

1

00:00:00,000 --> 00:00:07,800

I know it looks like we have fun on this show, but we spend weeks and sometimes months planning how to do our myths safely.

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00:00:07,800 --> 00:00:10,800

So please, don't try this at home.

3

00:00:15,300 --> 00:00:17,300

On this episode of Mythbusters,

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00:00:20,000 --> 00:00:22,400

Adam and Janie launch a prolonged assault

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00:00:24,680 --> 00:00:27,680

on a devilishly difficult weaponry myth.

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00:00:27,680 --> 00:00:29,180

That is amazing.

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00:00:29,180 --> 00:00:31,180

That's what I'm talking about.

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00:00:31,180 --> 00:00:33,180

Finding out if 13th century Syrians

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

She's hungry for some boat!

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00:00:35,180 --> 00:00:36,180

Honesty girl!

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

created the world's first rocket powered torpedo.

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00:00:40,180 --> 00:00:43,180

I don't know, maybe that was a little too powerful, what do you think?

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00:00:43,180 --> 00:00:46,180

Meanwhile, Carrie, Grant and Tori are feeling the pressure.

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00:00:46,180 --> 00:00:51,180

It's really strange having a job doing things that your parents told you never to do.

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00:00:52,180 --> 00:00:55,180

As they pop the cork on a vino myth,

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00:00:56,180 --> 00:00:58,180

Can a blaze in a wine bottle truck

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00:00:59,180 --> 00:01:02,180

really turn into a cork firing machine gun?

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00:01:02,180 --> 00:01:05,180

This is why we can never have anything nice.

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00:01:07,180 --> 00:01:09,180

Who are the Mythbusters?

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00:01:09,180 --> 00:01:11,180

Adam Savage, here we go.

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00:01:11,180 --> 00:01:13,180

That's 100% wacky right there.

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00:01:13,180 --> 00:01:15,180

And Jamie Hyneman.

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00:01:15,180 --> 00:01:17,180

Relax, this one hurt a bit.

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00:01:17,180 --> 00:01:21,180

Between them more than 30 years of special effects experience,

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00:01:21,180 --> 00:01:23,180

joining them,

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00:01:24,180 --> 00:01:25,180

Tori Belachie,

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00:01:25,180 --> 00:01:27,180

This is real science.

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00:01:27,180 --> 00:01:28,180

Carrie Byron,

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00:01:28,180 --> 00:01:29,180

Let's do it.

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00:01:29,180 --> 00:01:31,180

and Grant Imahara.

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00:01:31,180 --> 00:01:32,180

He's alive!

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00:01:32,180 --> 00:01:34,180

They don't just tell the myths,

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00:01:34,180 --> 00:01:37,180

they put them to the test.

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00:01:41,180 --> 00:01:46,180

This episode of Mythbusters is presented by Chevrolet Volt.

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00:01:47,180 --> 00:01:51,180

The Mythbusters

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00:01:52,180 --> 00:01:56,180

Dude, we have got historical weaponry myth that is actually older than you.

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00:01:58,180 --> 00:01:59,180

Okay, check it out.

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00:01:59,180 --> 00:02:05,180

It turns out that the torpedo might have been invented in Syria in the 13th century.

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00:02:05,180 --> 00:02:06,180

Really?

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00:02:06,180 --> 00:02:10,180

Well, okay, so today we think of a torpedo that's something that launches from underwater

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00:02:10,180 --> 00:02:11,180

and reaches its target underwater.

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00:02:11,180 --> 00:02:15,180

This, in fact, was a rocket-powered device that skimmed across the top of the water,

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00:02:15,180 --> 00:02:18,180

delivering an incendiary to its target.

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00:02:18,180 --> 00:02:19,180

Did it work?

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00:02:19,180 --> 00:02:22,180

We have no actual record of them actually using it.

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00:02:22,180 --> 00:02:26,180

We have modern speculations as to its shape and its function.

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00:02:26,180 --> 00:02:30,180

Our job is to figure out just how viable a weapon of war it might have been.

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00:02:30,180 --> 00:02:35,180

While modern speculation abounds, the historical record is a little sketchy.

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00:02:36,180 --> 00:02:41,180

Supposedly, this torpedo would travel over the water and explode on impact.

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00:02:41,180 --> 00:02:43,180

But did it actually work?

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00:02:44,180 --> 00:02:46,180

The Mythbusters are going to find out.

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00:02:48,180 --> 00:02:51,180

So I have scoured every historical reference I can,

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00:02:51,180 --> 00:02:54,180

and while there's not a ton of information, I think I know where we should start.

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00:02:54,180 --> 00:02:55,180

Go on.

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00:02:55,180 --> 00:02:59,180

All the accounts generally agree on the overall shape of this torpedo,

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00:02:59,180 --> 00:03:02,180

that it is pear-shaped with a narrow end and a fat end,

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00:03:02,180 --> 00:03:05,180

and it had two fins extending from the rear,

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00:03:05,180 --> 00:03:10,180

and that it's powered by a black powder rocket of about 20 pounds of black powder.

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00:03:10,180 --> 00:03:13,180

The question is, what does the underside look like, how it met the water?

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00:03:13,180 --> 00:03:15,180

Nobody has a speculation about that.

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00:03:15,180 --> 00:03:16,180

That's kind of up to us.

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00:03:16,180 --> 00:03:20,180

Well, why don't we go down in their shop and each take a stab at it and see what we get?

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00:03:20,180 --> 00:03:22,180

Exactly what I was thinking.

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00:03:22,180 --> 00:03:26,180

If you're thinking of torpedoes, you're probably thinking about World War II versions

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00:03:26,180 --> 00:03:28,180

that live along just under the surface of the water,

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00:03:28,180 --> 00:03:33,180

where this one was specified to skip along top of the water like a small motorboat.

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00:03:33,180 --> 00:03:38,180

So if you're thinking about motorboats, on the one hand you could pick a deep V sort of a hull,

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00:03:38,180 --> 00:03:42,180

which has the advantage of tracking straight and being able to handle choppy water.

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00:03:42,180 --> 00:03:46,180

But on the other hand, it actually requires a lot of power to do that.

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00:03:46,180 --> 00:03:51,180

You could pick a flat bottom sort of a hull, which moves along great quickly on the surface of the water,

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00:03:51,180 --> 00:03:56,180

but if it goes too fast, it can get air under it and actually flip and lose control,

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00:03:56,180 --> 00:03:58,180

which would be a bad thing.

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00:03:58,180 --> 00:04:04,180

Right, there are two possible hull choices, the deep V or the flat bottom.

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00:04:04,180 --> 00:04:12,180

So to test which style works best, the guys begin by designing two torpedo prototypes out of pliable copper.

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00:04:12,180 --> 00:04:21,180

Jamie is forging a flatter bottom torpedo, while Adam is hammering out the deep V.

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00:04:22,180 --> 00:04:31,180

Two different hulls and two different prototypes are soon ready to take to the water in a head-to-head accuracy launch.

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00:04:31,180 --> 00:04:33,180

We'll see what happens.

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00:04:33,180 --> 00:04:36,180

Well that thing's looking pretty snappy.

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00:04:36,180 --> 00:04:39,180

I'm pretty psyched about it, can't wait to try it, how's yours?

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00:04:39,180 --> 00:04:43,180

Well, it's not quite as pretty as yours is, but it ought to work.

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00:04:43,180 --> 00:04:44,180

Let's get them out there and try them.

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00:04:44,180 --> 00:04:45,180

Yeah.

83

00:04:45,180 --> 00:04:46,180

Alright.

84

00:04:47,180 --> 00:04:51,180

And for that, the Mythbusters have found the ideal location.

85

00:04:51,180 --> 00:04:53,180

A lovely day to fire torpedoes.

86

00:04:53,180 --> 00:04:55,180

Let's get to it.

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00:04:55,180 --> 00:05:02,180

I'm standing in one of our favorite Mythbusters locations on the island of Treasure Island in the middle of San Francisco Bay at a fire training facility.

88

00:05:02,180 --> 00:05:09,180

Now we've filmed exploding stun gun and dumpster diving out here, but we have never used this pool behind me.

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00:05:09,180 --> 00:05:13,180

We're going to use it today for testing some ancient torpedoes.

