I call this one the mystery of the backwards bullet.

34

00:01:50,960 --> 00:01:52,480

Oh, I think I heard about this one.

35

00:01:52,480 --> 00:01:57,400

Supposedly there was a shootout in Seattle between some cops and a perpetrator.

36

00:01:57,400 --> 00:02:02,680

And the perpetrator's bullet was later found lodged backwards in the policeman's gun barrel.

37

00:02:02,680 --> 00:02:03,680

Well, close.

38

00:02:03,680 --> 00:02:05,160

Actually it was in the cylinder.

39

00:02:05,160 --> 00:02:06,440

It was a revolver.

40

00:02:06,440 --> 00:02:16,240

But that's what the myth is and I think we should test it.

41

00:02:16,240 --> 00:02:21,000

Their best shot at success is to test this myth indoors with an old friend.

42

00:02:21,000 --> 00:02:23,120

We're here to have a shootout.

43

00:02:23,120 --> 00:02:26,480

Alan Normandy is one of South Frisco's finest.

44

00:02:26,480 --> 00:02:30,520

One round 9mm pistol fired from an MP5.

45

00:02:30,520 --> 00:02:37,600

And he's already guided the team through a dozen gunshot tests.

46

00:02:37,600 --> 00:02:45,360

Some of those gun myths came from the movies, but this one's from real life.

47

00:02:45,360 --> 00:02:50,200

Something like firing a bullet down the barrel of another gun, which is why it ends up facing

48

00:02:50,400 --> 00:02:51,400

backwards.

49

00:02:51,400 --> 00:02:56,720

But in this case, a bullet fired by a criminal in Seattle is said to have scored a direct

50

00:02:56,720 --> 00:02:59,840

hit on the empty chamber of a police revolver.

51

00:02:59,840 --> 00:03:01,280

You've heard of it then?

52

00:03:01,280 --> 00:03:03,240

Yeah, I have actually.

53

00:03:03,240 --> 00:03:04,760

Just recently we're doing some research on that.

54

00:03:04,760 --> 00:03:09,040

I'm actually very excited about this particular experiment.

55

00:03:09,040 --> 00:03:13,040

They're firing the same types of guns used in the Seattle shootout.

56

00:03:13,040 --> 00:03:16,040

The suspect pulled a pistol on two officers.

57

00:03:16,040 --> 00:03:19,960

Then they drew their 38 Colt revolvers.

58

00:03:19,960 --> 00:03:26,000

Of course, we'd love to reenact this shootout by Adam and I facing off and seeing what happens

59

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

with it.

60

00:03:27,000 --> 00:03:32,040

That'd be kind of stupid because one of us would get badly hurt.

61

00:03:32,040 --> 00:03:34,640

So what we've done is we set up a rig.

62

00:03:34,640 --> 00:03:39,000

We've got a board that will line these two guns up at a precise distance.

63

00:03:39,000 --> 00:03:44,080

We've got a way of aiming them precisely, including some laser sights.

64

00:03:44,080 --> 00:03:49,360

And we've got special made holders for the guns that we'll be able to hook a string onto

65

00:03:49,360 --> 00:03:54,360

and fire the guns safely and remotely from the other side of the range.

66

00:03:54,360 --> 00:03:56,040

The shooting gun is a Glock.

67

00:03:56,040 --> 00:04:00,960

The receiving gun is a Colt police positive 38 special.

68

00:04:00,960 --> 00:04:08,040

And we've got it mounted here into a basically a clamp that won't allow this gun to move.

69

00:04:08,040 --> 00:04:10,040

Glock's mounted in the same thing.

70

00:04:10,040 --> 00:04:14,480

It should just be a matter of sighting these up, firing them and seeing what the result

71

00:04:14,480 --> 00:04:15,480

is.

72

00:04:15,480 --> 00:04:20,680

To replicate this one in a million shot, they're fitting a laser sight inside the Glock's barrel

73

00:04:20,680 --> 00:04:24,680

to light up on the empty chamber.

74

00:04:24,680 --> 00:04:29,680

But bullets don't fly as straight as a laser beam, so Alan suggests a target test to calibrate

75

00:04:29,680 --> 00:04:31,680

the trajectory.

76

00:04:31,680 --> 00:04:36,960

Turns out the bullets don't always leave the barrel of a gun and stay on perfect columnar

77

00:04:36,960 --> 00:04:39,480

center of that barrel.

78

00:04:39,480 --> 00:04:40,720

That's something I had no idea about.

79

00:04:40,720 --> 00:04:46,480

Look, I mean all these things are million to one shots, which means that getting it

80

00:04:46,480 --> 00:04:50,760

is exceedingly difficult and requires a really high degree of precision.

81

00:04:50,760 --> 00:04:55,640

The laser is aimed at the heart of the bullseye and Alan's betting none of the test shots

82

00:04:55,640 --> 00:05:01,000

will hit the mark, even from a range of just five feet.

83

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

Fire the hole, prepare to fire.

84

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

Alright, firing in.

85

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

Three, two, one.

86

00:05:10,000 --> 00:05:14,520

The first bullet went through top hole and the second and third bullets both went through

87

00:05:14,520 --> 00:05:16,480

this bottom hole.

88

00:05:16,480 --> 00:05:18,520

So do we just split the difference between them?

89

00:05:18,520 --> 00:05:19,520

Absolutely.

90

00:05:19,520 --> 00:05:22,520

Three more shots should help refine the aim.

91

00:05:26,520 --> 00:05:32,320

We need to make one little final tweak of an adjustment and I think we're in.

92

00:05:32,320 --> 00:05:37,160

The Seattle Backwards Bullet became instant firearms folklore.

93

00:05:37,160 --> 00:05:41,360

Preparations of the incident were widespread, but you can't believe everything you read

94

00:05:41,360 --> 00:05:42,520

in the papers.

95

00:05:42,520 --> 00:05:48,160

So Adam and Jamie are set to look this myth straight down the barrel.

96

00:05:48,160 --> 00:05:52,560

We've got our Glock aimed down at the 38 special, right down the cylinder.

97

00:05:52,560 --> 00:05:57,320

It's all been aimed up and it should work.

98

00:05:57,320 --> 00:06:03,480

Our goal here is to end up with a backwards bullet lodged in the cylinder of the 38 special.

99

00:06:03,480 --> 00:06:06,160

Test number one, hopefully the only test.

100

00:06:06,160 --> 00:06:11,160

Firing in three, two, one.

101

00:06:11,160 --> 00:06:15,160

Oh, is that as bad as I think it is?

102

00:06:15,160 --> 00:06:19,840

Maybe not, but it seems the sight correction was a touch off beam.

103

00:06:19,840 --> 00:06:24,640

Well, there's no bullet in any of the cylinder or any of the chambers.

104

00:06:24,640 --> 00:06:28,920

My first thought is maybe the bullet bounced out of there.

105

00:06:28,920 --> 00:06:29,920

Certainly possible.

106

00:06:29,920 --> 00:06:32,720

I'd like to see what the high speed says.

107

00:06:32,720 --> 00:06:39,720

The high speed camera shows the bullet did hit the gun, but just missed the chamber.

108

00:06:39,720 --> 00:06:40,720

It's high.

109

00:06:40,720 --> 00:06:41,720

It's way high.

110

00:06:41,720 --> 00:06:42,720

Look at this.

111

00:06:42,720 --> 00:06:43,720

It's just flattering.

112

00:06:43,720 --> 00:06:45,720

The piece is coming out of the back even.

113

00:06:45,720 --> 00:06:48,240

That is crazy.

114

00:06:48,240 --> 00:06:52,600

After all this effort, it's definitely worth another try.

115

00:06:52,600 --> 00:06:53,600

Fire in the hole.

116

00:06:53,600 --> 00:06:58,600

Firing in three, two, one.

117

00:06:58,600 --> 00:07:02,000

Hey.

118

00:07:02,000 --> 00:07:03,000

That looks a little better.

119

00:07:03,000 --> 00:07:04,000

That looks a lot better.

