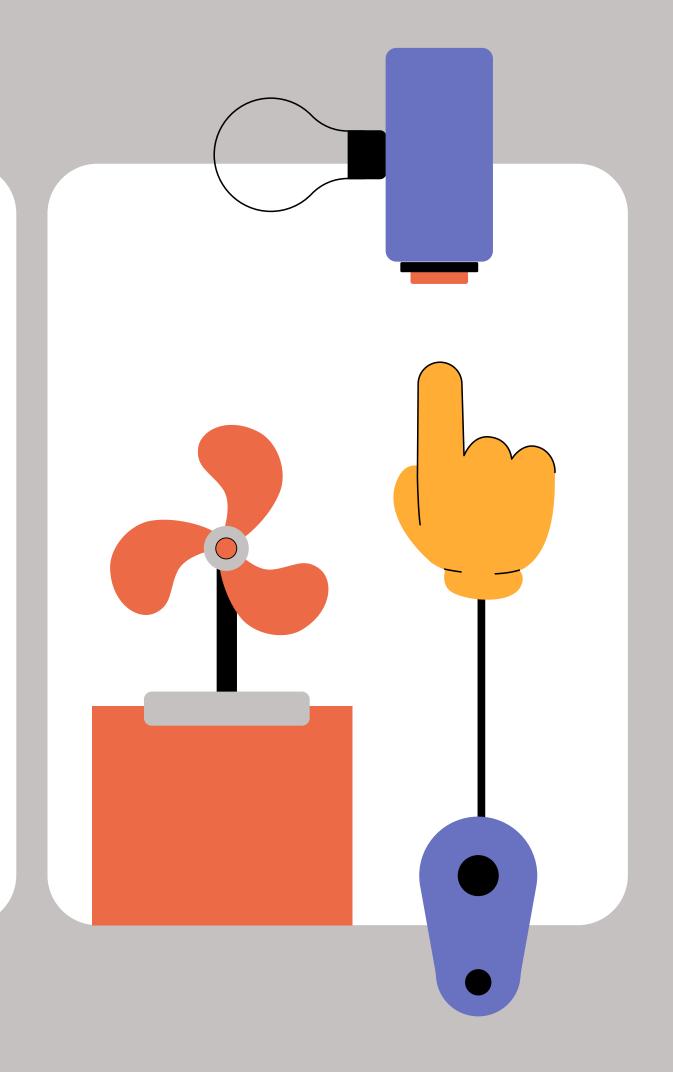
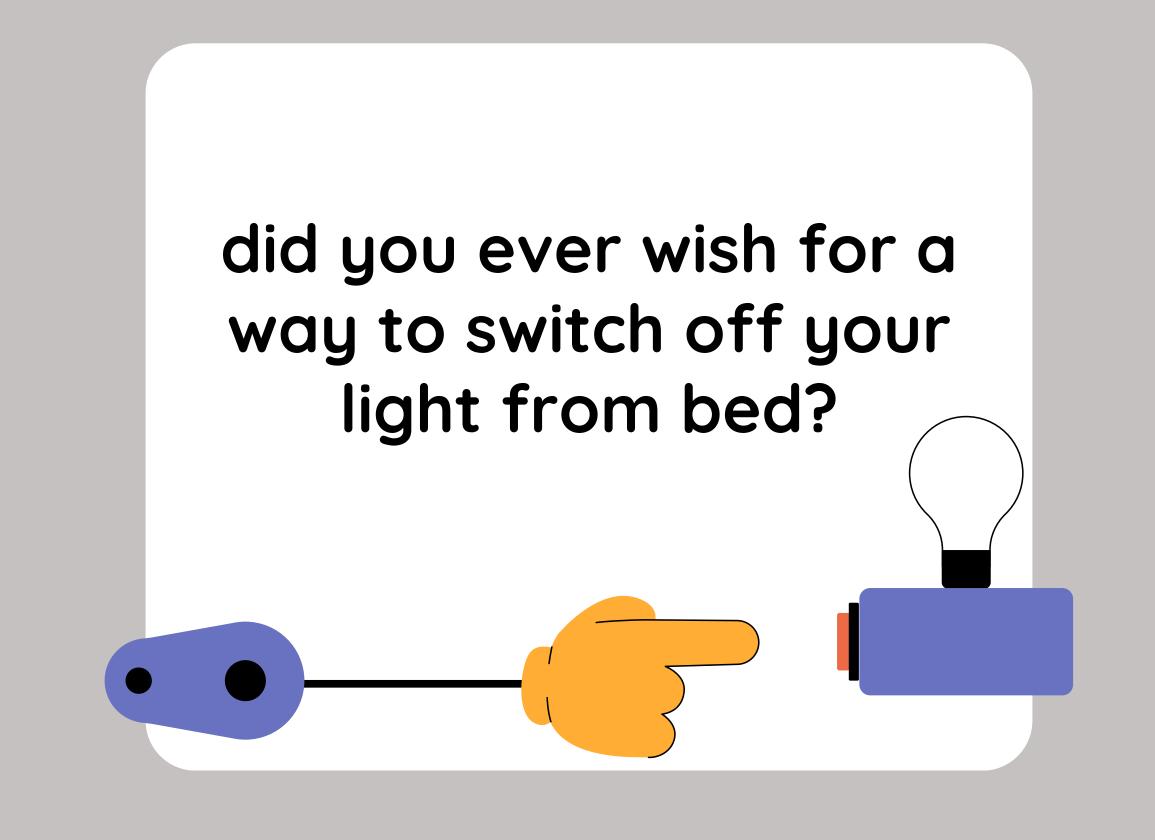
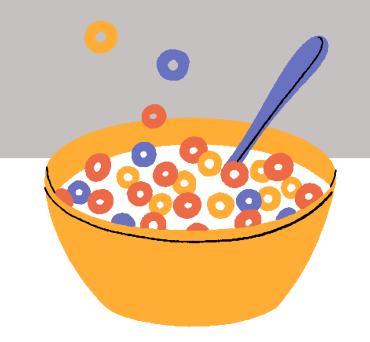
RUBE GOLDBERG