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00:05:13,180 --> 00:05:17,180

And they'll be aiming those torpedoes at a target 100 feet away.

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00:05:17,180 --> 00:05:20,180

But to get them there, first, they'll need some thrust.

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00:05:20,180 --> 00:05:27,180

Our rocket power today will be supplied by this, which provides 5.9 pounds of thrust for 2.8 seconds.

93

00:05:27,180 --> 00:05:31,180

Will that translate to my torpedo making it from one end of our 100 foot pool to the target?

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00:05:31,180 --> 00:05:35,180

Honestly, I don't think so, but that's okay, because this is a relative test.

95

00:05:35,180 --> 00:05:38,180

We're just trying to figure out the best hull shape at this point.

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00:05:38,180 --> 00:05:42,180

And first to launch is Adam's deep V design.

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00:05:43,180 --> 00:05:46,180

It's just sinking into me what we're doing.

98

00:05:46,180 --> 00:05:48,180

Crazy.

99

00:05:48,180 --> 00:05:52,180

In 3, 2, 1.

100

00:05:52,180 --> 00:05:54,180

There it goes.

101

00:05:58,180 --> 00:06:00,180

Look at that.

102

00:06:02,180 --> 00:06:03,180

That was lovely.

103

00:06:03,180 --> 00:06:05,180

That was pretty neat.

104

00:06:05,180 --> 00:06:12,180

Aside from curving a path straight into the wall, Adam's torpedo did make it 30 feet across the pool.

105

00:06:12,180 --> 00:06:15,180

Well, I think my torpedo did pretty well.

106

00:06:15,180 --> 00:06:19,180

I think it still was showing a lot of resistance in the water.

107

00:06:19,180 --> 00:06:26,180

Didn't quite get up on a plane, so I think I can actually take out a bunch of the weight in these fins and I might get an improved performance.

108

00:06:26,180 --> 00:06:32,180

The torpedo was plowing through the water rather than hydroplaning, meaning it's slow and crooked.

109

00:06:32,180 --> 00:06:35,180

But will an attitude adjustment make the difference?

110

00:06:35,180 --> 00:06:37,180

Alright, here we go.

111

00:06:38,180 --> 00:06:43,180

It loves that spot in this pool.

112

00:06:43,180 --> 00:06:49,180

Sadly, taking the extra weight out didn't help Adam's lethargic torpedo.

113

00:06:49,180 --> 00:06:52,180

Seems to be holding up pretty well. Any suggestions?

114

00:06:52,180 --> 00:06:58,180

You could strap two rockets onto that rocket mount, because I think you're just not getting up on top of the water.

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00:06:58,180 --> 00:07:01,180

It may be that you just don't have enough power.

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00:07:01,180 --> 00:07:03,180

I'll give it a shot.

117

00:07:03,180 --> 00:07:09,180

The idea is that more thrust will not only give more power, but also get the torpedo up on top of the water,

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00:07:09,180 --> 00:07:13,180

allowing it to skim fast and true to its target.

119

00:07:13,180 --> 00:07:16,180

Adam torpedoed test two rockets in 3, 2, 1.

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00:07:16,180 --> 00:07:19,180

And we are lit.

121

00:07:25,180 --> 00:07:27,180

That was awesome!

122

00:07:34,180 --> 00:07:42,180

Two rockets did push the torpedo over 60 feet, but it seems the V-shaped hull is still plowing through the water,

123

00:07:42,180 --> 00:07:45,180

slowing it down and pulling it off course.

124

00:07:45,180 --> 00:07:47,180

That hull shape doesn't seem like it's working very well.

125

00:07:47,180 --> 00:07:52,180

The fact that it's spraying so much water around says that it's wasting a lot of energy.

126

00:07:52,180 --> 00:07:58,180

With the deep V-design shelved, it's sink or swim time for Jamie's flat-bottomed hull.

127

00:07:58,180 --> 00:08:00,180

Alright, here we go.

128

00:08:00,180 --> 00:08:02,180

3, 2, 1.

129

00:08:11,180 --> 00:08:14,180

And sink is not the option Jamie was looking for.

130

00:08:14,180 --> 00:08:24,180

The only problem I saw on this one was that it's submarine, so I figure all I have to do is bend these tail fins with a slight downward pull to them,

131

00:08:24,180 --> 00:08:27,180

and that'll hold the front end up.

132

00:08:27,180 --> 00:08:32,180

Okay, now to see if this minute modification makes all the difference.

133

00:08:35,180 --> 00:08:38,180

Yeah! Where did it go?

134

00:08:38,180 --> 00:08:42,180

It's just sitting right there about the halfway mark a little bit more.

135

00:08:44,180 --> 00:08:50,180

Amazingly, the torpedo skimmed the water, hydroplaning 70 feet straight along the pool,

136

00:08:50,180 --> 00:08:54,180

proving that a flat bottom is faster and more effective.

137

00:08:54,180 --> 00:08:57,180

The slight adjustment to the rear fins seemed to do the trick,

138

00:08:57,180 --> 00:09:06,180

and I gotta say the flat bottom and long, narrow design allowed it to track pretty well over a great distance right on top of the water.

139

00:09:06,180 --> 00:09:08,180

I think we're looking pretty good.

140

00:09:09,180 --> 00:09:13,180

Looking pretty good, but just to be sure, it's double or nothing.

141

00:09:15,180 --> 00:09:17,180

This one's for the gold.

142

00:09:19,180 --> 00:09:20,180

There you go.

143

00:09:20,180 --> 00:09:22,180

Come on, baby.

144

00:09:25,180 --> 00:09:28,180

Ha ha ha ha ha ha!

145

00:09:31,180 --> 00:09:39,180

Despite veering slightly off course, it's clear that the flat bottom is straight up the best design, and that's good news for the myth.

146

00:09:40,180 --> 00:09:42,180

I think we have our design.

147

00:09:42,180 --> 00:09:44,180

It goes pretty quick on it.

148

00:09:44,180 --> 00:09:49,180

It's head and shoulders above the pear shaped design. I think that's what we should go with.

149

00:09:49,180 --> 00:09:51,180

Okay, let's get out of here.

150

00:09:51,180 --> 00:09:53,180

After the break.

151

00:09:53,180 --> 00:09:56,180

This could be my favorite way to open up a bottle of wine.

152

00:09:56,180 --> 00:10:00,180

Carrie, Tori and Grant pop the cork on Exploding Wine.

153

00:10:13,180 --> 00:10:16,180

So our next myth combines two things that don't normally go together.

154

00:10:16,180 --> 00:10:17,180

Projectiles and wine.

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00:10:17,180 --> 00:10:20,180

Oh, you're talking about the Exploding Wine Truck Myth.

156

00:10:20,180 --> 00:10:21,180

Correct.

157

00:10:21,180 --> 00:10:25,180

Supposedly a semi-filled with wine crashed on the freeway and caught fire.

158

00:10:25,180 --> 00:10:30,180

Oh yeah, and the fire gets so hot that it causes the wine bottles to violently fire out their corks.

159

00:10:30,180 --> 00:10:32,180

How violently? Like, were they lethal?

160

00:10:32,180 --> 00:10:36,180

Well, we don't know because no one was ever hit, but here's the mythical part.

161

00:10:36,180 --> 00:10:42,180

Supposedly the corks flew a hundred feet, and when the bottles went off, they sounded just like machine gun fire.

162

00:10:43,180 --> 00:10:47,180

There's no doubt this blazing bottle inferno actually happened.

163

00:10:47,180 --> 00:10:51,180

But were the reports of its demise greatly exaggerated?

164

00:10:52,180 --> 00:10:57,180

Did it really launch corks over a hundred feet with a machine gun like Rattle?

165

00:10:58,180 --> 00:11:01,180

Okay, the way I see it is we've got two directions we can go here.

166

00:11:01,180 --> 00:11:05,180

Either we just set a wine truck on fire and see what happens,

167

00:11:05,180 --> 00:11:08,180

or we can go to the shop and do some bottle testing.

168

00:11:08,180 --> 00:11:12,180

Yeah, I mean, personally, I'm a little hesitant to set a whole truck full of wine on fire,

169

00:11:12,180 --> 00:11:14,180

unless you know what's going to happen.