120

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

I'm provisionally excited.

121

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

One minute adjustment and the bullet is all over that chamber, though you really can't

122

00:07:14,000 --> 00:07:15,600

call it a bullet anymore.

123

00:07:15,600 --> 00:07:18,160

There's nothing but little pieces there.

124

00:07:18,160 --> 00:07:23,400

The bullet did go into the chamber, but it's not left there as a chunk of a bullet.

125

00:07:23,400 --> 00:07:26,280

And that may just be the way that it works.

126

00:07:26,280 --> 00:07:27,640

I think we ought to try it again.

127

00:07:27,640 --> 00:07:32,600

I'm just not sure from this distance that that bullet's going to be anything but munched

128

00:07:32,600 --> 00:07:35,680

like scrap.

129

00:07:35,680 --> 00:07:40,680

It's a tougher shot than anyone imagined, and one of the reasons is all too obvious.

130

00:07:40,680 --> 00:07:47,280

The 9mm bullet is slightly bigger than the .38 caliber chamber.

131

00:07:47,280 --> 00:07:51,120

First of all, the bullet is larger than the cylinder bore, which means when it's hitting,

132

00:07:51,120 --> 00:07:53,840

parts of the bullets are stripping off, but on the high speed, it just looks like the

133

00:07:53,840 --> 00:07:57,280

bullet's disintegrating into powder, practically.

134

00:07:57,280 --> 00:07:59,760

Well, it's a little frustrating at this point.

135

00:07:59,760 --> 00:08:06,920

We keep lining it up dead on with lasers and very carefully finessing it into position,

136

00:08:06,920 --> 00:08:12,400

and these guns just aren't designed for that.

137

00:08:12,400 --> 00:08:18,800

Coming up, Tori Grant and Kerry put the world's oldest tool to the ultimate safety test, while

138

00:08:18,800 --> 00:08:27,600

Adam and Jamie hone in on a most unlikely gunshot.

139

00:08:27,600 --> 00:08:37,120

Alright, so this next myth actually comes from a viewer complaint.

140

00:08:37,120 --> 00:08:40,880

A lot of people feel that Jamie is using hammers unsafely.

141

00:08:40,880 --> 00:08:46,360

A lot of people feel that when he's shaping metal with two hammers like that, they feel

142

00:08:46,480 --> 00:08:49,640

like there's a potential to crack the heads or even explode the heads.

143

00:08:49,640 --> 00:08:50,640

Well, this seems easy enough.

144

00:08:50,640 --> 00:08:53,240

Why don't we just bang them together and find out what happens?

145

00:08:53,240 --> 00:08:58,960

Well, if it's really as lethal as a fan say, I think that could be a little dangerous.

146

00:08:58,960 --> 00:09:04,960

Now hammers aren't normally sold with instructions, but some do have warnings that give this myth

147

00:09:04,960 --> 00:09:06,760

plenty of street cred.

148

00:09:06,760 --> 00:09:13,000

Never strike the tool with or against another striking tool, hard and nail or other hard

149

00:09:13,000 --> 00:09:20,360

objects as chipping can occur, possibly resulting in eye or other injury.

150

00:09:20,360 --> 00:09:25,040

But is this tall tool tail really a serious threat to life and limb?

151

00:09:25,040 --> 00:09:30,080

So far it's done Jamie no harm, but maybe that's why he wears the hat.

152

00:09:30,080 --> 00:09:34,200

Time to consult an honest to God old fashioned blacksmith.

153

00:09:34,200 --> 00:09:39,440

Scott Thomas doesn't just use hammers, he makes them.

154

00:09:39,440 --> 00:09:44,800

Have you heard that slamming two hammers into each other is dangerous?

155

00:09:44,800 --> 00:09:46,240

It can be bad.

156

00:09:46,240 --> 00:09:50,040

Generally because hammers are both made out of hardened steel and when you strike two

157

00:09:50,040 --> 00:09:53,480

pieces of hardened steel together, something's going to give and you're usually going to

158

00:09:53,480 --> 00:09:57,040

get chips or one might even break or fracture on you.

159

00:09:57,040 --> 00:10:01,360

Straight from the horse's mouth or at least the guy who makes their shoes, Scott thinks

160

00:10:01,360 --> 00:10:03,860

testing this myth will be risky business.

161

00:10:03,860 --> 00:10:07,840

So Tauri's designed a, what do you know, hammer smashing robot.

162

00:10:08,240 --> 00:10:12,920

When I'm going to build it's just, you know, it'll be like a little triangle frame with

163

00:10:12,920 --> 00:10:19,200

two arms and the arms will be on two axes, kind of like this, so that when they both

164

00:10:19,200 --> 00:10:23,560

reach the bottom, the two hammer heads will strike against each other.

165

00:10:23,560 --> 00:10:29,200

We're probably going to have to use some pneumatic actuators just to get the kind of speeds that

166

00:10:29,200 --> 00:10:30,840

we want.

167

00:10:30,840 --> 00:10:33,740

Actuators are simply devices that make something move.

168

00:10:33,740 --> 00:10:39,620

These rotary models use compressed air to rotate at high speed through 90 degrees.

169

00:10:39,620 --> 00:10:44,780

They should give the robot arms the mechanical muscle needed to simulate a swinging human

170

00:10:44,780 --> 00:10:45,780

arm.

171

00:10:45,780 --> 00:10:51,540

It's ironic how I'm using a hammer to make this and this is going to be the same thing

172

00:10:51,540 --> 00:10:53,020

that destroys the hammer.

173

00:10:53,020 --> 00:10:56,020

It'll be like cup of lamo.

174

00:10:56,020 --> 00:10:58,900

It'll be like bled out.

175

00:10:58,900 --> 00:11:00,700

Well let's just wait and see.

176

00:11:00,700 --> 00:11:05,460

Tauri sets up in the blast chamber and for the first test he's fitting brand new wooden

177

00:11:05,460 --> 00:11:06,940

handled claw hammers.

178

00:11:06,940 --> 00:11:10,780

We have two hammers set up on the rig that Tauri built with the pneumatics that Grant

179

00:11:10,780 --> 00:11:11,780

has added.

180

00:11:11,780 --> 00:11:15,980

They're basically just going to come together at a very high velocity which we will measure

181

00:11:15,980 --> 00:11:18,420

with our scale and our high speed camera.

182

00:11:18,420 --> 00:11:21,420

Okay here we go in three, two, one.

183

00:11:21,420 --> 00:11:22,420

What happened?

184

00:11:22,420 --> 00:11:23,420

It broke both hands.

185

00:11:23,420 --> 00:11:37,580

The speed was fast, around 16 meters per second from each arm, but the timber handles took

186

00:11:37,580 --> 00:11:39,100

all the impact.

187

00:11:39,100 --> 00:11:42,700

Still, some hammers are tougher than others.

188

00:11:42,700 --> 00:11:48,780

These are double tempered steel handles, unbreakable under normal conditions.

189

00:11:49,460 --> 00:11:53,500

Okay these are far from normal conditions, but that's the point.

190

00:11:53,500 --> 00:11:57,940

These toughened steel handles should at least put the pressure back on the hammer heads.

191

00:11:57,940 --> 00:11:59,780

Alright, we ready?

192

00:11:59,780 --> 00:12:00,780

Yeah!

193

00:12:00,780 --> 00:12:04,780

Here we go in three, two, one.

194

00:12:04,780 --> 00:12:10,780

Very bendy, gumby hammer happening.

195

00:12:10,780 --> 00:12:11,780

Whoa.

196

00:12:11,780 --> 00:12:15,780

This face right here has a dent, but that's about the worst off.

197

00:12:15,780 --> 00:12:16,780

No strapping?

198

00:12:16,780 --> 00:12:18,620

There's no chipping, it's just denting.

199

00:12:18,620 --> 00:12:19,620

It's all intact.

200

00:12:19,620 --> 00:12:26,660

Well, there's your two basic hammer types, bashed and bent, and still no blinding shards

201

00:12:26,660 --> 00:12:27,660

of steel.

