GEE HAW WHAMMY DIDDLE

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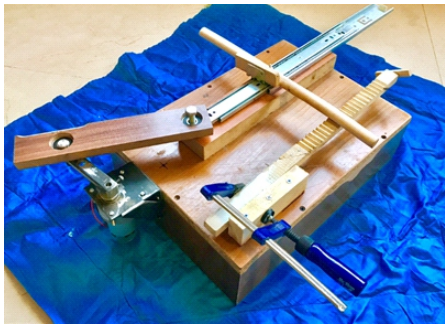
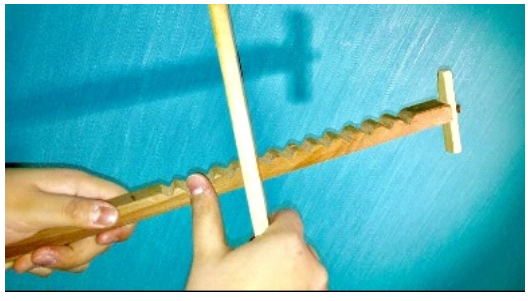
ABSTRACT

Dynamics are investigated for a rigid spinner with a hole, concentric with its mass center, into which a pivot is loosely fitted. Gee haw whimmy diddle is a mechanical toy, which by rubbing a stick rapidly back and forth on the notches, it causes the propeller to rotate.

1 Introduction

"Gee-Haw" refers to the fact that, by rubbing your finger against the notched stick while rubbing, the direction of the spinning propeller may be reversed. The operator may do this surreptitiously and yell "Gee" or "Haw" to make it appear that the propeller is reacting to the commands. If you call it a "Hooey Stick", you would yell "hooey" each time you want the direction to change. Different relevant parameters on the angular velocity of the propeller; such as difference, in the size of the stick, shape of the notches, size of the propeller, material of the stick, size of the hole, geometry of the stick and the number of the notches were investigated and...





2 Theory

The spin of the propeller is caused by horizontal or back and forth vibrations in the notched pencil as you run the second pencil over it. These horizontal vibrations have a specific oscillation pattern that creates vertical or up and down vibrations in the pin. The pin's vertical vibrations take the form of circular or elliptical motion, and this motion causes the propeller to spin was observed...