170

00:11:14,180 --> 00:11:18,180

So why don't we start out with learning more about wine and the bottles and the corks,

171

00:11:18,180 --> 00:11:20,180

and then move on to our small scale.

172

00:11:20,180 --> 00:11:22,180

Ooh, research.

173

00:11:23,180 --> 00:11:27,180

Since this myth is about corks firing out of wine bottles like machine guns,

174

00:11:27,180 --> 00:11:31,180

we thought what better place to go than Domain Carnera's winery

175

00:11:31,180 --> 00:11:34,180

to see what kind of circumstances might have caused this to happen.

176

00:11:34,180 --> 00:11:40,180

Was it the bottles? Was it the liquids inside the bottles, or was it the heat applied to the bottles?

177

00:11:40,180 --> 00:11:44,180

And to find the answers, Carrie's encountered an expert.

178

00:11:44,180 --> 00:11:46,180

You've been making wine for 30 years.

179

00:11:46,180 --> 00:11:49,180

What do you think of the idea that if a wine truck caught on fire,

180

00:11:49,180 --> 00:11:52,180

that wine corks could start shooting out of it like a machine gun?

181

00:11:52,180 --> 00:11:54,180

I believe it is conceivable.

182

00:11:54,180 --> 00:11:59,180

I know that when wine bottles get too warm, that sometimes the cork will push out a little tiny bit.

183

00:11:59,180 --> 00:12:06,180

I think that still wine bottles under extreme pressure of intense fire could shoot corks or could explode.

184

00:12:07,180 --> 00:12:10,180

And pressure is the name of this game.

185

00:12:10,180 --> 00:12:17,180

As heat is applied, the wine starts to evaporate, which increases the pressure in the bottle till...

186

00:12:19,180 --> 00:12:22,180

But what else could affect the power of the projectile?

187

00:12:22,180 --> 00:12:27,180

Is there a possibility that the shape of the bottle might have any sort of effect on the pressure?

188

00:12:27,180 --> 00:12:32,180

I don't think so. The shapes of the bottles are determined by tradition and custom.

189

00:12:32,180 --> 00:12:36,180

But I think under extreme temperature, all bets could be off.

190

00:12:36,180 --> 00:12:38,180

So bottle shape might be a factor.

191

00:12:38,180 --> 00:12:43,180

And on the champagne assembly line, Grant's found something that definitely is...

192

00:12:43,180 --> 00:12:44,180

The carbonation.

193

00:12:44,180 --> 00:12:47,180

Sorry, it's my first day. Sorry, everybody.

194

00:12:47,180 --> 00:12:56,180

With an internal pressure of 80 psi, adding heat to a champagne bottle may make it more likely to shoot for the moon.

195

00:12:56,180 --> 00:12:58,180

So this machine is the corker.

196

00:12:58,180 --> 00:13:02,180

Now from this mowing on, this bottle becomes a pressure vessel,

197

00:13:02,180 --> 00:13:07,180

potentially housing the kind of force that can cause a wine bottle to turn into a machine gun.

198

00:13:07,180 --> 00:13:09,180

And that is what this myth is all about.

199

00:13:10,180 --> 00:13:15,180

Okay, and back at the shop, Carrie begins by sizing up her opponent.

200

00:13:15,180 --> 00:13:18,180

Now, winemakers actually use different shaped bottles for different wine.

201

00:13:18,180 --> 00:13:22,180

You can tell that you have a re-sling because it has slender shoulders.

202

00:13:22,180 --> 00:13:25,180

A burgundy is a little bit fatter at the bottom.

203

00:13:25,180 --> 00:13:28,180

You have shoulders on a bordeaux.

204

00:13:28,180 --> 00:13:35,180

So it's possible that the size of the bottle, the type of wine, or even the shape of the bottle might make a more explosive cork.

205

00:13:35,180 --> 00:13:40,180

And to find out, the team is going to fire up a wine flambé.

206

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

I'm making my zen garden.

207

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

To see if any bottle can shoot its cork the mythical 100 feet.

208

00:13:47,180 --> 00:13:49,180

And here's how.

209

00:13:50,180 --> 00:13:53,180

So for our bottle Olympics, we're going to have a flame off.

210

00:13:53,180 --> 00:13:56,180

We're going to put each different type of wine in this holder right here,

211

00:13:56,180 --> 00:13:59,180

turn up the flame and compare the results.

212

00:13:59,180 --> 00:14:02,180

And first up is a room temperature bordeaux.

213

00:14:03,180 --> 00:14:04,180

Here we go.

214

00:14:04,180 --> 00:14:09,180

With the team safely behind the blast shields, now the waiting begins.

215

00:14:09,180 --> 00:14:13,180

You know, this could be my favorite way to open up a bottle of wine.

216

00:14:13,180 --> 00:14:18,180

Remember, the corks in the myth supposedly flew 100 feet.

217

00:14:18,180 --> 00:14:21,180

Right now I call we are at 50 seconds.

218

00:14:21,180 --> 00:14:24,180

But how far will the bordeaux blow?

219

00:14:27,180 --> 00:14:29,180

Oh, that was it.

220

00:14:29,180 --> 00:14:32,180

I was at their expecting blast or a cork go.

221

00:14:35,180 --> 00:14:37,180

Pip is right.

222

00:14:37,180 --> 00:14:41,180

After two minutes with the temperature at 160 degrees Fahrenheit,

223

00:14:42,180 --> 00:14:48,180

the cork erupted at a feeble three miles per hour and barely made it to the sand.

224

00:14:49,180 --> 00:14:54,180

After hearing the story, we got prepared with blast shields and eye protection and ear protection.

225

00:14:54,180 --> 00:14:57,180

And we got two feet of distance.

226

00:14:58,180 --> 00:15:03,180

Not being glass half full optimists, the guys reset with a twist.

227

00:15:04,180 --> 00:15:08,180

So this bottle looks the same as the other one and it is, but there's one big difference.

228

00:15:08,180 --> 00:15:14,180

It's been chilling for a while since we don't know whether the wine was being refrigerated when it was being transported.

229

00:15:14,180 --> 00:15:16,180

Throw this in and try it again.

230

00:15:16,180 --> 00:15:19,180

But will the chill give a greater thrill?

231

00:15:20,180 --> 00:15:22,180

I think I see it swelling.

232

00:15:22,180 --> 00:15:25,180

Oh yeah, yeah, it's starting to push out.

233

00:15:28,180 --> 00:15:30,180

Although still way short of the myth.

234

00:15:30,180 --> 00:15:32,180

Three feet four inches.

235

00:15:32,180 --> 00:15:37,180

The cold bordeaux did fly 50% further than its warm counterpart.

236

00:15:37,180 --> 00:15:42,180

Now there are a few reasons why a cold bottle might actually be better for this myth than a warm one.

237

00:15:42,180 --> 00:15:46,180

What we start out with a cold bottle and a warm bottle both have the same pressure,

238

00:15:46,180 --> 00:15:52,180

but the more drastic change in temperature that a cold bottle experiences might mean a more drastic change in pressure.

239

00:15:52,180 --> 00:15:57,180

So from here on in, they're sticking with cold bottles on high heat.

240

00:15:57,180 --> 00:16:00,180

Next up, burgundy. Chill.

241

00:16:01,180 --> 00:16:03,180

But neither the burgundies.

242

00:16:06,180 --> 00:16:08,180

Hey, five feet ten inches.

243

00:16:08,180 --> 00:16:10,180

Nor the sauvignon blancs.

244

00:16:13,180 --> 00:16:15,180

It got caught.

245

00:16:15,180 --> 00:16:17,180

Nor even the fortified ports.

246

00:16:18,180 --> 00:16:20,180

That was put there.

247

00:16:20,180 --> 00:16:21,180

That was adorable.

248

00:16:21,180 --> 00:16:25,180

Come anywhere near the mythical 100 feet.

249

00:16:25,180 --> 00:16:28,180

Looks like size doesn't matter.

250

00:16:28,180 --> 00:16:30,180

And that just leaves the final line.

251

00:16:30,180 --> 00:16:32,180

Long slender bottle.

252

00:16:32,180 --> 00:16:33,180

High heat.

253

00:16:33,180 --> 00:16:34,180

The Riesling.

254

00:16:35,180 --> 00:16:38,180

30 seconds on the clock.