202

00:12:27,660 --> 00:12:35,900

Perhaps they're just not hitting hard enough.

203

00:12:35,900 --> 00:12:39,540

Adam and Jamie are just as frustrated with their backwards bullet.

204

00:12:39,540 --> 00:12:42,500

Is that as bad as I think it is?

205

00:12:42,500 --> 00:12:47,620

They want to confirm the story that a criminal's bullet hit and lodged in the empty chamber

206

00:12:47,620 --> 00:12:48,620

of a police revolver.

207

00:12:48,620 --> 00:12:53,660

So far, the messy results don't quite match the myth.

208

00:12:53,660 --> 00:12:55,580

Maybe the bullet bounced out of there.

209

00:12:55,580 --> 00:13:00,980

After some tiny adjustments to the pitch of the guns, they stand back, block their ears,

210

00:13:00,980 --> 00:13:02,500

and give it their best shot.

211

00:13:02,500 --> 00:13:06,100

Scylder test number five, trying to get a one in a million shot, a fifth try.

212

00:13:06,100 --> 00:13:07,100

Here we go.

213

00:13:07,100 --> 00:13:11,620

In three, two, one.

214

00:13:11,620 --> 00:13:15,060

The aim looks good, but they're chasing perfection.

215

00:13:15,060 --> 00:13:19,780

It's just a sliver straighter than the last shot, and that's all it takes.

216

00:13:19,780 --> 00:13:25,060

Incredibly, most of the bullet is still intact, and it's a very close match to the police photos.

217

00:13:25,060 --> 00:13:28,740

There's a hell of a lot of shrapnel at the bottom of the very chamber we were shooting

218

00:13:28,740 --> 00:13:32,900

into, and if you look in this way, you can see the copper jacket.

219

00:13:32,900 --> 00:13:36,380

That's a bullet lodged the wrong way in.

220

00:13:36,380 --> 00:13:40,180

This is the ballistics equivalent of a hole in one.

221

00:13:40,180 --> 00:13:41,180

Perfect.

222

00:13:41,180 --> 00:13:43,900

It's just perfect as we can possibly make it.

223

00:13:43,900 --> 00:13:47,180

It's a tight fit, as no one knows better than Jamie.

224

00:13:47,180 --> 00:13:51,140

It takes him 15 minutes to prize the bullet loose from the chamber.

225

00:13:51,140 --> 00:13:52,900

There wasn't much left of it.

226

00:13:52,900 --> 00:13:58,900

I had to saw and pry and finagle the thing out of the back of the gun, and a lot of it

227

00:13:58,900 --> 00:14:04,740

had actually gone into the cylinder and then kind of sprayed out the back and the gap between

228

00:14:04,740 --> 00:14:09,100

the cylinder and the rest of the gun, but it was an honest to goodness bullet, and it

229

00:14:09,100 --> 00:14:10,100

was in there.

230

00:14:10,100 --> 00:14:15,580

It looks just like the picture that we had from the report we saw.

231

00:14:15,580 --> 00:14:16,580

It's perfect.

232

00:14:16,580 --> 00:14:17,580

I couldn't be happier.

233

00:14:17,580 --> 00:14:18,900

I'm calling this one confirmed.

234

00:14:18,900 --> 00:14:23,340

It's totally possible that you can shoot your bullet down the cylinder of another person's

235

00:14:23,340 --> 00:14:24,700

gun.

236

00:14:24,700 --> 00:14:33,660

I'm calling this one confirmed, 100%.

237

00:15:03,660 --> 00:15:08,500

Really send deadly shards of steel whizzing around the workplace.

238

00:15:08,500 --> 00:15:14,380

Some tool makers take the myth seriously, but so far, Tari's hammer smashing robot has

239

00:15:14,380 --> 00:15:16,500

barely made a dent.

240

00:15:16,500 --> 00:15:21,100

Well clearly we're not in any imminent danger based on these few tests here, so we're going

241

00:15:21,100 --> 00:15:26,540

to step away from the robot and give it a crack ourselves.

242

00:15:26,540 --> 00:15:31,940

Grant's concerned that the robot arms might simply be too slow to cause the fabled fracture.

243

00:15:31,940 --> 00:15:37,380

So with a high speed camera and a calibration board, you'll soon find out who's fastest,

244

00:15:37,380 --> 00:15:40,780

man or machine.

245

00:15:40,780 --> 00:15:51,220

Tari thinks you'll drive the nail with one strike, but that was a tad optimistic.

246

00:15:51,220 --> 00:15:55,220

I was just like inches away from hitting the nail.

247

00:15:55,220 --> 00:15:56,460

Just inches.

248

00:15:56,460 --> 00:15:57,460

Inches.

249

00:15:57,460 --> 00:15:58,900

I was just inches away.

250

00:15:59,020 --> 00:16:02,500

To the plate at its swing and a miss.

251

00:16:02,500 --> 00:16:03,500

You know.

252

00:16:03,500 --> 00:16:05,500

Look I hit the same spot as last time.

253

00:16:05,500 --> 00:16:07,660

Why did she put the nail there?

254

00:16:07,660 --> 00:16:11,660

It's worth noting that a smart remark rarely goes unpunished.

255

00:16:11,660 --> 00:16:12,660

Oh!

256

00:16:12,660 --> 00:16:13,660

Are you okay?

257

00:16:13,660 --> 00:16:14,660

Oh my god.

258

00:16:14,660 --> 00:16:15,660

Oh.

259

00:16:15,660 --> 00:16:16,660

You missed the steel cap.

260

00:16:16,660 --> 00:16:17,660

You hit me on the side.

261

00:16:17,660 --> 00:16:18,660

You guys might want to like...

262

00:16:18,660 --> 00:16:19,660

Oh.

263

00:16:19,660 --> 00:16:37,420

The advice is well taken and in due course, Tari finally hits the nail on the head.

264

00:16:37,420 --> 00:16:40,980

Where is it?

265

00:16:40,980 --> 00:16:41,980

Yeah.

266

00:16:41,980 --> 00:16:42,980

You got it?

267

00:16:42,980 --> 00:16:43,980

One shot.

268

00:16:43,980 --> 00:16:49,060

At least we have plenty of information on his velocity, not his accuracy.

269

00:16:49,060 --> 00:16:54,940

High speed replays clock Tari's mighty swing at 16 meters per second, which is no faster

270

00:16:54,940 --> 00:17:00,420

than the robot, so speed at impact clearly isn't the problem.

271

00:17:00,420 --> 00:17:05,180

With our last round of human testing, we were successful in that we confirmed our robot

272

00:17:05,180 --> 00:17:09,020

as well in the realm of human capacity.

273

00:17:09,020 --> 00:17:13,540

In a desperate effort to prove the legend of spurting shrapnel, they try again with

274

00:17:13,540 --> 00:17:16,260

two of Adam's old, pre-loved hammers.

275

00:17:16,660 --> 00:17:21,220

It's a possibility that over time, the constant hitting of those hammers maybe tempers them

276

00:17:21,220 --> 00:17:24,060

in some way and makes them more brittle so they might shatter.

277

00:17:24,060 --> 00:17:30,660

This is Adam's old hammer versus Adam's old hammers.

278

00:17:30,660 --> 00:17:33,700

Once again, no shards.

279

00:17:33,700 --> 00:17:36,660

Looks like the handle's bent, but no shattering.

280

00:17:36,660 --> 00:17:40,180

So what about a pair that spent a whole night in the freezer?

281

00:17:40,180 --> 00:17:50,900

Well, these are our best quality hammers kept overnight at minus 10 degrees Fahrenheit.

282

00:17:50,900 --> 00:17:56,140

And you can tell right here closest that we've gotten to a chip.

283

00:17:56,140 --> 00:17:58,300

Still, no explosion.

284

00:17:58,300 --> 00:18:00,980

Okay, so where to from here?

285

00:18:00,980 --> 00:18:02,540

Maybe Jamie has the answer.