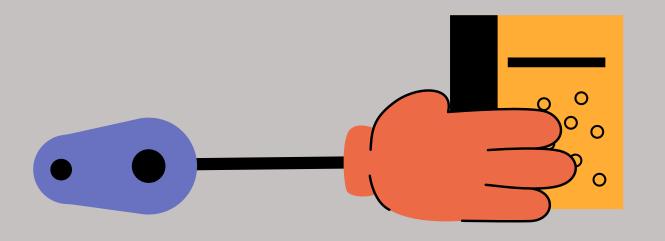
and his machines!







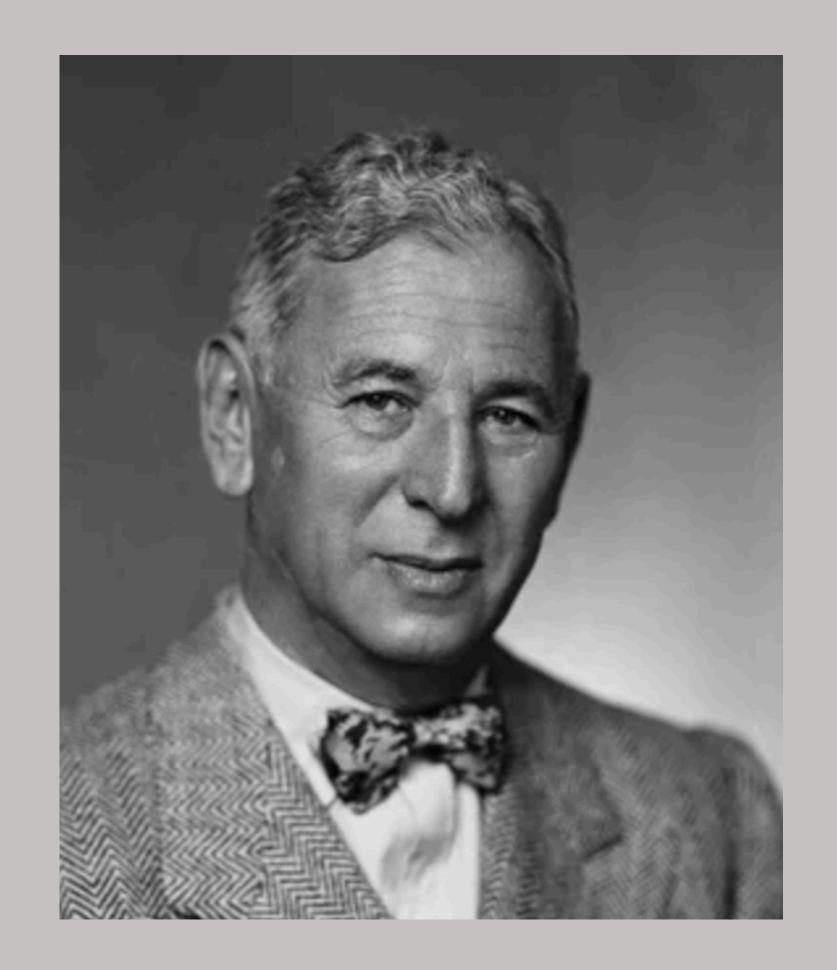
or maybe a way to prepare breakfast while you were getting ready?