255

00:16:38,180 --> 00:16:45,180

All is quiet until the temperature hits 200 degrees when suddenly here we go.

256

00:16:48,180 --> 00:16:52,180

Oh my gosh, it went off the end of the scale.

257

00:16:52,180 --> 00:16:54,180

That is incredible.

258

00:16:54,180 --> 00:16:55,180

Incredible is right.

259

00:16:55,180 --> 00:17:02,180

Maybe because of its pointed shape, the Riesling shoots its cork over 30 feet at 32 miles an hour.

260

00:17:02,180 --> 00:17:06,180

Still not far enough for the myth, but all is not lost.

261

00:17:09,180 --> 00:17:12,180

Later, a semi-sizzles for science.

262

00:17:13,180 --> 00:17:17,180

But next, it's the world's first ancient torpedo launch.

263

00:17:26,180 --> 00:17:31,180

Supposedly the ancient Syrians created the world's first rocket-powered torpedo.

264

00:17:31,180 --> 00:17:33,180

But did it work?

265

00:17:33,180 --> 00:17:39,180

In the small scale launch, Jamie's flat bottom prototype won on speed and accuracy.

266

00:17:39,180 --> 00:17:40,180

So now what?

267

00:17:40,180 --> 00:17:43,180

I can't think of anything to do now, but go full scale.

268

00:17:43,180 --> 00:17:44,180

Yep.

269

00:17:44,180 --> 00:17:47,180

So about that 20 pound black powder rocket, you think we need to build one?

270

00:17:47,180 --> 00:17:48,180

Nah, those things are scary.

271

00:17:48,180 --> 00:17:50,180

I think we should use a modern rocket equivalent.

272

00:17:50,180 --> 00:17:55,180

Alright, well then I guess what's ahead is to build a few full-sized torpedoes and find a body of water to test them on.

273

00:17:55,180 --> 00:17:57,180

Sounds good.

274

00:17:58,180 --> 00:18:03,180

And that means the guys are ramping up the scale for a full-blown torpedo attack.

275

00:18:03,180 --> 00:18:05,180

The steel structure is my mold.

276

00:18:05,180 --> 00:18:12,180

I'm going to weld the sheet metal to it, and that'll hold it stable while I beat on it with the cannonball welded onto the end of a jackhammer.

277

00:18:14,180 --> 00:18:16,180

I have no idea if it's going to work or not.

278

00:18:16,180 --> 00:18:18,180

I don't either, but it is cool.

279

00:18:23,180 --> 00:18:26,180

Now, that may seem kind of elaborate.

280

00:18:27,180 --> 00:18:36,180

But it's not really unlike what would happen in the olden days with Syrians and muscular slaves and so on, nicely rounded rock.

281

00:18:36,180 --> 00:18:40,180

The difference is that they would have taken days, and I'm going to do it in a couple of hours.

282

00:18:40,180 --> 00:18:42,180

That looks great!

283

00:18:42,180 --> 00:18:47,180

That may be the plan, but the cannonball has other ideas.

284

00:18:50,180 --> 00:18:56,180

With Jamie's jackhammer beaten, it's clear they'll have to find another way to hammer out this myth.

285

00:18:58,180 --> 00:19:02,180

That was it!

286

00:19:02,180 --> 00:19:09,180

So far, the Mythbusters have parked the cork on still wine, but now it's time to unleash the big guns.

287

00:19:09,180 --> 00:19:11,180

It's time to bring out the bubbly.

288

00:19:11,180 --> 00:19:15,180

Already at a pressure of 80 psi, even without any heat.

289

00:19:15,180 --> 00:19:18,180

Alright, so this is the control test or the champagne?

290

00:19:21,180 --> 00:19:24,180

The champagne's cork can fly 25 feet.

291

00:19:25,180 --> 00:19:29,180

That's no heating, no agitation, just straight up.

292

00:19:29,180 --> 00:19:33,180

So will an inferno beat that benchmark?

293

00:19:33,180 --> 00:19:39,180

Really strange having a job where you spend all day just doing things that your parents told you never to do.

294

00:19:39,180 --> 00:19:42,180

The cork looks like it's pushing out. Here it goes!

295

00:19:42,180 --> 00:19:43,180

Oh my god, it's happening.

296

00:19:43,180 --> 00:19:44,180

It's about to pop!

297

00:19:44,180 --> 00:19:45,180

It's happening.

298

00:19:45,180 --> 00:19:49,180

I forgot to even see where it went.

299

00:19:49,180 --> 00:19:52,180

Talk about a champagne moment.

300

00:19:52,180 --> 00:19:58,180

After five minutes of flame, the cork flies from the bottle at an astonishing 60 miles an hour.

301

00:19:58,180 --> 00:20:01,180

But gets lodged in the ceiling.

302

00:20:01,180 --> 00:20:05,180

Finally we're getting some results and this is looking very good for the myth.

303

00:20:05,180 --> 00:20:12,180

With the champagne bottles, our corks are actually going so far, you're not able to measure them on our scale.

304

00:20:12,180 --> 00:20:13,180

They keep hitting the roof.

305

00:20:13,180 --> 00:20:21,180

Having hit the champagne ceiling, they head outside, where there's no limit to how far they can pop their corks.

306

00:20:21,180 --> 00:20:22,180

Lighten it up.

307

00:20:22,180 --> 00:20:25,180

But will they get the 100 feet thereafter?

308

00:20:25,180 --> 00:20:27,180

I see some dripping.

309

00:20:27,180 --> 00:20:28,180

I see dripping.

310

00:20:28,180 --> 00:20:30,180

Well, not with test one.

311

00:20:33,180 --> 00:20:34,180

What is that?

312

00:20:34,180 --> 00:20:35,180

40 feet?

313

00:20:35,180 --> 00:20:36,180

40 feet!

314

00:20:36,180 --> 00:20:38,180

And not with test two.

315

00:20:39,180 --> 00:20:42,180

Six minutes, the bottle exploded.

316

00:20:43,180 --> 00:20:47,180

Test three with some extra agitation does better.

317

00:20:47,180 --> 00:20:49,180

Where'd it go?

318

00:20:49,180 --> 00:20:50,180

Out there.

319

00:20:50,180 --> 00:20:52,180

50 feet!

320

00:20:52,180 --> 00:20:54,180

But still not good enough.

321

00:20:54,180 --> 00:20:57,180

So what does this mean for the myth?

322

00:20:57,180 --> 00:21:04,180

What all the results have in common is that none of them is even close to the mythical 100 feet that we need.

323

00:21:05,180 --> 00:21:07,180

But this is myth buster.

324

00:21:07,180 --> 00:21:09,180

We're not just going to stop here.

325

00:21:14,180 --> 00:21:19,180

Turning torpedoes full scale, the myth busters struck a problem.

326

00:21:21,180 --> 00:21:23,180

But it's okay because...

327

00:21:25,180 --> 00:21:28,180

Jamie Heidemann has been on the case.

328

00:21:29,180 --> 00:21:31,180

Dude, that is amazing!

329

00:21:34,180 --> 00:21:42,180

I've heard about this technique called hydroforming, where you use water pressure to form sheet metal shells, and I decided to give it a try.

330

00:21:43,180 --> 00:21:52,180

All you do is you take a couple of pieces of sheet metal and you weld them together, and then you pump high pressure water in between them, and it inflates like a balloon, at least in theory.

331

00:21:52,180 --> 00:21:53,180

Let's go!

332

00:21:56,180 --> 00:21:58,180

You want to see how I pulled it off?

333

00:21:58,180 --> 00:21:59,180

Okay.

334

00:22:00,180 --> 00:22:06,180

Yep, with his extracurricular determination, Jamie has come up with an ingenious plan B.

335

00:22:06,180 --> 00:22:11,180

We take our piece of sheet metal and clamp it between two massive plates of steel.

336

00:22:12,180 --> 00:22:19,180

We've cut out an almond shaped hole in the top plate, and attached our pressure washer pump to a small hole in the bottom plate.

337

00:22:19,180 --> 00:22:21,180

Now here's the fun part.

338

00:22:21,180 --> 00:22:29,180

All we do is start the pump, and the water pressure pushes the sheet metal out the almond shaped hole, inflating it just like a balloon.