286

00:18:02,540 --> 00:18:04,980

Jamie, we've been doing this all afternoon.

287

00:18:04,980 --> 00:18:06,420

We've been smacking hammers together.

288

00:18:06,420 --> 00:18:11,100

We haven't gotten anything more than a little tiny spray of particle dust.

289

00:18:11,100 --> 00:18:14,820

And you're sort of the subject of this whole myth and you're the reason that we're visiting

290

00:18:14,820 --> 00:18:15,820

it.

291

00:18:15,820 --> 00:18:23,260

I think if a hammer head is really hard, like if it's just super hard, it's going to be

292

00:18:23,260 --> 00:18:28,660

brittle, that you would do by getting the hammer head really hot, like red or white

293

00:18:28,660 --> 00:18:29,660

hot.

294

00:18:29,660 --> 00:18:33,220

As hot as you can get it without melting it and then quenching it and used motor oil

295

00:18:33,220 --> 00:18:39,620

because it absorbs a lot of the excess carbon in there.

296

00:18:39,620 --> 00:18:44,020

It's called case hardening and here's why it could work.

297

00:18:44,020 --> 00:18:46,540

Steel is an alloy of iron and carbon.

298

00:18:46,540 --> 00:18:51,140

The more carbon you add to the mix, the more brittle the steel.

299

00:18:51,140 --> 00:18:54,460

So Tori taps into the nearest source of free carbon.

300

00:18:54,460 --> 00:18:58,180

That's some dirty oil.

301

00:18:58,180 --> 00:19:04,660

The used motor oil is full of carbon, which is introduced into the hot metal and it's

302

00:19:04,660 --> 00:19:08,700

supposed to make this a much stronger hammer.

303

00:19:08,700 --> 00:19:14,900

But in taking away some of its softness, which absorbs shock, we are making it more brittle.

304

00:19:14,900 --> 00:19:17,180

At least that's the idea.

305

00:19:17,180 --> 00:19:21,940

And that calls for a down home myth buster style barbecue.

306

00:19:21,940 --> 00:19:24,740

Who had the 20 ounce claw hammer?

307

00:19:24,740 --> 00:19:25,740

Medium?

308

00:19:25,740 --> 00:19:26,740

Okay.

309

00:19:26,740 --> 00:19:27,740

Medium on this one.

310

00:19:27,900 --> 00:19:33,020

Once the hammers are heated to a healthy red glow, they're all set to suck up the carbon

311

00:19:33,020 --> 00:19:35,180

from that second hand motor oil.

312

00:19:35,180 --> 00:19:39,740

When they've cooked and cooled, we might just have the explosive hammers we've been looking

313

00:19:39,740 --> 00:19:40,740

for.

314

00:19:40,740 --> 00:19:48,380

Still to come, Adam and Jamie face off to see who gets to play Super Sniper.

315

00:19:48,380 --> 00:19:50,140

Give us a break.

316

00:19:50,140 --> 00:19:52,780

Don't try what you're about to see at home.

317

00:19:52,780 --> 00:19:59,380

Back at Myth Busters HQ, Adam and Jamie are ready to test their next classic gun myth.

318

00:19:59,380 --> 00:20:00,700

I've seen this in the movies.

319

00:20:00,700 --> 00:20:05,460

It's one sniper taking out another sniper and the final thing is the guy who's about

320

00:20:05,460 --> 00:20:10,980

to be killed sees the first sniper in his eyepiece and gets shot right through his scope, through

321

00:20:10,980 --> 00:20:12,420

his eye, through his head.

322

00:20:12,420 --> 00:20:13,420

That's it?

323

00:20:13,420 --> 00:20:14,420

That's it.

324

00:20:14,420 --> 00:20:17,980

I don't think that the insurance company is going to let you or I be the sniping victim

325

00:20:17,980 --> 00:20:18,980

in this.

326

00:20:18,980 --> 00:20:22,700

I think we should ask Grant if he's willing to do it.

327

00:20:23,620 --> 00:20:29,540

Sadly, Grant's too busy bashing hammers to accept the invitation, but he has offered

328

00:20:29,540 --> 00:20:31,860

his likeness in the name of science.

329

00:20:31,860 --> 00:20:37,140

Well, the stuff that I'm making it out of is a ballistics media that's actually based

330

00:20:37,140 --> 00:20:39,380

on animal protein.

331

00:20:39,380 --> 00:20:44,780

So it's perfect for us in seeing a real damage assessment to muscle tissue.

332

00:20:44,780 --> 00:20:51,060

That's exactly what this equates to when it's dry, is muscle tissue.

333

00:20:51,060 --> 00:20:55,940

Just like the backwards bullet, this myth wasn't invented by a script writer.

334

00:20:55,940 --> 00:21:01,700

The legend stems from the Vietnam War, when a US Marine sniper named Carlos Hathcock killed

335

00:21:01,700 --> 00:21:07,340

his VC counterpart with one shot straight down the scope.

336

00:21:07,340 --> 00:21:10,700

Jamie's first job is to track down a similar rifle.

337

00:21:10,700 --> 00:21:13,220

This is a new gun that just came out.

338

00:21:13,220 --> 00:21:19,060

This is the actual 100% true copy of a Vietnam sniper rifle.

339

00:21:19,060 --> 00:21:21,060

So is that a good rifle?

340

00:21:21,060 --> 00:21:27,820

Oh man, you could hit a fly at 500 yards of this if you're a good sniper.

341

00:21:27,820 --> 00:21:34,660

All they need now is a victim, and Adam delivers a bouncing ballistics baby named Grant.

342

00:21:36,660 --> 00:21:39,340

Beautiful, look at that.

343

00:21:40,220 --> 00:21:41,220

That.

344

00:21:45,980 --> 00:21:46,980

That's great.

345

00:21:47,900 --> 00:21:49,900

This ought to be not so hard.

346

00:21:49,900 --> 00:21:51,700

Look at that.

347

00:21:51,700 --> 00:21:56,820

That's easy, I can do that with a piece of bailing wire.

348

00:21:56,820 --> 00:22:02,700

Always a bear for detail, Adam hitches a lift to raid Jamie's wig wardrobe.

349

00:22:02,700 --> 00:22:03,700

That's it.

350

00:22:03,700 --> 00:22:08,340

Now at least we'll have a snappy sniper.

351

00:22:08,340 --> 00:22:13,580

A little cosmetic surgery to accommodate the rifle rig, and they're ready to go.

352

00:22:13,580 --> 00:22:14,580

I guess we're all set.

353

00:22:14,580 --> 00:22:16,340

Let's go do some sharpshooting.

354

00:22:17,980 --> 00:22:24,100

Jamie and Adam have brought their two sniper rifles and a rubbery likeness of Grant to

355

00:22:24,100 --> 00:22:25,780

a local rifle range.

356

00:22:25,780 --> 00:22:28,460

There's our sniper.

357

00:22:28,460 --> 00:22:33,020

They want to see if one sniper could kill another by shooting a bullet straight down

358

00:22:33,020 --> 00:22:34,020

the enemy scope.

359

00:22:34,020 --> 00:22:35,940

I look forward to seeing if we can make that shot.

360

00:22:35,940 --> 00:22:37,980

What is it from here to the end of the range?

361

00:22:37,980 --> 00:22:43,500

It's 100 yards, which for a sniper or precision marksman is not really that far.

362

00:22:43,500 --> 00:22:45,820

So you think this is totally possible?

363

00:22:45,820 --> 00:22:51,460

Apparently back in World War II, when marksmen were first used for this type of activity,

364

00:22:51,460 --> 00:22:55,060

they were trained to aim at the glint of the opponent's scope.

365

00:22:55,060 --> 00:22:58,860

So in bright sunlight, they saw a little reflection to aim at that glint.

366

00:22:58,860 --> 00:23:02,420

And that's why there's really potential for this myth to be seen today.

367

00:23:02,420 --> 00:23:05,060

I think we can knock this out today.