Thats exactly what the Rube Goldberg machines are all about!

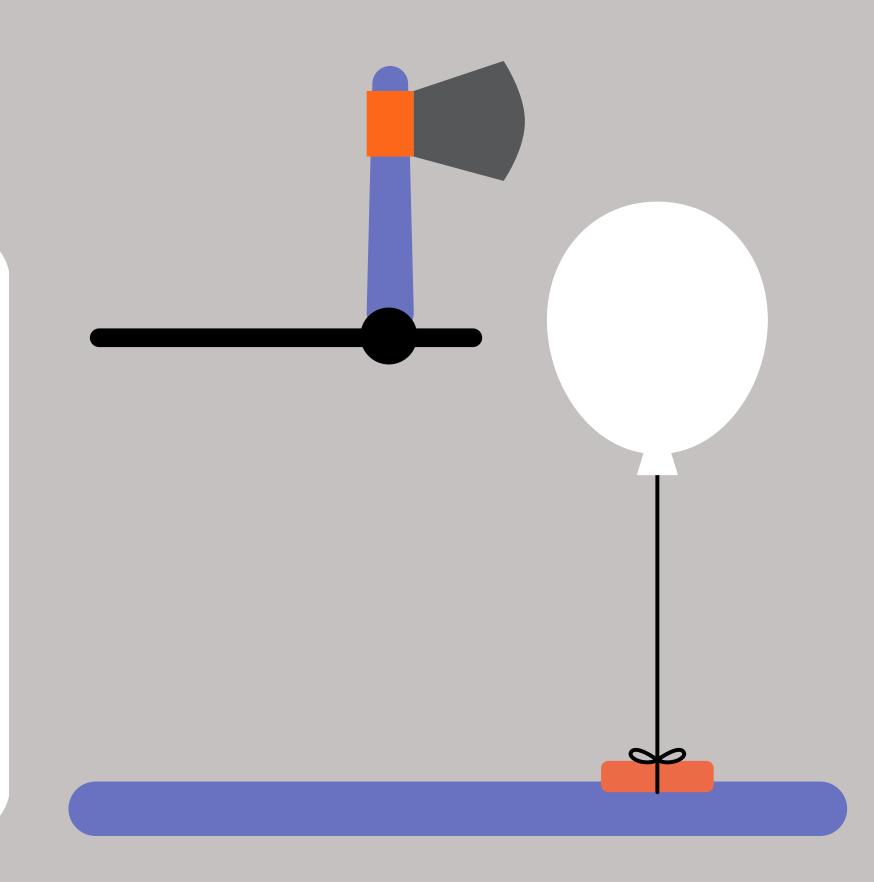
WHO IS RUBE GOLDBERG????

- He was born in San Francisco in 1883
- He passed away in 1970
- He graduated from College of Mining Engineering at UC Berkeley in 1904
- He worked in a Water & Sewage company before quitting, moving to NYC and becoming a full time cartoonist
- He is a famous award winning artist and inventor, but he never invented anything! (physically)