339

00:22:29,180 --> 00:22:31,180

Ha! It's perfect!

340

00:22:33,180 --> 00:22:39,180

It's a long way from medieval blacksmithing, but I can make a torpedo shell in about a half an hour.

341

00:22:41,180 --> 00:22:43,180

It's like magic.

342

00:22:44,180 --> 00:22:46,180

Beating, beating on it with a hammer.

343

00:22:47,180 --> 00:22:56,180

Each set of shells is given a rocket casing and some foam flotation to ensure they don't sink to the bottom of the lake while testing.

344

00:22:56,180 --> 00:23:02,180

And finally, a set of laser precision control fins to keep them in line.

345

00:23:03,180 --> 00:23:04,180

That was a lot of work.

346

00:23:04,180 --> 00:23:06,180

Man, they look fantastic.

347

00:23:06,180 --> 00:23:09,180

I think our torpedo army is ready for deployment.

348

00:23:09,180 --> 00:23:10,180

Time for a road trip?

349

00:23:10,180 --> 00:23:11,180

It is.

350

00:23:13,180 --> 00:23:21,180

And I own quarry where the mythbusters have slid, flipped, and blasted myths before.

351

00:23:22,180 --> 00:23:23,180

Oh yeah.

352

00:23:24,180 --> 00:23:27,180

Is the perfect location for deployment.

353

00:23:28,180 --> 00:23:29,180

Shall we get started?

354

00:23:29,180 --> 00:23:30,180

Yeah, why not?

355

00:23:31,180 --> 00:23:32,180

Let it drift.

356

00:23:32,180 --> 00:23:34,180

First up, to create a familiar target.

357

00:23:35,180 --> 00:23:37,180

Do you want to save your own city?

358

00:23:38,180 --> 00:23:44,180

At 800 feet from shore, the boat is positioned well out of reach of an ancient archer.

359

00:23:44,180 --> 00:23:47,180

But, will it be within reach of their torpedo?

360

00:23:48,180 --> 00:23:49,180

Well, there we go.

361

00:23:50,180 --> 00:23:51,180

It was nice and pretty.

362

00:23:51,180 --> 00:23:52,180

Now it's really ugly.

363

00:23:55,180 --> 00:23:59,180

You may remember earlier that we do best with a flat bottom pole on our torpedo.

364

00:23:59,180 --> 00:24:01,180

And this is actually kind of rounded.

365

00:24:01,180 --> 00:24:05,180

But I figure it's okay because of the way that I've placed the rocket motor back here.

366

00:24:05,180 --> 00:24:10,180

And this forms kind of a straight or flat line, which is what I'm looking for.

367

00:24:10,180 --> 00:24:15,180

Because when this gets up and running, this is all that's going to be actually contacting the water.

368

00:24:15,180 --> 00:24:17,180

And that's what's important.

369

00:24:17,180 --> 00:24:20,180

That's what's going to allow it to move real quick and real efficiently.

370

00:24:20,180 --> 00:24:21,180

Quick and efficiently.

371

00:24:21,180 --> 00:24:28,180

Because to test its success as an ancient weapon, they're zeroing in on two crucial criteria.

372

00:24:28,180 --> 00:24:32,180

Its accuracy and its ability to deliver its deadly payload.

373

00:24:32,180 --> 00:24:36,180

And to test those, they'll need some rocket power.

374

00:24:36,180 --> 00:24:39,180

In the sparse details we've been able to uncover about this story,

375

00:24:39,180 --> 00:24:44,180

the torpedo is said to be powered by a rocket composed of 20 pounds of black powder.

376

00:24:44,180 --> 00:24:47,180

What does that equal in a modern day repeatable equivalent?

377

00:24:47,180 --> 00:24:49,180

Well, it turns out to be this puppy.

378

00:24:49,180 --> 00:24:51,180

This is an M motor.

379

00:24:51,180 --> 00:24:55,180

It puts out 270 pounds of thrust for approximately 14 seconds.

380

00:24:55,180 --> 00:24:59,180

And it will be our ye olde rocket engine.

381

00:24:59,180 --> 00:25:04,180

With the ye olde rocket equivalent on board, test one is about accuracy,

382

00:25:04,180 --> 00:25:07,180

getting their torpedo to hit its mark.

383

00:25:07,180 --> 00:25:09,180

Alright, that's hot. Let's do it.

384

00:25:09,180 --> 00:25:11,180

Let's see what it does.

385

00:25:11,180 --> 00:25:17,180

And even though there are not yet incendiaries on board, the guys take cover behind the blast shields.

386

00:25:17,180 --> 00:25:19,180

Alright, ma'am, count it down.

387

00:25:19,180 --> 00:25:28,180

Okay, here we go with the full power rocket in three, two, one, go.

388

00:25:28,180 --> 00:25:39,180

Whoa.

389

00:25:39,180 --> 00:25:44,180

Well, I don't know, maybe that was a little too powerful. What do you think?

390

00:25:44,180 --> 00:25:47,180

It was fun though. Let's do it again.

391

00:25:47,180 --> 00:25:57,180

Everything started out okay, and then everything seemed to go haywire.

392

00:25:57,180 --> 00:26:04,180

It spiraled up into the sky and did this massive belly flop, absolutely crushing the top of this.

393

00:26:04,180 --> 00:26:09,180

Wow, that is a lot of damage.

394

00:26:09,180 --> 00:26:13,180

This is like a car accident's worth of damage.

395

00:26:13,180 --> 00:26:19,180

It bent the entire central shaft of this thing on an arc. It's fantastic.

396

00:26:19,180 --> 00:26:23,180

Fantastic, but nowhere near accurate.

397

00:26:23,180 --> 00:26:28,180

So for test two, they'll reduce the speed and cut its thrust.

398

00:26:28,180 --> 00:26:34,180

This nozzle has been drilled out to 5 eighths of an inch, which should lower its pressure rating to between 150 and 180 pounds of thrust,

399

00:26:34,180 --> 00:26:40,180

which should be the butter zone that'll get our torpedo all the way to the boat while staying in the water.

400

00:26:40,180 --> 00:26:49,180

Now this is rocket science, but that's still the equivalent of the mythical 20 pounds of black powder, just with a longer burn time.

401

00:26:49,180 --> 00:26:56,180

Question is, will reducing its speed help their torpedo stay water bound and stay on target?

402

00:26:56,180 --> 00:27:03,180

This is the Goldilocks torpedo in three, two, one, fire.

403

00:27:08,180 --> 00:27:13,180

Despite its promise and start, frustratingly, the torpedo still took flight.

404

00:27:14,180 --> 00:27:19,180

Still a little too much power, but really nice.

405

00:27:21,180 --> 00:27:25,180

I think that's fun by itself. Why do we need to hit the boat?

406

00:27:29,180 --> 00:27:31,180

Damn, that one just wouldn't quit.

407

00:27:31,180 --> 00:27:36,180

It was like a porpoise. It kept going up and right down underwater and up.

408

00:27:37,180 --> 00:27:44,180

And although the torpedo's aerobatics are certainly entertaining,

409

00:27:44,180 --> 00:27:50,180

annoyingly for our mythbusters, it's a long way off the direct hit of the myth.

410

00:27:50,180 --> 00:27:54,180

It's not working too well. We're going to have to figure something else out.

411

00:27:54,180 --> 00:27:56,180

Yeah, well, let's get on it.

412

00:28:01,180 --> 00:28:03,180

Please do not try what we do on this show at home.

413

00:28:03,180 --> 00:28:05,180

We're what you call experts.

414

00:28:05,180 --> 00:28:07,180

It's safer that way.

415

00:28:12,180 --> 00:28:17,180

It's no myth that this semi became a blazing Vino Inferno,

416

00:28:17,180 --> 00:28:21,180

but did its cargo really explode as per the reports?

417

00:28:22,180 --> 00:28:28,180

Okay, so there's two parts to this myth. The distance the corks flew and the machine gun firing effect.

418

00:28:28,180 --> 00:28:31,180

Well, as far as the distance goes, it's looking a little dodgy.

419

00:28:31,180 --> 00:28:35,180

I mean, even our best performer, the champagne, chilled and agitated,

420

00:28:35,180 --> 00:28:38,180

only went 50 feet, half the required distance.