368

00:23:05,060 --> 00:23:07,140

But Jamie has his doubts.

369

00:23:07,140 --> 00:23:10,900

The question is, what will happen to that bullet when it hits the scope?

370

00:23:10,900 --> 00:23:15,060

Is it actually going to penetrate all the way through and hit the other sniper in the

371

00:23:15,060 --> 00:23:19,300

eye or is the scope going to serve as some sort of a shield?

372

00:23:19,300 --> 00:23:23,740

Jamie's worried about the half dozen or so glass lenses inside the scope.

373

00:23:23,740 --> 00:23:29,140

They're not especially robust, but any one of them could still deflect a speeding bullet

374

00:23:29,140 --> 00:23:33,180

and stop it from bursting out the other end.

375

00:23:33,180 --> 00:23:40,980

Once again, Allen needs to sight in the rifle by taking test shots at a target.

376

00:23:40,980 --> 00:23:45,820

Here's the center of the group, right?

377

00:23:45,820 --> 00:23:49,380

They're going to move in one click left and one click down.

378

00:23:49,380 --> 00:23:50,380

And that's it.

379

00:23:50,380 --> 00:23:55,140

Once we know that it's reasonably centered in that fashion, you guys can start shooting.

380

00:23:55,140 --> 00:24:04,740

Now's the chance for Adam and Jamie to get their fingers on the trigger.

381

00:24:04,740 --> 00:24:06,260

Good job, young man.

382

00:24:06,260 --> 00:24:10,500

Yeah, good shooting there, Tex.

383

00:24:11,500 --> 00:24:15,820

There's a myth that I'm looking to bust today, which is that somehow Jamie is an incredible

384

00:24:15,820 --> 00:24:18,340

shot and I'm a terrible shot.

385

00:24:18,340 --> 00:24:20,020

It's not that I feel competitive.

386

00:24:20,020 --> 00:24:24,420

Just, you know, I happen to be a myth buster.

387

00:24:24,420 --> 00:24:30,420

Bullseye right down the middle.

388

00:24:30,420 --> 00:24:32,420

Perfect shot.

389

00:24:32,420 --> 00:24:38,360

Jamie's grouping is close to perfect, but then Adam's effort wasn't exactly scattershot.

390

00:24:38,360 --> 00:24:40,880

There can only be one fair decision.

391

00:24:40,880 --> 00:24:43,160

They both get to shoot Grant.

392

00:24:43,160 --> 00:24:44,960

I think it's time to set up our sniper target.

393

00:24:44,960 --> 00:24:48,320

I think it's time to set up our sniper target as well.

394

00:24:48,320 --> 00:24:52,400

This might be a good time for Grant's mom to turn off the TV.

395

00:24:52,400 --> 00:24:59,880

Our floppy facsimile is carefully positioned behind his rifle out at the 100 yard mark.

396

00:24:59,880 --> 00:25:02,800

Heads, tails.

397

00:25:02,800 --> 00:25:03,800

Jamie goes first.

398

00:25:03,800 --> 00:25:07,240

Jamie wins the coin toss and the right to shoot first.

399

00:25:07,320 --> 00:25:11,320

I don't know whether I'm going to hit the guy behind the scope or not, but I'm going

400

00:25:11,320 --> 00:25:13,480

to pretend it's either him or me.

401

00:25:13,480 --> 00:25:17,860

We want to hit smack dab in the middle because we want that bullet to go all the way through

402

00:25:17,860 --> 00:25:21,000

the scope and into our sniper.

403

00:25:21,000 --> 00:25:25,540

Confidence is high that this myth could be proved with a one hit wonder.

404

00:25:25,540 --> 00:25:28,040

And there's no doubt that Jamie's got his eye in.

405

00:25:38,080 --> 00:25:40,680

I think that was the money shot.

406

00:25:40,680 --> 00:25:43,800

It's a direct hit from a distance of 100 yards.

407

00:25:43,800 --> 00:25:49,360

The scope is history, but gunman Grant lives to snipe another day.

408

00:25:49,360 --> 00:25:52,200

It didn't make it through to his eye.

409

00:25:52,200 --> 00:25:54,080

It didn't even make it to the back of the scope.

410

00:25:54,080 --> 00:26:00,120

I do say this guy would be kind of upset, but his eye is still intact and the scope

411

00:26:00,120 --> 00:26:03,160

acted effectively as a shield.

412

00:26:03,160 --> 00:26:05,720

It looks like Jamie's fears were well founded.

413

00:26:05,720 --> 00:26:10,760

The optic elements jam the bullet, but with three more scopes to destroy, they can still

414

00:26:10,760 --> 00:26:12,640

turn this myth around.

415

00:26:15,360 --> 00:26:20,080

Well it's up to Adam to see whether he can best this shot and that's going to be a pretty

416

00:26:20,080 --> 00:26:21,600

tall task.

417

00:26:21,600 --> 00:26:25,720

The fate of the squad rests with Sergeant Savage.

418

00:26:29,520 --> 00:26:30,840

I'm happy with that shot.

419

00:26:30,840 --> 00:26:33,120

Let's see how it is.

420

00:26:33,120 --> 00:26:38,600

It's another clean hit, unleashing a river of pulverized glass, but it's Adam who's

421

00:26:38,600 --> 00:26:39,840

truly shattered.

422

00:26:39,840 --> 00:26:42,720

It doesn't look like I made it.

423

00:26:42,720 --> 00:26:44,720

Nope, similar deal.

424

00:26:44,720 --> 00:26:47,760

No, it doesn't even look like it made it as far.

425

00:26:47,760 --> 00:26:51,840

Look, we have two hits, neither of them are kill shots, but there's no reason to call

426

00:26:51,840 --> 00:26:54,040

this one busted yet.

427

00:26:54,040 --> 00:27:00,080

Jamie or I have been firing sniper rifles for all of four hours.

428

00:27:00,080 --> 00:27:04,600

I think it might be time to bring in our ringer and ask Sergeant Normandy to take the shot

429

00:27:04,600 --> 00:27:05,600

for us.

430

00:27:05,600 --> 00:27:11,600

They're hoping for one expert shot that hits and shatters those lenses dead level, dead

431

00:27:11,600 --> 00:27:15,240

center with no deflection.

432

00:27:15,240 --> 00:27:20,320

So a new scope is fitted and the master marksman takes aim.

433

00:27:20,320 --> 00:27:28,880

I don't think I got it.

434

00:27:28,880 --> 00:27:33,760

In fact, he did get it, but once again, the bullet stopped short of ruining Grant's good

435

00:27:33,760 --> 00:27:34,760

looks.

436

00:27:34,760 --> 00:27:37,960

No, didn't make it through the back.

437

00:27:37,960 --> 00:27:39,520

It's the same deal as before.

438

00:27:39,520 --> 00:27:41,160

I don't see a hole all the way through.

439

00:27:41,160 --> 00:27:43,000

I see everything collapsed inside.

440

00:27:43,000 --> 00:27:47,520

Yeah, look, I think this just, I mean, to me, this just keeps on explaining that it's not

441

00:27:47,520 --> 00:27:48,720

about marksmanship.

442

00:27:48,720 --> 00:27:51,000

It's about a ridiculously lucky shot.

443

00:27:51,000 --> 00:27:52,000

It's not plus or minus.

444

00:27:52,000 --> 00:27:53,000

It's like threading a needle.

445

00:27:53,000 --> 00:27:54,000

A half inch.

446

00:27:54,000 --> 00:27:56,560

Yeah, it's like threading a needle from 300 feet away.

447

00:27:56,560 --> 00:28:01,720

There's only one scope left, so they decide to stack the odds and make this last test

448

00:28:01,720 --> 00:28:04,760

up close and lethal.

449

00:28:04,760 --> 00:28:09,360

What we're doing now is we're setting up a point blank shot so that there's no kind

450

00:28:09,360 --> 00:28:11,400

of trajectory involved.

451

00:28:11,400 --> 00:28:17,640

We've determined that the power of the bullet, the difference from the distance is negligible.

