

THINK ABOUT IT
CURIOUS CONTRAPTIONS

*“I cannot live without brain-work.
What else is there to live for?”*

—Sherlock Holmes, *The Sign of Four*

What's Going On?

You have built a complex machine that completes various tasks in order.

This kind of machine, called a Rube Goldberg machine, is characterized by a set of complex processes that, in total, accomplish a relatively simple task such as moving a ball or turning on a light. You may have seen a Rube Goldberg machine at a science museum – do you remember lots of complicated levels, pulleys, and slides, all working together?



THE INTERNATIONAL EXHIBITION OF
SHERLOCK HOLMES

P4



CURIOUS CONTRAPTIONS



“What one man can invent another can discover.”

—Sherlock Holmes, *The Adventure of the Dancing Men*

SHERLOCK HOLMES' LATEST CLIENT IS PERCY CARLISLE, A VERY NERVOUS MAN WHO IS CONVINCED THAT HIS HOUSE IS HAUNTED.

“I hear strange noises at night,” said Carlisle, “and once, as I was walking past the parlor, I saw a strange object moving across the floor. But there was no one inside the room! It was so eerie that I haven't entered the parlor since.” Carlisle mopped his brow with a handkerchief.

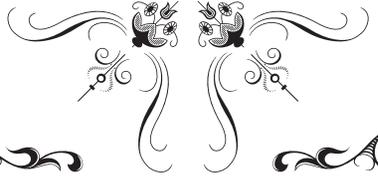
“I am at my wit's end, Mr. Holmes. A neighbor of mine has offered to purchase the house, and I am resolved to sell it to him, but I have come to you as a last resort. I can see only two explanations: either my house is haunted, or I have gone insane.”

“I suspect there is a third explanation,” said Holmes. “Your neighbor is determined to purchase your house, so he devised a contraption, activated by a single touch, that moves on its own and produces the noises that you hear. By the time you investigate the noise, the man has disappeared and the machine is in motion.”

“Is such a thing possible?” asked Carlisle, astonished.

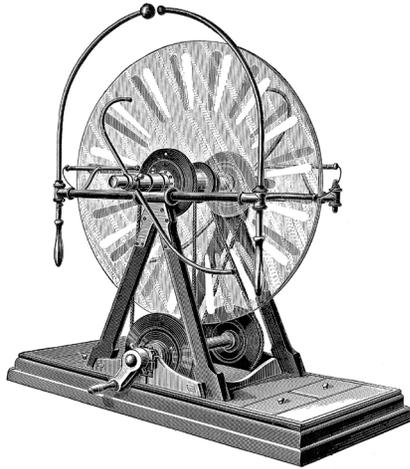


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EXPERIMENT

CURIOUS CONTRAPTIONS



The Challenge

Is Sherlock correct? Can you create a device similar to the one being used to haunt this house?

MATERIALS

- Tape
- Scissors
- Reusable building supplies such as cardboard, plastic containers, balls, CD jewel cases, books, dominoes, funnels, cups, string, or rubber bands

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EXPERIMENT

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PROCEDURE

Your challenge is to create a machine that moves at least three objects in sequence (for example, a falling ball triggers a basket to tip over, which releases marbles that roll across the floor).

You can use any supplies in any way you see fit, but you must follow two rules when designing your machine:

- 1 It must be set in motion with a single touch.
- 2 It must continue to “haunt” for as long as possible.

Be creative and remember that many different “haunting” mechanisms are possible – objects that fall, roll, twist, etc. Be sure to test your machine to ensure that it completes at least three motions.

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