421

00:28:38,180 --> 00:28:41,180

All right, well, that just leaves the machine gun fire effect.

422

00:28:41,180 --> 00:28:43,180

I think it's time we take this myth full scale.

423

00:28:43,180 --> 00:28:48,180

I totally agree. Let's fill a semi truck full of wine, both our winning still, which was the re-sling,

424

00:28:48,180 --> 00:28:51,180

and a ton of champagne and see if we can get a machine gun fire.

425

00:28:51,180 --> 00:28:53,180

To the bomb range!

426

00:28:54,180 --> 00:28:58,180

Yep, there's only one destination for this bottle barbecue.

427

00:28:59,180 --> 00:29:01,180

And it's BYO SEMITRAILER.

428

00:29:01,180 --> 00:29:03,180

It's actually a pretty good condition.

429

00:29:03,180 --> 00:29:05,180

Let's burn it.

430

00:29:05,180 --> 00:29:09,180

And with the truck in position, prepped, and the fire would stop.

431

00:29:09,180 --> 00:29:11,180

Nice job, Mythbusters.

432

00:29:11,180 --> 00:29:15,180

Now to stock it with some bottom of the line wine.

433

00:29:15,180 --> 00:29:19,180

So we have our truck. Now we're going to fill it with almost a thousand bottles of champagne,

434

00:29:19,180 --> 00:29:21,180

which is our obvious clear winner from our bottle experiments.

435

00:29:21,180 --> 00:29:25,180

We got 60 miles an hour and 50 feet from those corks.

436

00:29:25,180 --> 00:29:29,180

Just for good measure, we're going to throw in a few bottles of our still winner as well,

437

00:29:29,180 --> 00:29:31,180

which is the long skinny bottle.

438

00:29:31,180 --> 00:29:34,180

All right, here we go. We're lighting up.

439

00:29:34,180 --> 00:29:35,180

Okay.

440

00:29:35,180 --> 00:29:38,180

Three, two, one.

441

00:29:41,180 --> 00:29:42,180

Let's go.

442

00:29:42,180 --> 00:29:44,180

That's beautiful.

443

00:29:44,180 --> 00:29:47,180

I mean, it's not like a machine gun you would imagine.

444

00:29:47,180 --> 00:29:49,180

It's more...

445

00:29:49,180 --> 00:29:50,180

Not yet. Hold your horses.

446

00:29:50,180 --> 00:29:52,180

The spearman's not over yet.

447

00:29:52,180 --> 00:29:55,180

That's what carries right, because in their earlier tests,

448

00:29:55,180 --> 00:29:59,180

it sometimes took eight minutes for the champagne to fire.

449

00:29:59,180 --> 00:30:01,180

Eight and a half minutes.

450

00:30:01,180 --> 00:30:03,180

Oh, man.

451

00:30:03,180 --> 00:30:07,180

And as the saying goes, good things come to those who wake.

452

00:30:07,180 --> 00:30:09,180

Oh!

453

00:30:09,180 --> 00:30:12,180

There's your machine gun!

454

00:30:12,180 --> 00:30:15,180

Oh, my goodness.

455

00:30:15,180 --> 00:30:17,180

It's like firecrackers.

456

00:30:17,180 --> 00:30:20,180

Yeah, really expensive firecrackers.

457

00:30:20,180 --> 00:30:23,180

Oh!

458

00:30:23,180 --> 00:30:25,180

Oh!

459

00:30:25,180 --> 00:30:29,180

This is better than the fourth and the last.

460

00:30:29,180 --> 00:30:34,180

In fact, once the gunfire sounds start,

461

00:30:34,180 --> 00:30:36,180

there's no stopping them.

462

00:30:36,180 --> 00:30:38,180

Wow, you see shrapnel flying out here?

463

00:30:38,180 --> 00:30:39,180

Yeah.

464

00:30:39,180 --> 00:30:43,180

As hundreds and hundreds of bottles either pop their corks

465

00:30:43,180 --> 00:30:47,180

or explode in the fire.

466

00:30:47,180 --> 00:30:49,180

I can't believe how well this is working.

467

00:30:49,180 --> 00:30:51,180

After we set the trailer on fire,

468

00:30:51,180 --> 00:30:54,180

those bottles started popping just like a machine gun.

469

00:30:54,180 --> 00:30:57,180

It sounds like Fourth of July.

470

00:30:57,180 --> 00:30:59,180

I'm going to tell you one thing.

471

00:30:59,180 --> 00:31:01,180

If I were a fireman and I heard what sounded like

472

00:31:01,180 --> 00:31:05,180

automatic machine gun fire coming out of that thing,

473

00:31:05,180 --> 00:31:07,180

I wouldn't be approaching it.

474

00:31:07,180 --> 00:31:08,180

Absolutely.

475

00:31:08,180 --> 00:31:13,180

Because with corks flying 50 feet and glass shrapnel even further,

476

00:31:13,180 --> 00:31:18,180

this is a wine tasting to steer clear of.

477

00:31:18,180 --> 00:31:24,180

But with a semi reduced to ashes is the myth in any better shape.

478

00:31:24,180 --> 00:31:26,180

Look, look, there's one right there.

479

00:31:26,180 --> 00:31:27,180

Wow!

480

00:31:27,180 --> 00:31:28,180

What distance is that?

481

00:31:28,180 --> 00:31:30,180

That's easily 50 feet.

482

00:31:30,180 --> 00:31:31,180

You know what?

483

00:31:31,180 --> 00:31:32,180

It sounded like a machine gun.

484

00:31:32,180 --> 00:31:34,180

Yeah, but the myth said 100 feet.

485

00:31:34,180 --> 00:31:35,180

That's not even near it.

486

00:31:35,180 --> 00:31:37,180

So I'm thinking this is busted overall.

487

00:31:37,180 --> 00:31:38,180

Yeah, I say busted.

488

00:31:38,180 --> 00:31:39,180

All right, busted.

489

00:31:39,180 --> 00:31:41,180

But what if we harness the power inside these bottles?

490

00:31:41,180 --> 00:31:42,180

Like what?

491

00:31:42,180 --> 00:31:44,180

I don't know, make it directional.

492

00:31:44,180 --> 00:31:45,180

Make some kind of a gun.

493

00:31:45,180 --> 00:31:46,180

A machine gun.

494

00:31:46,180 --> 00:31:47,180

Maybe.

495

00:31:47,180 --> 00:31:49,180

We're going to myth buster this up?

496

00:31:49,180 --> 00:31:50,180

Yeah.

497

00:31:53,180 --> 00:31:54,180

Next.

498

00:31:55,180 --> 00:31:57,180

That doesn't go at all like I expected.

499

00:32:03,180 --> 00:32:04,180

Is it a burn?

500

00:32:04,180 --> 00:32:06,180

Is it a plane?

501

00:32:06,180 --> 00:32:09,180

No, that's an ancient torpedo.

502

00:32:09,180 --> 00:32:12,180

And it's not supposed to be airborne.

503

00:32:13,180 --> 00:32:16,180

So our rockets do not have to be quite powerful.

504

00:32:16,180 --> 00:32:19,180

And when they cause our torpedoes to take off into the sky,

505

00:32:19,180 --> 00:32:21,180

that actually has a term in rocketry.

506

00:32:21,180 --> 00:32:23,180

It's called skyriding.

507

00:32:23,180 --> 00:32:25,180

We don't want to be skyriding.

508

00:32:25,180 --> 00:32:27,180

So we are going to add actually a tether,

509

00:32:27,180 --> 00:32:34,180

a guide wire under the water that will hopefully guide our torpedo right to the boat.

510

00:32:34,180 --> 00:32:36,180

The skyriding is on the wall.

511

00:32:36,180 --> 00:32:41,180

Accurately hitting the solo boat is proving more difficult than the more likely target

512

00:32:41,180 --> 00:32:44,180

of a 13th century invading armada.

513

00:32:45,180 --> 00:32:48,180

So for test three, accuracy is out of the picture.

514

00:32:48,180 --> 00:32:52,180

And they're jumping ship to test the payload delivery.

515

00:32:53,180 --> 00:32:56,180

All right, ladies and germs, we're ready to head across the lake.

516

00:32:57,180 --> 00:32:58,180

Oh crap.