452

00:28:17,640 --> 00:28:22,920

So if this doesn't do it, then we'll be able to say something definitive about whether

453

00:28:22,920 --> 00:28:25,280

the myth is possible or not.

454

00:28:25,280 --> 00:28:30,000

It's literally their last shot at this myth, and Alan has the honors.

455

00:28:30,000 --> 00:28:36,640

One, two, three.

456

00:28:36,640 --> 00:28:40,520

The impact is strong enough to knock the scope from the rifle.

457

00:28:40,520 --> 00:28:44,200

It's a fitting end to a myth that's been all but blown away.

458

00:28:44,200 --> 00:28:48,840

Oh man, looks like the same as the others from 100 yards.

459

00:28:48,840 --> 00:28:50,920

It's deflecting off the convex lens.

460

00:28:50,920 --> 00:28:52,640

Exactly the same deal.

461

00:28:52,640 --> 00:28:57,480

If you're a sniper and you're looking down the barrel of another sniper's gun and you

462

00:28:57,480 --> 00:29:02,000

see this blint, I'd take the shot.

463

00:29:02,000 --> 00:29:05,720

First off, you're going to ruin the guy's scope and he's not going to be able to shoot

464

00:29:05,720 --> 00:29:07,360

back very accurately.

465

00:29:07,360 --> 00:29:10,160

Secondly, you're probably going to make him clear out of there.

466

00:29:10,160 --> 00:29:12,520

He's not going to be a very happy camper.

467

00:29:12,520 --> 00:29:17,800

And then thirdly, I mean, if you miss, you're going to hit his head.

468

00:29:17,800 --> 00:29:19,920

It's a one in a billion shot.

469

00:29:19,920 --> 00:29:23,960

He might have been the best marksman in the world and might have never made that shot.

470

00:29:23,960 --> 00:29:28,440

If the sun and moon and stars aligned and maybe one of the lenses was weak and maybe

471

00:29:28,440 --> 00:29:33,840

the sniper had removed an element because he had some better focusing thing, maybe then

472

00:29:33,840 --> 00:29:35,720

the bullet could have gone through.

473

00:29:35,720 --> 00:29:40,720

We don't have the scope that Gunny Hathcock shot at, so we can't know for sure.

474

00:29:40,720 --> 00:29:47,000

I say we have to call this myth busted.

475

00:29:47,000 --> 00:29:50,800

Next up, the legend lights up in exploding hammers.

476

00:29:50,800 --> 00:29:52,200

Everything's under control.

477

00:29:52,200 --> 00:30:00,440

And our last gun myth shapes up as a civil war meltdown.

478

00:30:00,440 --> 00:30:05,680

Tory Grant and Kerry are testing the myth that smashing hammers together could be extremely

479

00:30:05,680 --> 00:30:09,520

bad for your health.

480

00:30:09,520 --> 00:30:14,440

So far, they've hardly scratched the surface, but according to Jamie, high heat followed

481

00:30:14,440 --> 00:30:21,920

by a carbon rich oil bath should make the steel much more brittle and much more flammable.

482

00:30:21,920 --> 00:30:23,800

Well, that's interesting.

483

00:30:23,800 --> 00:30:24,800

That's cool.

484

00:30:24,800 --> 00:30:25,800

I didn't expect that.

485

00:30:25,800 --> 00:30:27,200

I didn't either.

486

00:30:27,200 --> 00:30:29,640

More steel and more flames.

487

00:30:29,640 --> 00:30:33,040

This backyard Barbie is getting way out of control.

488

00:30:33,040 --> 00:30:34,400

You're spilling it on the wood pallet.

489

00:30:34,400 --> 00:30:36,240

I'm getting a fire extinguisher.

490

00:30:36,240 --> 00:30:48,840

The extinguisher works briefly, but it's no match for flaming oil.

491

00:30:48,840 --> 00:30:49,840

Everything's under control.

492

00:30:49,840 --> 00:30:53,680

That always sounds so easy in those do-it-yourself manuals.

493

00:30:53,680 --> 00:30:59,040

This case hardened solid steel hammer is ready to be put to the sword.

494

00:30:59,040 --> 00:31:03,760

And this time, they've decided to crash it into something that's guaranteed not to bend

495

00:31:03,760 --> 00:31:04,760

or break.

496

00:31:05,280 --> 00:31:09,440

What we're going to do is we're going to put to rest one of these arms.

497

00:31:09,440 --> 00:31:14,880

We're just going to have the hammers crash into the anvil.

498

00:31:14,880 --> 00:31:18,200

So we are moving onto a test that possibly could be the grand finale.

499

00:31:18,200 --> 00:31:22,600

This could be the shattering hammer that we've been waiting so patiently for.

500

00:31:22,600 --> 00:31:25,040

Systems arm let down.

501

00:31:25,040 --> 00:31:27,080

Just got a limbo my way out.

502

00:31:27,080 --> 00:31:28,080

All right.

503

00:31:28,080 --> 00:31:29,560

So this is the final test.

504

00:31:29,560 --> 00:31:37,080

Harden hammer against anvil in three, two, one.

505

00:31:37,080 --> 00:31:39,560

The result is totally unexpected.

506

00:31:39,560 --> 00:31:45,000

The carbon-soaked head failed to shatter, but the softer shaft has a serious case of the

507

00:31:45,000 --> 00:31:46,000

bends.

508

00:31:46,000 --> 00:31:48,000

That was the part that wasn't hardened.

509

00:31:48,000 --> 00:31:49,000

That's true.

510

00:31:49,000 --> 00:31:51,520

That's the part that wasn't hardened.

511

00:31:51,520 --> 00:31:52,520

Dang!

512

00:31:52,520 --> 00:31:54,680

Yeah, that was the part that wasn't hardened.

513

00:31:54,680 --> 00:31:57,080

That's pretty cool.

514

00:31:57,080 --> 00:32:01,280

This here is our case, hardened hammer, which we did on our last test.

515

00:32:01,280 --> 00:32:08,080

Now the hammer's so hard, and this is so soft that the neck completely bent.

516

00:32:08,080 --> 00:32:12,120

Those flying fragments are just flaky residue from the barbecue.

517

00:32:12,120 --> 00:32:14,840

The head itself is completely undamaged.

518

00:32:14,840 --> 00:32:22,440

Conclusion, it's never wise to bang two good tools together, but the chances of a hardware

519

00:32:22,440 --> 00:32:26,840

store hammer exploding are virtually zero.

520

00:32:27,400 --> 00:32:29,080

So are we in agreement?

521

00:32:29,080 --> 00:32:30,400

Hammer versus hammer, busted?

522

00:32:30,400 --> 00:32:31,960

Yeah, it's busted.

523

00:32:31,960 --> 00:32:39,280

Totally busted.

524

00:32:39,280 --> 00:32:44,760

Coming up, Jamie and Adam are well on target to test one of America's oldest gun myths.

525

00:32:44,760 --> 00:32:50,200

Three, two, one.

526

00:32:50,200 --> 00:32:55,160

Jamie and Adam have already proved that a fired bullet could end up in another gun's

527

00:32:55,160 --> 00:32:57,160

empty chamber.

528

00:32:57,160 --> 00:33:02,560

As for killing the enemy by shooting down his sniper scope, well, Grant survived without

529

00:33:02,560 --> 00:33:03,680

a scratch.

530

00:33:03,680 --> 00:33:08,560

But this last gun myth might be the toughest test of all.

531

00:33:08,560 --> 00:33:11,160

Now I've got one that I've been wanting to try.

532

00:33:11,160 --> 00:33:17,560

About two Civil War soldiers who fired at each other and their bullets fused together

533

00:33:17,560 --> 00:33:21,240

in midair and dropped to the ground below where they hit.

534

00:33:21,240 --> 00:33:22,840

It sounds like a classic myth.

535

00:33:22,840 --> 00:33:28,400

It also sounds like one that might be a little trickier than we think to pull it off.