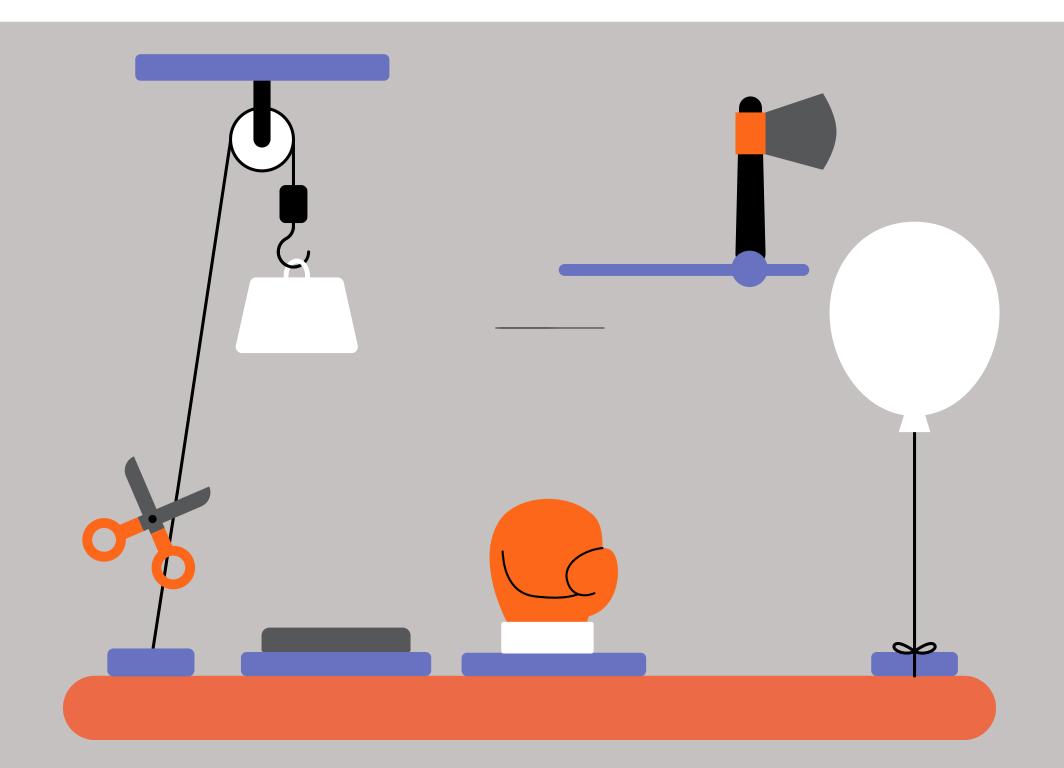
RUBE GOLDBERG MACHINES

Generally defined as machines that perform a simple task in an indirect and overly complicated manner



A Rube Goldberg guide on

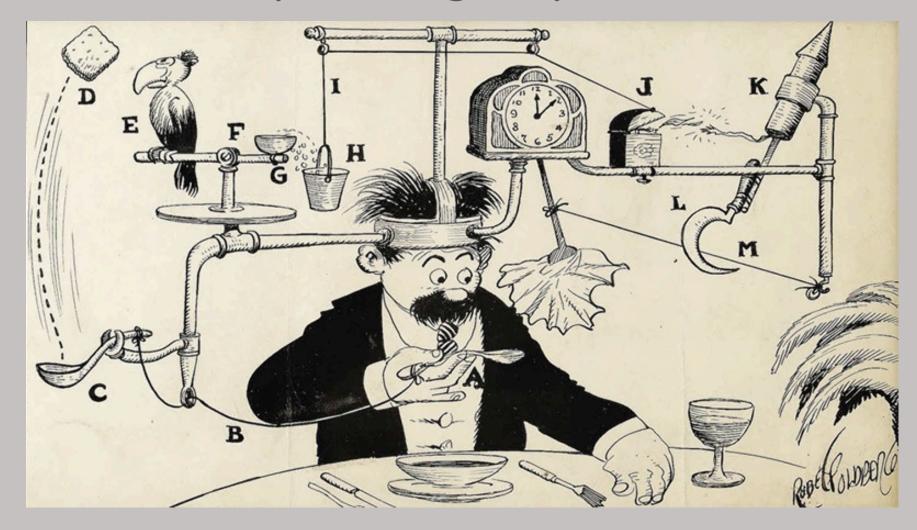
HOW TO POP A BALLOON:



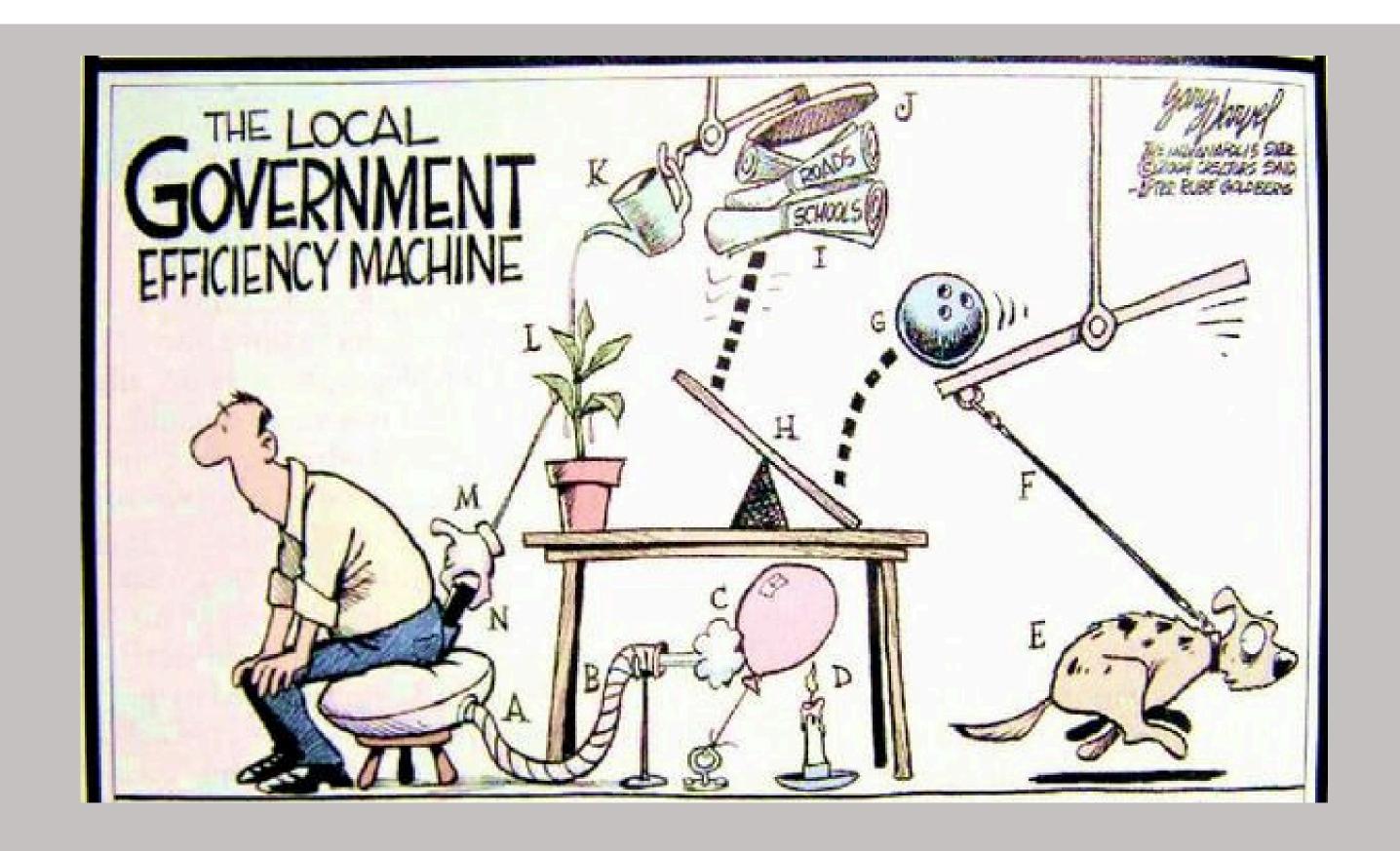
RUBE COLDBERG CARTOONS

- His machines were published in magazines as cartoons
- Featuring Professor Lucifer Gorgonzola Butts
- Used to carry out simple, mundane tasks
- Easy for **everyone** to understand
- Always uses a chain reaction to trigger one event after the other
- Usually do not involve motors or mechanical parts
- Often defy logic and physics