517

00:33:00,180 --> 00:33:01,180

Uh oh.

518

00:33:02,180 --> 00:33:04,180

All right, let's go.

519

00:33:04,180 --> 00:33:07,180

With the taut tether ready to keep it in line.

520

00:33:07,180 --> 00:33:09,180

That's a lot of tension.

521

00:33:09,180 --> 00:33:11,180

That's pretty good.

522

00:33:11,180 --> 00:33:16,180

Torpedo number three is loaded with a rocket equivalent of 20 pounds of black powder.

523

00:33:16,180 --> 00:33:19,180

And it's deadly payload.

524

00:33:19,180 --> 00:33:21,180

These are my incendiary devices.

525

00:33:21,180 --> 00:33:27,180

They're actually filled with gasoline and a couple of other things to make it a secret recipe.

526

00:33:28,180 --> 00:33:33,180

That right there, 10 and a half pounds of death and destruction to be delivered

527

00:33:33,180 --> 00:33:36,180

as soon as possible to our enemies.

528

00:33:36,180 --> 00:33:40,180

Death and destruction as long as it explodes on impact.

529

00:33:40,180 --> 00:33:44,180

For this to be a successful test, we've got to be able to launch our torpedo from shore,

530

00:33:44,180 --> 00:33:49,180

have it skim across the surface of the water and crash into our target boat,

531

00:33:49,180 --> 00:33:53,180

splashing incendiary liquid all over it and creating a big fireball.

532

00:33:53,180 --> 00:33:55,180

That's what we've got to do.

533

00:33:55,180 --> 00:33:57,180

Yep, accuracy is beside the point.

534

00:33:57,180 --> 00:34:02,180

This test is about whether the torpedo delivers its destructive payload.

535

00:34:03,180 --> 00:34:06,180

Tethered Goldilocks, let's hope this one works.

536

00:34:06,180 --> 00:34:10,180

In three, two, one, fire.

537

00:34:13,180 --> 00:34:15,180

Oh, shit.

538

00:34:16,180 --> 00:34:18,180

We're doing better without it tethered.

539

00:34:20,180 --> 00:34:21,180

I'm sad.

540

00:34:22,180 --> 00:34:24,180

Rockets don't like to be tethered.

541

00:34:24,180 --> 00:34:25,180

No.

542

00:34:25,180 --> 00:34:26,180

Nor torpedoes.

543

00:34:26,180 --> 00:34:28,180

They just want to be free.

544

00:34:28,180 --> 00:34:30,180

Free range torpedoes.

545

00:34:31,180 --> 00:34:36,180

In contrast to yesterday's test, the tethered definitely kept the torpedo waterbound,

546

00:34:36,180 --> 00:34:38,180

although a little too much so.

547

00:34:38,180 --> 00:34:41,180

But that's a problem they think they can fix.

548

00:34:41,180 --> 00:34:44,180

In the interest of trying everything we can think of,

549

00:34:44,180 --> 00:34:49,180

we have moved the boat from its original position of 800 feet from shore to 200 feet from shore

550

00:34:49,180 --> 00:34:53,180

and we've moved the guide wire from underwater to above water.

551

00:34:53,180 --> 00:34:55,180

I really hope this works.

552

00:34:56,180 --> 00:35:02,180

Remember, the historical record isn't clear as to whether this was a long or short range weapon.

553

00:35:02,180 --> 00:35:06,180

So they're closing in to concentrate on payload delivery.

554

00:35:06,180 --> 00:35:07,180

There we go.

555

00:35:07,180 --> 00:35:11,180

It's now or never for their torpedo of doom.

556

00:35:11,180 --> 00:35:19,180

Okay, and send your torpedo in three, two, one, fire.

557

00:35:22,180 --> 00:35:23,180

Come on, come on.

558

00:35:24,180 --> 00:35:25,180

No!

559

00:35:35,180 --> 00:35:36,180

Wow.

560

00:35:36,180 --> 00:35:38,180

That didn't go at all like I expected.

561

00:35:40,180 --> 00:35:43,180

So close, but so far.

562

00:35:44,180 --> 00:35:46,180

Maybe we should just go home.

563

00:35:46,180 --> 00:35:49,180

No, we have to hurt this boat.

564

00:35:49,180 --> 00:35:50,180

Darn it.

565

00:35:51,180 --> 00:35:54,180

Everything was going to plan, but the tethers snapped,

566

00:35:54,180 --> 00:35:58,180

turning the torpedo into a surface-to-air missile

567

00:35:58,180 --> 00:36:02,180

and getting the mythbusters all bent out of shape.

568

00:36:05,180 --> 00:36:07,180

I'm a sad monkey right now.

569

00:36:08,180 --> 00:36:09,180

That's our enemy.

570

00:36:09,180 --> 00:36:11,180

Look how close he is to shore.

571

00:36:11,180 --> 00:36:14,180

We've got rockets, we've got incendiary,

572

00:36:14,180 --> 00:36:16,180

but somehow we can't stop him.

573

00:36:17,180 --> 00:36:19,180

Just bugging the hell out of me.

574

00:36:19,180 --> 00:36:23,180

Yep, it seems the torpedo is less death and destruction

575

00:36:23,180 --> 00:36:26,180

and more like a weapon of mass frustration.

576

00:36:26,180 --> 00:36:29,180

And with only one remaining torpedo,

577

00:36:29,180 --> 00:36:32,180

they've only got one more shot at the myth.

578

00:36:32,180 --> 00:36:34,180

Captain Kirk never said this to Scotty,

579

00:36:34,180 --> 00:36:37,180

but I think we've got too much power.

580

00:36:37,180 --> 00:36:39,180

And that tether is not working for us.

581

00:36:39,180 --> 00:36:40,180

I think we've got to remove it.

582

00:36:40,180 --> 00:36:42,180

Yeah, I think so.

583

00:36:42,180 --> 00:36:44,180

I didn't know you watched Star Trek.

584

00:36:44,180 --> 00:36:45,180

Sure.

585

00:37:14,180 --> 00:37:15,180

Hey, hey, hey!

586

00:37:17,180 --> 00:37:20,180

But we didn't get the mythical 100 feet,

587

00:37:20,180 --> 00:37:22,180

so this one is busted.

588

00:37:22,180 --> 00:37:24,180

But we're not going to stop there.

589

00:37:24,180 --> 00:37:25,180

This is mythbusters.

590

00:37:25,180 --> 00:37:28,180

So the next step for us is to go with the spirit of the myth

591

00:37:28,180 --> 00:37:29,180

and replicate the results.

592

00:37:29,180 --> 00:37:33,180

And that means making our own wine bottle machine gun.

593

00:37:34,180 --> 00:37:36,180

And back at the shop,

594

00:37:36,180 --> 00:37:39,180

that's exactly what the mythbusters are gunning for.

595

00:37:40,180 --> 00:37:41,180

So after all of our tessie,

596

00:37:41,180 --> 00:37:43,180

we've decided to try to replicate the result

597

00:37:43,180 --> 00:37:46,180

and give that machine gun effect the myth talks about

598

00:37:46,180 --> 00:37:49,180

by harnessing the power of the wine bottle.

599

00:37:49,180 --> 00:37:51,180

We basically just cut up a bunch of pipes,

600

00:37:51,180 --> 00:37:52,180

put it on some bearings,

601

00:37:52,180 --> 00:37:54,180

made it look like a gatling gun,

602

00:37:54,180 --> 00:37:56,180

and we're going to use propane as a heat source.

603

00:37:57,180 --> 00:38:01,180

This is it, the ultimate mythbuster wine machine gun.

604

00:38:01,180 --> 00:38:03,180

We're using chilled champagne bottles,

605

00:38:03,180 --> 00:38:06,180

shaken and set over an open flame.

606

00:38:06,180 --> 00:38:08,180

Now it's time to fire this thing.

607

00:38:08,180 --> 00:38:11,180

It's certainly a red hot piece of hardware.

608

00:38:11,180 --> 00:38:15,180

That only needs a target.

609

00:38:15,180 --> 00:38:17,180

And that's where Grant comes in.

610

00:38:18,180 --> 00:38:21,180

There'll be potentially shattering glass,

611

00:38:21,180 --> 00:38:23,180

boiling liquid.

