Rube Goldberg Design and Experiment

Play That Track, Ross!  
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# Introduction and Background

A Rube Goldberg device exemplifies the harmony between the dynamic motion of objects. A simple cut of a string can cause huge implications if the device is designed to easily transfer potential into kinetic energy. People around the world have created systems that can be reset over and over to make a certain task easier to do every day. It also can lead a creative, student team to over complicate a simple task of turning on a record player. Voyager One, the first of two spacecraft to leave the solar system, brought with it a piece of human history unlike anything ever made before. A record consisting of the history, sounds and pictures of Earth was on board, wandering the universe to one day be picked up by lifeforms unknown to us. With the work of almost every country on Earth, our pale, blue dot collaborated together to bring forward the best of ourselves to maybe, one day, communicate with whoever else might be out there. We recently got our hands on this record, and was inspired to create a device that would turn it on with a simple light of a match.

# Description of the Device

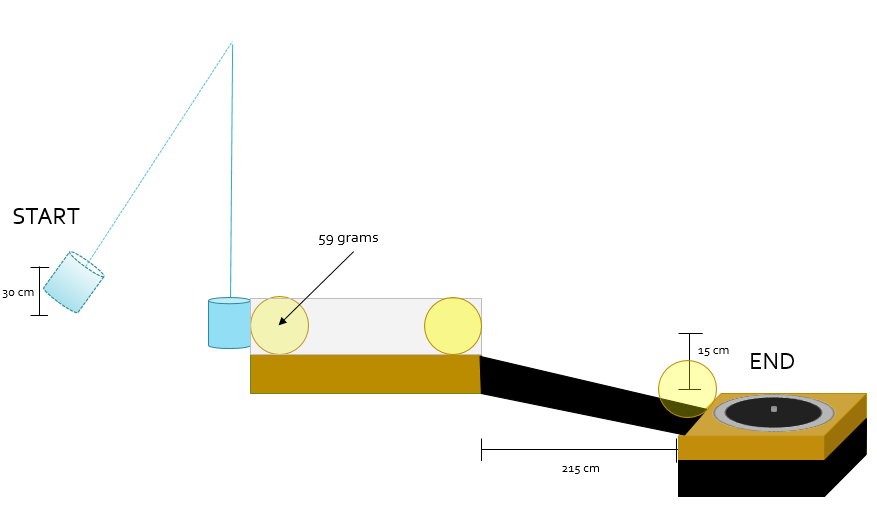


Figure - 2D representation of the rube goldberg device with measurements recorded priot to test

The figure above illustrates our device and its basic function. The measurements added to the figure details the measurements taken prior to our test to help us fully analyze the motion once the tes tis complete. Several materials need to be obtained for this device to be functional. All of our materials were found in the UNH SEDS shop in Kingsbury Hall S172 and the machine shop in S172. The materials that brought this experiment to life were:

* Hanging electrical cord
* Lighter
* Tennis ball
* String
* Plexiglass plates
* Tape
* Piece of wood
* Scrap ramp
* Paper
* Record player
* Voyager track

# Description of Motion

Although it might be easier to manually turn the record player on by hitting a switch, like most people, but being engineers, we wanted to think of a more complicated way to do the same thing. Our device takes the act of flipping ona record player to a more extreme level, requiring pendulum motion, rigid body collisions, and rolling dynamics along a striaghtaway with imparting force and a ramp.

# Numerical Ananlysis

# Observations

# Comparison of Predicted and Observed Data

# Summary and Conclusion

# References

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