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HANDS ON LAB - ME 371

TUMBLING MONKEY

PROJECT MEMBERS --->

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CONTENTS

INTRODUCTION

In this project,we present the mechanism of the "tumbling monkey".It can carry out the following actions:

- Tumbling backwards by using its hands
- Shaking i.e. regaining its stable position even from a stumbled position
- moving forward by using its hands
- Moving its tail round and round

To operate it two 1.5V pencil batteries are needed. Some of the functions are shown below:

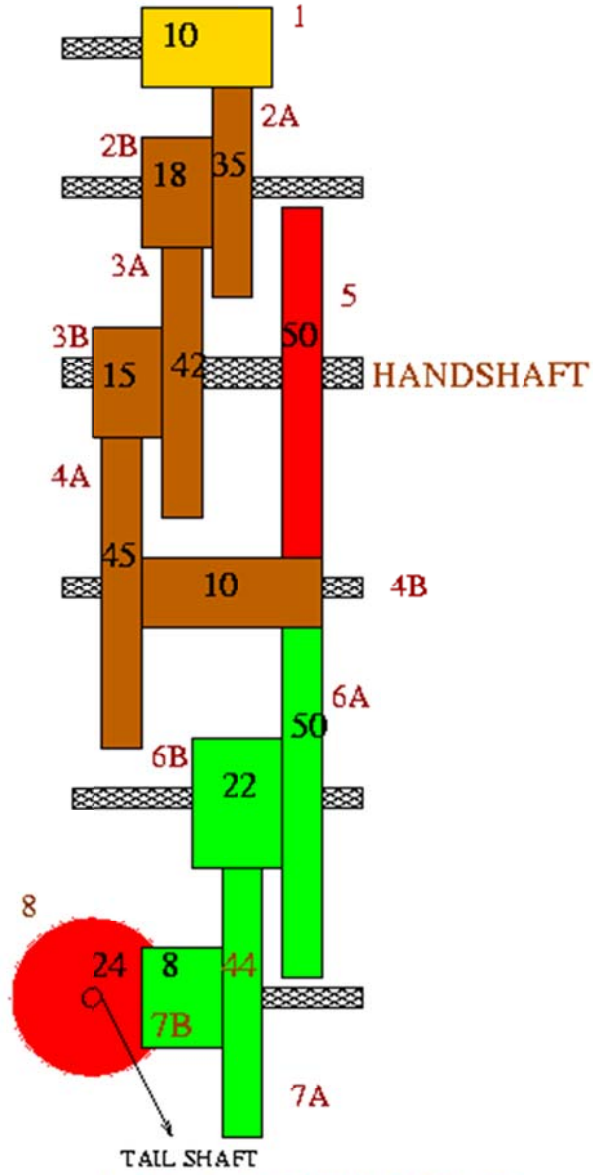
TUMBLING & FORWARD ACTION

BACK

WORKING MECHANISM

GEAR ASSEMBLY

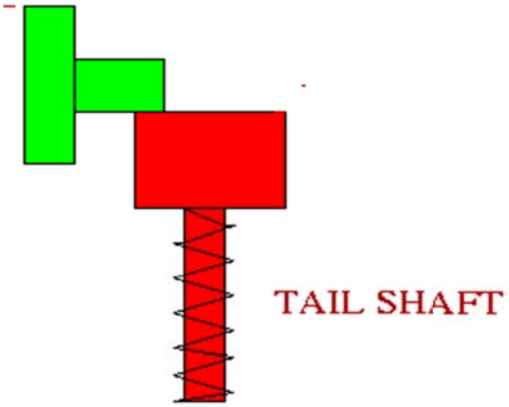
The number of teeths of respective gears are shown in black colour & numbered in brown colour.



GEAR ASSEMBLY

Engagement of gears:

- **Gear 1 :- connected to permanent magnet dc motor.**
- **Gear 5:- Integral with hand shaft.**
- **Gear 8:- Integral with tail shaft.**
- **Other gears :- Free to rotate on their respective shafts.**



Engagement of gear asssembly with tail shaft:

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RIGHT ANGLE GEAR

- *Right angle gear:-- This gear is used here to transmit the motion in prependicular direction.This is responsible for the WAVING TAIL.The rotation is mainly transmitted through sliding.Disadvantages of this type of gear are low power transmission large axial thrust. Though above gear has got aforesaid disadvantages,yet it is easier to make a`:economical.So it is used here.*
- *Spring:-- Spring is acting as shock absorber as it receives frequent impact .*

BACK