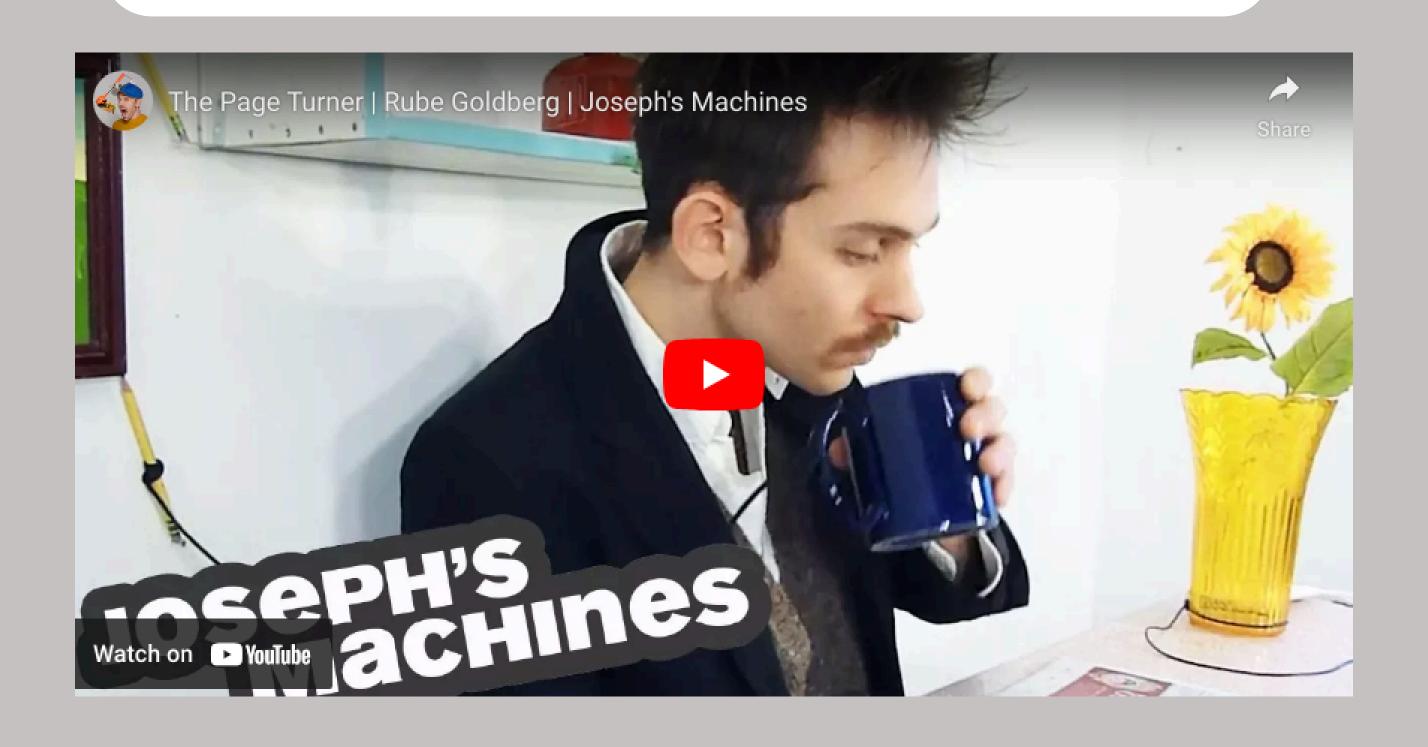
The Self-Operating Napkin - 1931



POLITICAL CARTOONS & MACHINES

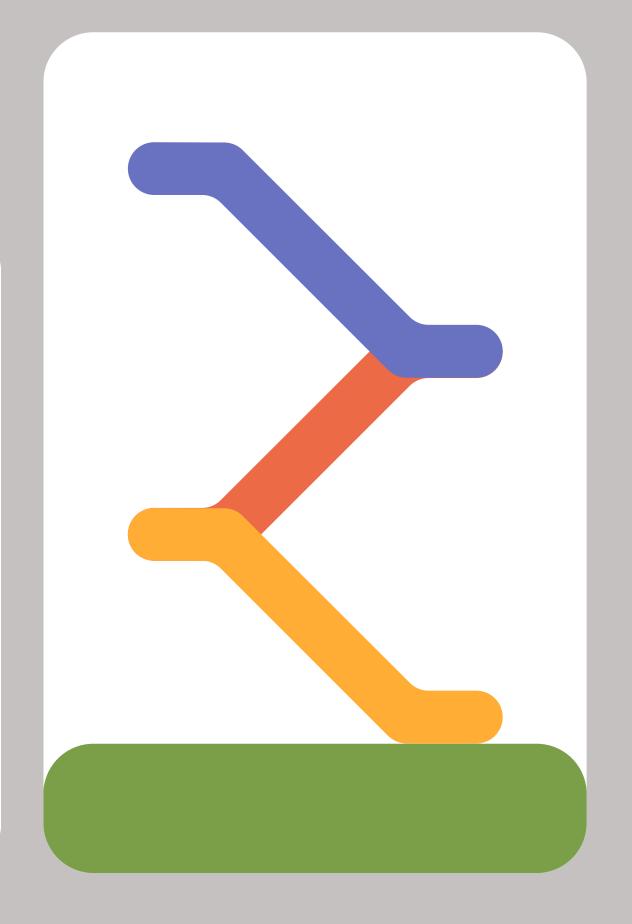


