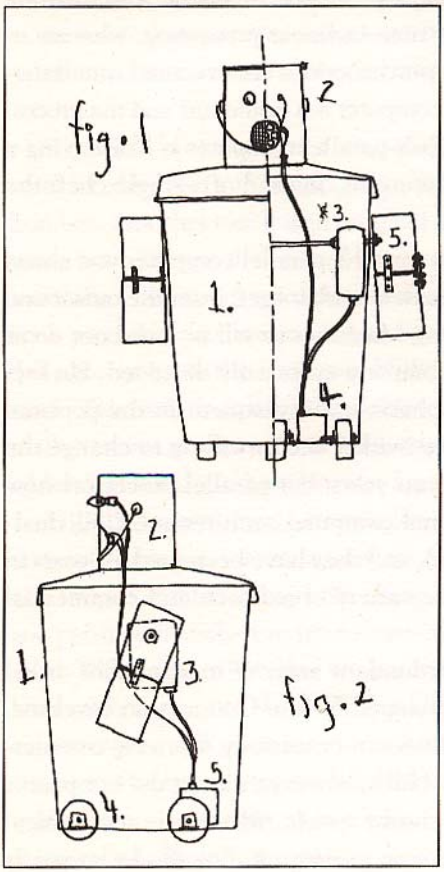
DANNY HILLIS'S PAINT CAN ROBOT



1956–

Artist interpretation of Danny Hillis's robot made from paint cans. (See endnote.)

was opened. And then . . . the room was filled with the thunder of giant footsteps, the giant curtain came down, and a 14-foot tall triceratops rushed from behind it, heading straight for the audience. The Disney execs were impressed all right — they jumped out of their seats and ran for cover, thrilled out of their wits. In Hillis's words, he had "oversolved the problem." The dinosaur was declared a little *too* thrilling for public consumption. Even though it was a technological marvel — 6 tons (5.5 t) of metal that could move as fast as a running human but was gentle enough to step on a light-bulb without breaking it — the dinosaur was simply too realistic. In a sense, Hillis had failed again.

Hillis has talked about how and why inventors fail — he says, "Inventors don't think of failures, they are just things that are not appreciated yet." More seriously, he thinks it is typical for inventors to have blind spots — as a group, inventors can be pretty excitable. During the invention process, Hillis explains that he visualizes an idea. He says that with experience he's gotten skeptical of his enthusiasm and recognizes that his vision of an invention is just an illusion created in his own mind, one that is likely faulty and will need adjustment if it is to work.

Of course there is nothing wrong with Hillis's robot ideas. Robots to deliver orange juice are now a reality. As of 2006, one Hong Kong restaurant "employs" three of them to take orders and deliver the food and drinks. Customers love it, and the robots have definitely helped business. Though, apparently, they are pretty inefficient — so much so that the restaurant actually requires more staff than a normal restaurant. Caring for robots is one of the core duties of the human staff.

It seems that we are living at a critical period in the evolution of the humanoid robot — when the use of intelligent machines is experiencing rapid change. A robot chef now exists that, given the raw ingredients, can produce more than 160 classic Chinese dishes. Honda has developed ASIMO, a humanoid robot that walks like a human, talks like a human, kicks a soccer ball like a human, and brings people orange juice. It can also recognize faces and perform