536

00:33:28,400 --> 00:33:32,720

They're going to want to go, and every plays butt like that.

537

00:33:32,720 --> 00:33:36,440

This is definitely a one in a million shot, but we've got to try this one.

538

00:33:36,440 --> 00:33:40,640

It's one of my favorites.

539

00:33:40,640 --> 00:33:47,360

One famous fused bullet myth became folklore at the Battle of Fredericksburg in 1862.

540

00:33:47,360 --> 00:33:50,960

These primitive rifles shot rounds called mini-balls.

541

00:33:50,960 --> 00:33:55,800

Slightly pointed, 58 caliber slugs of solid lead.

542

00:33:55,800 --> 00:33:57,400

The recipe is simple.

543

00:33:57,400 --> 00:34:05,960

Melt some lead pellets, pour the liquid into the mold, and then cool it.

544

00:34:05,960 --> 00:34:12,040

Now that is perfect.

545

00:34:12,040 --> 00:34:18,640

Meantime, Jamie sourced two near-perfect replica rifles to fire those mini-balls.

546

00:34:18,640 --> 00:34:23,400

What we're going to do is take these rifles and put them in our bunker at opposite ends.

547

00:34:23,400 --> 00:34:28,680

We'll probably screw them down onto a table and we'll line them up with laser sights.

548

00:34:28,680 --> 00:34:34,080

We'll use the adjustable qualities of these clamps to precisely dial them in, and we're

549

00:34:34,080 --> 00:34:35,840

good to go.

550

00:34:35,840 --> 00:34:39,160

But this is shaping up as one very tricky test.

551

00:34:39,160 --> 00:34:43,040

These rifles need to be fully adjustable for fine tuning.

552

00:34:43,040 --> 00:34:46,680

But once they're set, they can't move a fraction of an inch.

553

00:34:46,680 --> 00:34:50,200

I've got an idea which I think you're going to like.

554

00:34:50,200 --> 00:34:55,880

You know the really, really huge hockey puck magnets of death?

555

00:34:55,880 --> 00:34:58,920

How could anyone forget?

556

00:34:58,920 --> 00:35:03,440

Jamie used his mega magnets to climb up the inside of a metal duct.

557

00:35:03,440 --> 00:35:08,000

Thor, the god of thunder is trying to enter my building.

558

00:35:08,000 --> 00:35:11,760

And they could make or break this rifle rig.

559

00:35:11,760 --> 00:35:15,000

These magnets are like the most diabolical things you've ever seen.

560

00:35:15,000 --> 00:35:18,560

They're like straight out of a science fiction movie except they're real.

561

00:35:18,560 --> 00:35:22,160

And on a side note, they actually provide us a lot of the adjustability we'd be looking

562

00:35:22,160 --> 00:35:23,160

for.

563

00:35:23,160 --> 00:35:26,320

I mean these guns aren't going to go anywhere with two of these magnets on them.

564

00:35:26,320 --> 00:35:31,480

Mounting the magnets to the frame involves a fair degree of strength and patience.

565

00:35:31,480 --> 00:35:35,080

There we go.

566

00:35:35,080 --> 00:35:38,320

But the key to testing this myth is timing.

567

00:35:38,320 --> 00:35:43,840

Two actuators linked up to digital timers should ensure a simultaneous trigger.

568

00:35:43,880 --> 00:35:46,480

That's no guarantee of success.

569

00:35:46,480 --> 00:35:52,440

We've got a hammer that hits a cap that ignites the powder that sets the bullet off on its

570

00:35:52,440 --> 00:35:53,440

path.

571

00:35:53,440 --> 00:35:55,040

One bullet could be packed a little tighter.

572

00:35:55,040 --> 00:35:57,200

One bullet could have a little more wadding.

573

00:35:57,200 --> 00:36:00,280

One black powder might have a drop of someone's sweat in it.

574

00:36:00,280 --> 00:36:04,880

One cap, I don't even know what the manufacturing standards on these caps are.

575

00:36:04,880 --> 00:36:09,280

All these factors could really get in our way of being able to get these bullets to

576

00:36:09,280 --> 00:36:13,160

fire simultaneously and hit in midair.

577

00:36:13,160 --> 00:36:20,680

They're setting the guns just six feet apart, hoping the laser sights ensure a hit.

578

00:36:20,680 --> 00:36:25,720

In case the aim is a skew, they've fitted circular collars to the end of both barrels

579

00:36:25,720 --> 00:36:28,160

to limit the damage to the rest of the gun.

580

00:36:28,160 --> 00:36:34,560

In order to align the two barrels directly down each other's throat, we've got these

581

00:36:34,560 --> 00:36:37,600

which are in-barrel laser sights.

582

00:36:37,600 --> 00:36:42,320

Basically, I put this in the barrel and I screw it in and it pulls this little thing

583

00:36:42,320 --> 00:36:45,840

down, expands this collet to fit the barrel.

584

00:36:45,840 --> 00:36:50,600

And then I know that this laser is dead center of the barrel pointing exactly where that

585

00:36:50,600 --> 00:36:52,320

barrel's going to shoot.

586

00:36:52,320 --> 00:36:56,160

Line both of these up across the same center and we should get two bullets meeting.

587

00:36:56,160 --> 00:36:58,560

But the biggest concern is timing.

588

00:36:58,560 --> 00:37:05,120

Jamie's actuators are precise to the millisecond, but 19th century firing caps and gunpowder

589

00:37:05,120 --> 00:37:08,080

aren't so reliable.

590

00:37:08,080 --> 00:37:14,360

So Adam's running a test with a slab of bulletproof plastic to see if both rifles fire in perfect

591

00:37:14,360 --> 00:37:15,360

unison.

592

00:37:15,360 --> 00:37:18,880

Alright, I'm just about to put the caps in and we should clear all non-essential personnel.

593

00:37:18,880 --> 00:37:20,280

Okay, I'm out.

594

00:37:20,280 --> 00:37:21,280

Alright.

595

00:37:21,280 --> 00:37:23,600

Okay, range is going hot.

596

00:37:23,600 --> 00:37:25,600

Clear the range.

597

00:37:25,600 --> 00:37:33,320

Three, two, one.

598

00:37:33,320 --> 00:37:35,520

I heard that bounce around.

599

00:37:35,520 --> 00:37:39,720

And I also heard that it wasn't quite exactly the same hit.

600

00:37:39,720 --> 00:37:44,760

There's only one slug embedded in the plastic and it takes a minute to figure things out.

601

00:37:44,760 --> 00:37:50,480

No, that's the bullet from this side because there's still a barrier.

602

00:37:50,480 --> 00:37:53,960

Yeah, I think they both just kind of bounced off.

603

00:37:53,960 --> 00:37:56,600

This one didn't quite bounce as far as the other one.

604

00:37:56,600 --> 00:37:59,160

Hey, how good is the aim?

605

00:37:59,160 --> 00:38:00,160

It's perfect.

606

00:38:00,160 --> 00:38:02,200

I can't tell, is it?

607

00:38:02,200 --> 00:38:03,200

Yeah.

608

00:38:03,200 --> 00:38:04,920

That is very, very cool.

609

00:38:04,920 --> 00:38:06,120

Let's check out the high speed.

610

00:38:06,120 --> 00:38:08,880

The high speed camera confirms the theory.

611

00:38:08,880 --> 00:38:14,200

One bullet popped out the other because one gun fired a fraction of a second later.

612

00:38:14,200 --> 00:38:21,680

Which means we now want to set this one to fire 62 milliseconds before that one.

613

00:38:21,680 --> 00:38:23,560

Well, I've got it set for delay.

614

00:38:23,560 --> 00:38:26,480

So I'll delay that one 62 milliseconds.

615

00:38:26,480 --> 00:38:27,480

Yes.

616

00:38:27,480 --> 00:38:32,840

Six hundreds of a second might not sound much, but that tiny delay could be catastrophic

617

00:38:32,840 --> 00:38:34,760

in a real test.

