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# The Robot Shark Technology of Jaws - Tested

7-9 minutes

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The mechanical shark from *Jaws* has always gotten a bad rap. Anyone who has a passing interest in *Jaws* knows it kept breaking down, which was a blessing in disguise because Steven Spielberg had to add more character development and depth to the script.

At the same time, when we do see the shark, it's damn scary, and if it wasn't effective, even in the brief flashes it's shown, *Jaws* wouldn't be the masterpiece of terror we know and love today.

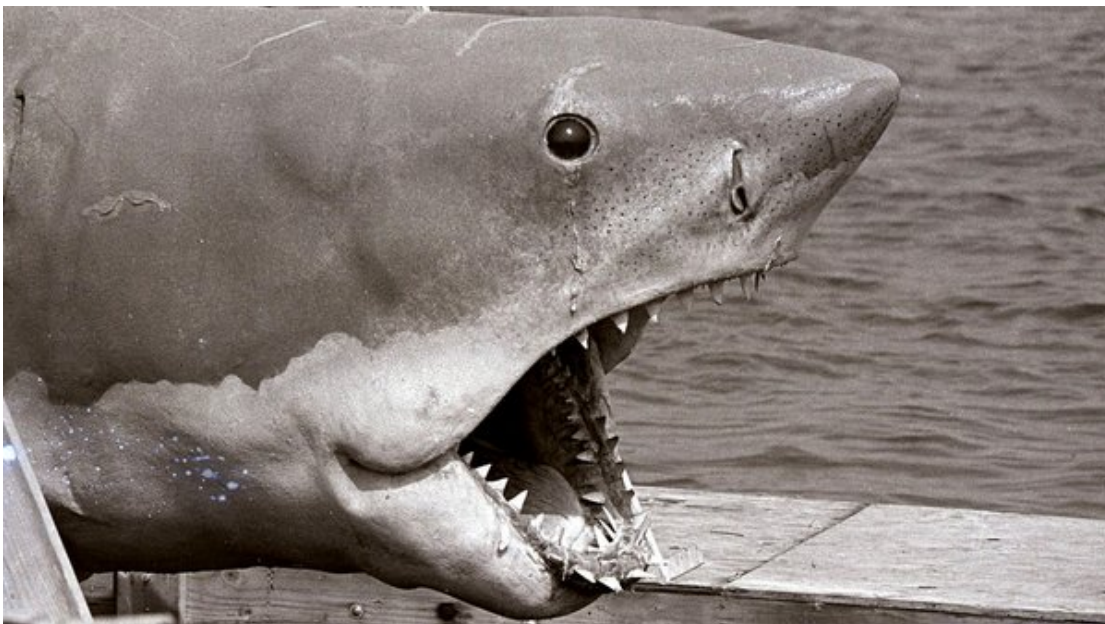


Photo credit: Edith Blake

As Pat Jankiewicz, author of the *Jaws* compendium [Just When You Thought It Was Safe](#), says, “The animatronic shark in *Jaws* showed how effective an animatronic special effect could be. While the stories of it malfunctioning are legendary, it is completely believable and terrifying onscreen. The climax, where the shark and Roy Schieder battle to the death, is utterly dependent on the creature's effectiveness and it delivers. While Steven Spielberg hid the shark until the climax, Bob Mattey's monster lives up to the film's build up by being as scary as we were told it would be up to that point.”

Jankiewicz adds, “It's amazing when you realize that *Jaws* was snubbed for an Oscar for the special effects, which went to the bland *Hindenburg*, as the shark led to the '80s and early '90s, which was a boomtown of animatronic creatures making millions for their studios, including Spielberg's own *Jurassic Park*, *E.T.* and *Gremlins*.”



Photo credit: Jim Beller

The first person onboard to work on *Jaws* was art director Joe Alves, who also worked on Rod Serling's Night Gallery, as well as Spielberg's Sugarland Express and Close Encounters.

When *Jaws* was first set up at Universal, the book was still in galleys, and the biggest names attached to it were producers David Brown and Richard Zanuck.

Alves drew up some sketches, and showed them to the FX department, who said, "We can't do that. We can't build that thing. It would take a year and a half, two years. Besides we've got bigger pictures like Earthquake and The Hindenburg." In fact, Universal thought *The Hindenburg* was going to be its big movie for 1975. (Although it's a long forgotten disappointment today, *The Hindenburg* is notable for the FX work of matte painting master Albert Whitlock.)