REAL EXAMPLE



APPLICATIONS

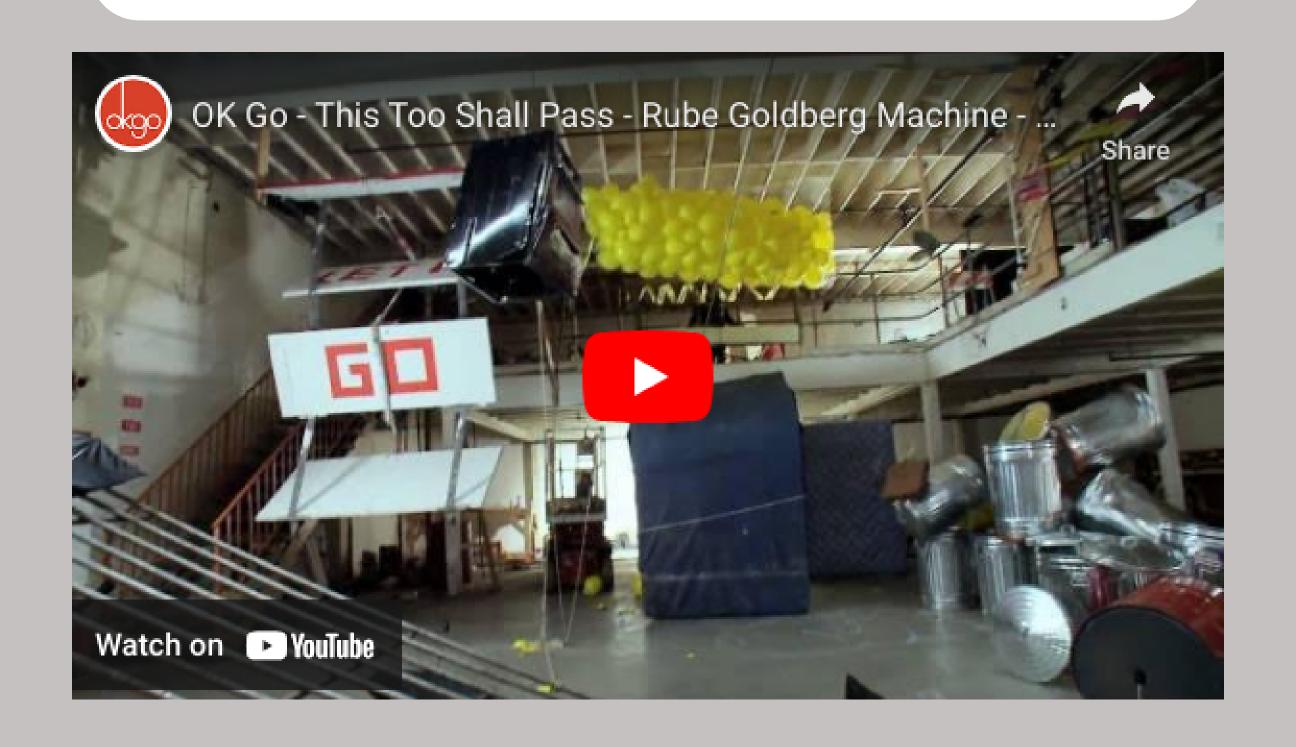
Rube Goldberg Machines are **EVERYWHERE**