618

00:38:34,760 --> 00:38:39,040

It's way more time than it takes for one bullet to get from one gun to the other.

619

00:38:39,040 --> 00:38:42,200

So that would have been one bullet all the way down the barrel of the other gun.

620

00:38:42,200 --> 00:38:47,800

Our biggest worry is that this black powder stuff is so unreliable that we may get some

621

00:38:47,800 --> 00:38:52,960

totally different result next time, but at least we're dialing in on it.

622

00:38:52,960 --> 00:38:56,520

The odds against perfect synchronicity are enormous.

623

00:38:56,520 --> 00:38:59,680

The gun powder is just too unreliable.

624

00:38:59,680 --> 00:39:05,480

So they might as well bite the bullet, lose the plastic, and do this test for real.

625

00:39:05,480 --> 00:39:10,520

In three, two, one.

626

00:39:10,520 --> 00:39:15,440

Oh, collar got knocked up.

627

00:39:15,440 --> 00:39:17,720

That hammer is down.

628

00:39:17,720 --> 00:39:20,600

Interesting.

629

00:39:20,600 --> 00:39:27,080

Test after test proves that timing is still the problem, and there's no way to fix it.

630

00:39:27,080 --> 00:39:31,960

One rifle always fires fractionally before the other, and they take turns jumping the

631

00:39:31,960 --> 00:39:33,120

gun.

632

00:39:33,120 --> 00:39:37,920

Any delay Jamie dials in is pure guesswork.

633

00:39:37,920 --> 00:39:42,880

You can in the high speed camera clearly see one bullet moving across frame, and then another

634

00:39:42,880 --> 00:39:46,400

bullet moving across frame in that kind of time period.

635

00:39:46,400 --> 00:39:50,000

So it's not like they're like this.

636

00:39:50,000 --> 00:39:52,680

They're kind of going.

637

00:39:52,680 --> 00:39:54,400

We're not sure how to get there.

638

00:39:54,400 --> 00:39:57,240

These bullets are little rascals.

639

00:39:57,240 --> 00:39:59,400

They're like, you know, it's like herding cats.

640

00:39:59,400 --> 00:40:00,400

They're not behaving.

641

00:40:00,400 --> 00:40:05,320

So we need to come at it from a different angle, and I'm not sure what that is right

642

00:40:05,320 --> 00:40:06,320

now.

643

00:40:06,320 --> 00:40:09,160

The solution might involve some lateral thinking.

644

00:40:09,160 --> 00:40:11,360

Hey, Tori.

645

00:40:11,360 --> 00:40:14,960

And there's no doubt that Adam's brain often works sideways.

646

00:40:14,960 --> 00:40:15,960

This is perfect.

647

00:40:15,960 --> 00:40:18,360

I want to put a bullet in there.

648

00:40:18,360 --> 00:40:22,120

Just hold it ever so lightly enough that it stays there, and I can shoot it with another

649

00:40:22,120 --> 00:40:23,120

bullet.

650

00:40:23,120 --> 00:40:25,000

You're trying to shoot silver dollars, right?

651

00:40:25,000 --> 00:40:26,760

Yeah, and that's what was designed.

652

00:40:26,760 --> 00:40:29,600

So there's no resistance whatsoever.

653

00:40:29,600 --> 00:40:35,200

It's basically just a two but three long screws mounted in it that hold the bullet very gingerly.

654

00:40:35,200 --> 00:40:39,800

The thing that it does is holds it completely stationary, so we're guaranteed to hit it.

655

00:40:39,800 --> 00:40:44,520

If those bullets completely disintegrate and don't fuse at any speed, then this myth is

656

00:40:44,520 --> 00:40:45,920

busted.

657

00:40:45,920 --> 00:40:51,760

If we are able to get those bullets to fuse at some speed, well then we're going to say

658

00:40:51,760 --> 00:40:53,640

it's plausible.

659

00:40:53,640 --> 00:40:59,000

With one mini-ball held fast in the frame, they compensate by cutting the charge to just

660

00:40:59,000 --> 00:41:01,600

20 grains of gunpowder.

661

00:41:01,600 --> 00:41:07,640

It's a fairly realistic battlefield scenario, and their last chance to turn two bullets into

662

00:41:07,640 --> 00:41:09,120

one.

663

00:41:09,120 --> 00:41:15,520

Powders in, bullets in, safety's on, target bullets in, lights are on.

664

00:41:15,520 --> 00:41:20,360

I'm going to climb out and put in the cap, and we'll be able to close the doors and fire.

665

00:41:20,360 --> 00:41:26,520

Bring in three, two, one.

666

00:41:26,520 --> 00:41:27,960

That was such a delay.

667

00:41:27,960 --> 00:41:30,360

It was like, capow.

668

00:41:30,360 --> 00:41:35,720

Jamie always says the simplest rigs are the most effective, and once again, he's proved

669

00:41:35,720 --> 00:41:37,720

the point.

670

00:41:37,720 --> 00:41:42,520

Oh, Jamie.

671

00:41:42,520 --> 00:41:49,480

If you and I had hired a sculptor, we couldn't have asked him to do a better proving of plausibility

672

00:41:49,480 --> 00:41:50,480

than that.

673

00:41:50,480 --> 00:41:52,520

Yeah, that's pretty elegant.

674

00:41:52,520 --> 00:41:55,560

It does not get any better than that.

675

00:41:55,560 --> 00:41:58,280

Dude, that is fusion.

676

00:41:58,280 --> 00:42:03,800

There's no doubt that these two lethal chunks of lead have hit and fused.

677

00:42:03,800 --> 00:42:08,320

The high-speed camera can't clearly show the melting moment, but so what?

678

00:42:08,320 --> 00:42:10,400

Oh, you can't see it.

679

00:42:10,400 --> 00:42:11,400

It's already gone.

680

00:42:11,400 --> 00:42:12,400

Oh, well.

681

00:42:12,400 --> 00:42:15,400

I thought the evidence would be on the high-speed, but no.

682

00:42:15,400 --> 00:42:17,320

We have physical evidence.

683

00:42:17,320 --> 00:42:19,360

Who cares about the high-speed today?

684

00:42:19,360 --> 00:42:21,280

It's not me.

685

00:42:21,280 --> 00:42:28,760

When you think about what's required to make this happen in real life, I mean, it's a

686

00:42:28,760 --> 00:42:30,360

freak accident.

687

00:42:30,360 --> 00:42:31,600

I am so happy about this.

688

00:42:31,600 --> 00:42:35,080

This is one of the most beautiful objects we have yet made on the show because of how

689

00:42:35,080 --> 00:42:36,280

unexpected it is.

690

00:42:36,280 --> 00:42:38,560

I would have to call this one plausible.

691

00:42:38,560 --> 00:42:42,480

However unlikely, it is in fact plausible.

692

00:42:42,480 --> 00:42:46,920

All right.

693

00:42:46,920 --> 00:42:48,520

Time to call it.

694

00:42:48,520 --> 00:42:50,440

First one up, mystery of the backwards bullet.

695

00:42:50,440 --> 00:42:51,440

What do we say?

696

00:42:51,440 --> 00:42:52,440

That would be confirmed.

697

00:42:52,440 --> 00:42:56,320

It is possible to fire a bullet down the cylinder of another gun.

698

00:42:56,320 --> 00:42:58,800

The fused bullets from the Civil War.

699

00:42:58,800 --> 00:42:59,800

Plausible.

700

00:42:59,800 --> 00:43:01,920

It worked.

701

00:43:01,920 --> 00:43:03,480

And sniper scope.

702

00:43:03,480 --> 00:43:06,520

Oh, we kind of have to say busted, I think.

703

00:43:06,520 --> 00:43:09,600

I mean, as much as I don't want to make a bunch of snipers angry.

704

00:43:09,600 --> 00:43:11,600

No, I don't either.

705

00:43:11,600 --> 00:43:13,640

It's busted.

706

00:43:13,640 --> 00:43:14,640

We couldn't make it happen.

707

00:43:14,640 --> 00:43:15,640

No.