Marshall Green, who was head of production for Universal, got upset and told the FX department, "*Jaws* could be a bigger picture than *The Hindenburg*," which was greeted with laughter. Green then met with Alves alone and asked, "Do you think we can get the shark made?" "Well I can certainly try," Alves said. "Take it away from the studio," Green replied. "Take it off this lot."

Alves scouted locations for *Jaws*, and picked Martha's Vineyard, but it wasn't just a case of keeping the Universal brass from breathing down everyone's necks. As Alves recalls, "In our naïve way, Steven and I, having seen *The Old Man and the Sea*, which was a good movie but it had terrible

effects, said, ‘No, it’s gotta be a full-sized shark in the real ocean.’”

{ *Jaws* art director Joe Alves was determined to prove a top-notch mechanical shark could be done.

Of course this decision would come back to haunt Spielberg repeatedly throughout the shoot, but Alves was determined to prove a top-notch mechanical shark could be done. He kept going around to experts, who told him it would take several years, and the idea of putting it in the open water was anathema to them. Then Alves came in contact with Bob Matthey, the mechanical FX legend who created the giant squid from *20,000 Leagues Under the Sea*, as well as Herbie from *The Love Bug*.

Matthey told Alves the shark could indeed be made, and he got to work. Then in January 1974, *Jaws* the novel was published and it was a big best-seller. Universal decreed the movie had to shoot that summer, which gave Matthey no time to perfect his mechanical masterpiece.



Art director Joe Alves with Bruce under construction.

Actually, three sharks were built for Jaws at the cost of \$150,000 each. They were collectively named Bruce, after Spielberg's lawyer. Roy Arbogast, who was honing his monster making skills as Matthey's assistant, recalled that the sharks had a skin hard polyurethane rubber over a tubular-steel skeleton. As special effects supervisor Kevin Pike recalled in *Just When You Thought It Was Safe*, when painting the shark, "We used chopped-up walnuts, sand and dust in the paint to give the skin texture on the surface."

When the sharks first arrived in Martha's Vineyard, Pike asked if they had been tested in the water yet. The answer was no. Jaws was the first film Pike ever worked on, but he knew right there it was going to be a long shoot.

"When you got it in the salt water, it started to affect the electrolysis," Alves says. "Everything that was electrical in the shark dissipated rapidly. Bob used pneumatics instead of

hydraulics because he didn't want oil spills."

As the apocryphal story of *Jaws* goes, with the shark not working, Spielberg was able to make a much more effective movie by not showing it all the time. The director even said in one documentary, "I think the film would have made half the money had the shark worked." But Alves says, "I don't know if we originally planned to show the shark much. I did all the sketches, I did 300 storyboards to *Jaws*, and I think we showed it too much."



Photo credit: Edith Blake

In the scenes where the naked swimmer gets eaten in the beginning, you were never supposed to see the the shark, whether it was working or not.

In fact, in the scenes where the naked swimmer gets eaten in the beginning, and when the fishermen try to catch the shark off the dock, you were never supposed to see the it, whether it was working or not. As cinematographer Michael Chapman

(*Raging Bull*), who was the camera operator on *Jaws*, says, “There was always at least some of that in the script that were not going to see it for a while. It was just lurking and lurking.”

Susan Backline, who was the first shark victim, recalled that in her scene and the scene on the pier, “They never, ever considered showing the shark. That’s exactly how Steve wanted it filmed.” (The first time the shark was supposed to be seen in *Jaws* was when it ate the kid on the raft.)

“When we were running out of time, it wasn’t that we were going to use the shark so much more,” Alves continues. “When the shark wasn’t working, we shot everything we could shoot. What worked well for us is we used the barrels to represent the shark, and it did so in a very dramatic way. That was sort of planned, and it allowed us to keep shooting while we didn’t have the shark.”



Photo credit: Louis Goldman

So yes, even though the shark has gotten a bad rap over the

years, it was a top-notch creature for its time, and it definitely delivered when you saw it onscreen. “Bob Mattey was doing stuff that had never been done before,” Alves says. “I don’t know if the sharks could have been done any better. The technology is a little bit more sophisticated today, and you can do more remote controlled kinds of things, but you’re still going to have problems in the water. It was complicated, but when people say the shark didn’t work, my rebuttal is if it didn’t work, why did it scare so many people?””