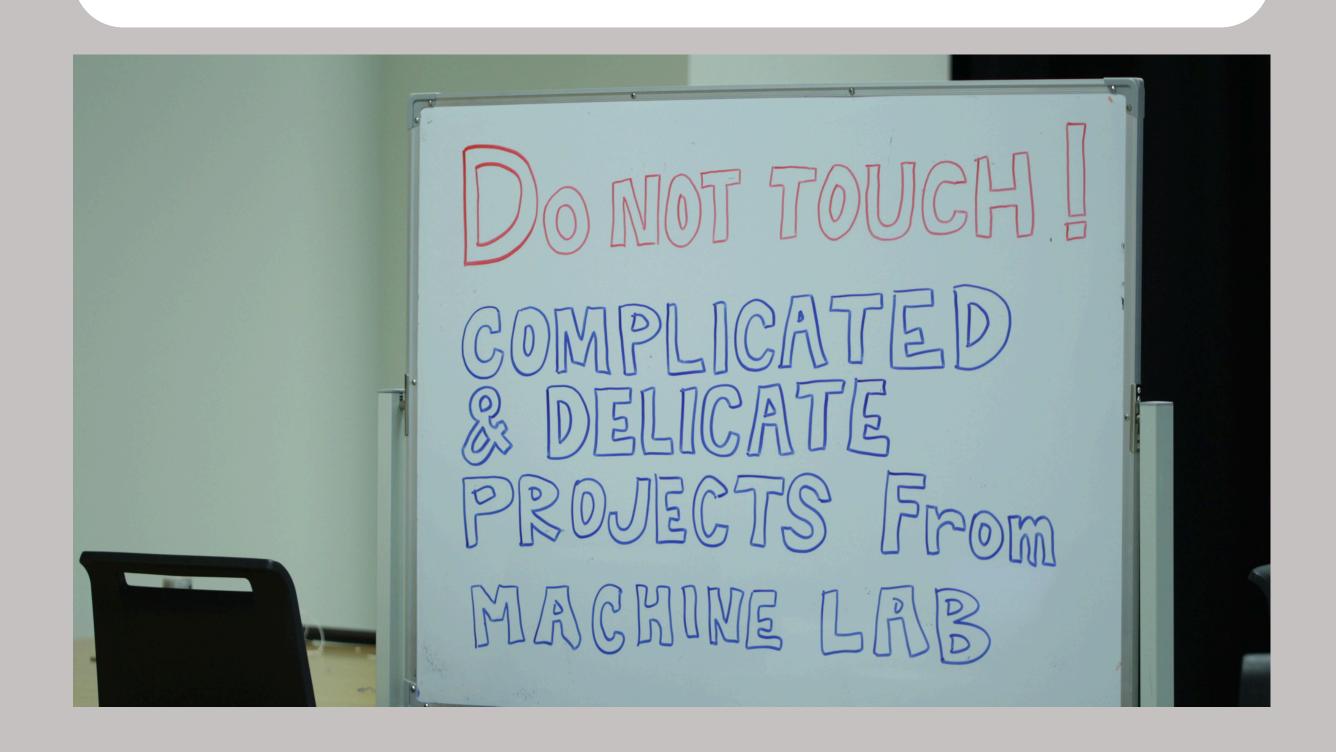
APPLICATIONS: ANIMATION



APPLICATIONS: MUSIC/FUN

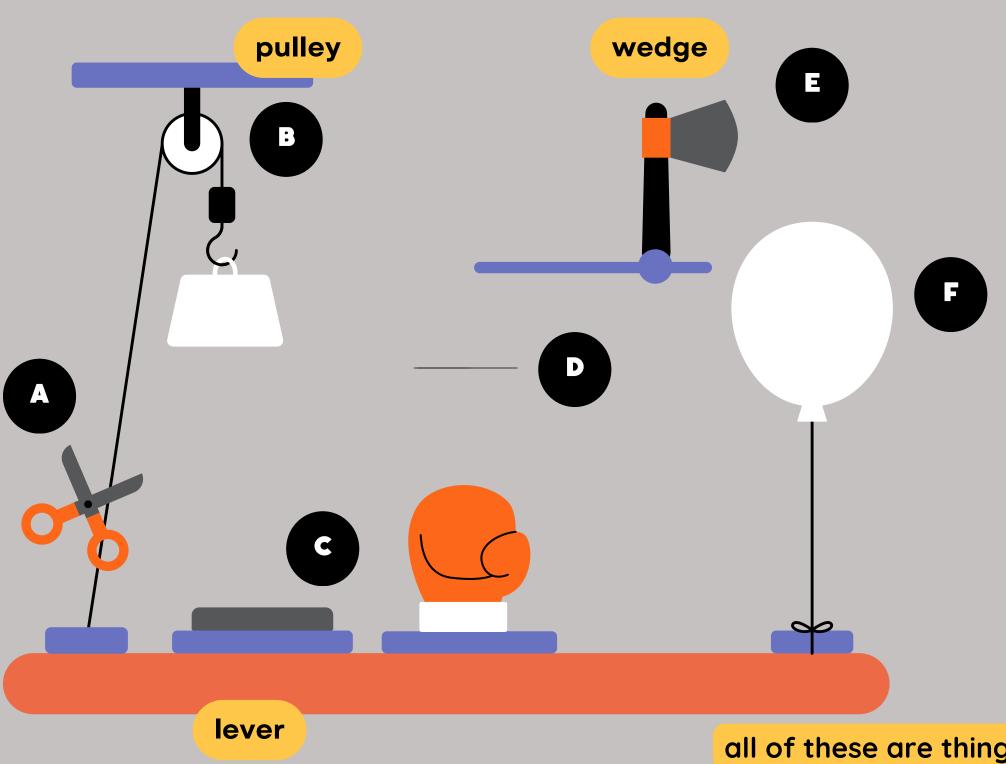


APPLICATIONS: MACHINE LAB??



Mechanics of

HOW TO POP A BALLOON:



all of these are things we've seen and used!

SIMPLE? NOT NECESSARILY!



THANK YOU!

What would you use a Rube Goldberg machine for? Would you ever like to build one?

Do you have any Questions?