612

00:38:23,180 --> 00:38:24,180

That's why I have this.

613

00:38:24,180 --> 00:38:26,180

It's a fire suit.

614

00:38:26,180 --> 00:38:28,180

Hopefully, it's going to keep me safe.

615

00:38:29,180 --> 00:38:30,180

Let's do this.

616

00:38:31,180 --> 00:38:35,180

With Grant quite literally staring down the barrel,

617

00:38:35,180 --> 00:38:37,180

Here come the pain.

618

00:38:37,180 --> 00:38:39,180

It's go time.

619

00:38:40,180 --> 00:38:43,180

I forgot to protect my nether regions.

620

00:38:43,180 --> 00:38:46,180

As machine guns go, it's a low key start,

621

00:38:46,180 --> 00:38:49,180

as the team has to wait ten minutes for the wine

622

00:38:49,180 --> 00:38:51,180

to reach optimum pressure.

623

00:38:51,180 --> 00:38:52,180

But then...

624

00:38:54,180 --> 00:38:56,180

Got him in the leg!

625

00:38:58,180 --> 00:39:00,180

Right in the ending!

626

00:39:03,180 --> 00:39:06,180

I don't know about dangerous, but it's hilarious.

627

00:39:10,180 --> 00:39:13,180

They're actually hitting with some force.

628

00:39:16,180 --> 00:39:18,180

Right in the gut!

629

00:39:18,180 --> 00:39:21,180

It's a sparkling mythbusters moment.

630

00:39:21,180 --> 00:39:22,180

Oh yeah!

631

00:39:22,180 --> 00:39:25,180

But with reloading too dangerous,

632

00:39:25,180 --> 00:39:27,180

the conclusion is inevitable.

633

00:39:29,180 --> 00:39:32,180

We got the wine bottles to act like a machine gun,

634

00:39:32,180 --> 00:39:36,180

and we got the corks to go in the direction we wanted it.

635

00:39:37,180 --> 00:39:39,180

I feel a little bad for Grant.

636

00:39:41,180 --> 00:39:42,180

Yeah!

637

00:39:42,180 --> 00:39:45,180

But I think he would agree it was worth it.

638

00:39:45,180 --> 00:39:46,180

At least for science.

639

00:39:57,180 --> 00:40:00,180

The mythbusters are at the end of their tether.

640

00:40:02,180 --> 00:40:04,180

Frustratingly, their ancient torpedoes

641

00:40:04,180 --> 00:40:08,180

have missed the boat on accuracy and payload delivery.

642

00:40:08,180 --> 00:40:11,180

But they've had a eureka moment.

643

00:40:12,180 --> 00:40:16,180

Perhaps it's all down to too much rocket power.

644

00:40:16,180 --> 00:40:19,180

Well sometimes less is more, and I think this is one of those times.

645

00:40:19,180 --> 00:40:21,180

We're going to lose the tether,

646

00:40:21,180 --> 00:40:23,180

and we're going to go with a rocket motor

647

00:40:23,180 --> 00:40:25,180

that puts out about half the thrust

648

00:40:25,180 --> 00:40:27,180

of the ones that we've been using here to form.

649

00:40:27,180 --> 00:40:30,180

Hopefully that'll allow our torpedo to stay as a boat,

650

00:40:30,180 --> 00:40:33,180

and not a rocket, and go crazy.

651

00:40:33,180 --> 00:40:36,180

If having the thrust doesn't get a direct hit,

652

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

then this myth is totally and utterly sunk.

653

00:40:42,180 --> 00:40:43,180

With the boat fully prepped,

654

00:40:43,180 --> 00:40:45,180

and the torpedo armed to the teeth,

655

00:40:45,180 --> 00:40:48,180

it takes its slow walk to the shore.

656

00:40:48,180 --> 00:40:49,180

Don't drop it.

657

00:40:49,180 --> 00:40:50,180

I will not.

658

00:40:50,180 --> 00:40:53,180

But will it have the bite of the myth?

659

00:40:53,180 --> 00:40:55,180

This part when the explosives are alive,

660

00:40:55,180 --> 00:40:57,180

it's not the fun part of this job.

661

00:40:57,180 --> 00:40:58,180

No.

662

00:40:59,180 --> 00:41:02,180

The tension mounts as their final torpedo is ready for launch.

663

00:41:03,180 --> 00:41:04,180

It's alive.

664

00:41:04,180 --> 00:41:05,180

Good.

665

00:41:05,180 --> 00:41:07,180

Then the guys retreat behind the shields

666

00:41:07,180 --> 00:41:10,180

at its sinker swim time.

667

00:41:10,180 --> 00:41:14,180

In three, two, one, fire.

668

00:41:17,180 --> 00:41:20,180

This is starting to get me upset.

669

00:41:21,180 --> 00:41:23,180

There it goes.

670

00:41:23,180 --> 00:41:25,180

Come on, baby, come on, hit it.

671

00:41:27,180 --> 00:41:30,180

Ahhh!

672

00:41:30,180 --> 00:41:32,180

Just boom, boom.

673

00:41:33,180 --> 00:41:37,180

Yep, that certainly was chest bump worthy.

674

00:41:39,180 --> 00:41:43,180

Not only did the torpedo stay on the surface of the water,

675

00:41:44,180 --> 00:41:47,180

but it delivered its deadly payload.

676

00:41:47,180 --> 00:41:50,180

That sent fire up over the bow of the boat.

677

00:41:50,180 --> 00:41:52,180

That was awesome.

678

00:41:53,180 --> 00:41:55,180

Holy Crippala.

679

00:41:56,180 --> 00:41:58,180

Oh, there's a fire.

680

00:41:58,180 --> 00:42:01,180

Luckily, I've got a 13th century fire extinguisher.

681

00:42:05,180 --> 00:42:07,180

I have saved your boat.

682

00:42:10,180 --> 00:42:12,180

Yeah, that was a perfect hit.

683

00:42:12,180 --> 00:42:14,180

And, you know, you could have used explosives,

684

00:42:14,180 --> 00:42:16,180

you could have incendiaries, anything you want.

685

00:42:16,180 --> 00:42:18,180

If it hit that hole like that.

686

00:42:18,180 --> 00:42:21,180

I'd be telling my other boats to turn around if one of those hit me.

687

00:42:21,180 --> 00:42:22,180

That's what I'd be saying.

688

00:42:22,180 --> 00:42:23,180

Turn around.

689

00:42:23,180 --> 00:42:24,180

Get the hell out of here.

690

00:42:24,180 --> 00:42:26,180

These people are crazy.

691

00:42:27,180 --> 00:42:31,180

That last launch was what we've been looking for all week.

692

00:42:33,180 --> 00:42:36,180

The engine cut fire, started to push the torpedo.

693

00:42:36,180 --> 00:42:39,180

It skipped beautifully on the surface,

694

00:42:39,180 --> 00:42:42,180

maybe veering about a foot or two to the right,

695

00:42:42,180 --> 00:42:44,180

and slammed into the side of the boat,

696

00:42:44,180 --> 00:42:47,180

embedding itself, releasing its incendiary,

697

00:42:47,180 --> 00:42:49,180

and catching it all on fire at the same moment,

698

00:42:49,180 --> 00:42:51,180

and setting the boat on fire.

699

00:42:51,180 --> 00:42:55,180

Pretty much every last thing in one launch.

700

00:42:55,180 --> 00:42:58,180

I still can't believe it. I'm pitching myself.

701

00:43:03,180 --> 00:43:05,180

Well, how do you want to call this one?

702

00:43:05,180 --> 00:43:08,180

Was the series mythical, surface, rocket-powered,

703

00:43:08,180 --> 00:43:11,180

incendiary-galloping torpedo been an effective weapon of war?

704

00:43:11,180 --> 00:43:13,180

Indeed it was, based on this task.

705

00:43:13,180 --> 00:43:14,180

We have to call it plausible, don't we?

706

00:43:14,180 --> 00:43:15,180

Absolutely.

707

00:43:15,180 --> 00:43:17,180

Bargain time machine, it's plausible.

708

00:43:17,180 --> 00:43:18,180

Let's get out of here.

709

00:43:25,180 --> 00:43:31,180

This episode of Mythbusters was presented by Chevrolet Volt.