

NATURAL MOTIONS VIDEOTAPE

Patent Pending – 1999

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The Technical Models (0-15 Minutes)

Scientists and engineers will see how:

- Energy is converted to motion in one step
- Modified propellers produce motion at lower RPM
- Power plant can be a fraction of total weight
- Mechanism can produce stresses (unknown before) in aircraft, spacecraft, launch vehicles and other structures
- Bodies of different material and geometry respond in motion
- Quantum and electromagnetic effects are produced mechanically

Scientists and engineers will benefit from, and enjoy, The Toys' motions, which show other features of self-motion.

The Toys (15-60 Minutes)

See the following toys move directly on their feet, shoes, boots, sandals and skis without gears, shafts or wheels:

1. Mickey Mouse
2. Mini Mouse
3. Building Blocks model 1
4. Building Blocks model 2
5. Building Blocks Tower 1
6. Building Blocks Tower 2
7. Silver man
8. Sylvester the Cat
9. Cowgirl on Horse
10. Cutie Catie Dolls (Fishel)
11. The Dancing Baby 1 (Street Players)
12. The Dancing Baby 2 (Street Players)
13. The Dancing Baby 3 (Street Players)
14. Plastic Figure
15. Human Footman (Blizzard)
16. Soldier (Kmart)
17. Soldier (Kmart)
18. Ken (Mattel)
19. Gumby (Trendmasters)
20. Large Gumby (Trendmasters)
21. Gumby Rocking (Trendmasters)
22. Gumby & Cat's reaction
23. Alien Lifeform (Shadowbox)
24. The Roswell Alien (Street Players)
25. Astronaut (Bendos)
26. Doctor Figure (\$Stores)
27. Police Woman Figure (\$Stores)
28. Fireman Figure (\$Stores)
29. Ranger Figure (\$Stores)
30. Farmer Figure (\$Stores)
31. Wrestler
32. Dion Sanders Football Figure
33. Valentine Heart
34. Ernie (Sesame Street)
35. Big Bird Mitt (Sesame Street)
36. Teletubbies Po (Hasbro)
37. Bath Bubble Figure
38. Doll
39. Doll (\$Stores)
40. Doll (\$Stores)
41. Doll (\$Stores)
42. Doll (Total Crafts)
43. Doll (Total Crafts)
44. Barbie (Mattel)
45. Barbie/Skater (Mattel)
46. Barbie/Walker (Mattel)
47. Barbie/Work out (Mattel)
48. Barbie/Wal-Mart (Mattel)
49. Barbie/UVA (Mattel)
50. Bugs Bunny (Warner Bros.)

- Thrill collectors of your toys with drive-belts that can produce infinite gaits and motions in dolls, action figures, and other toys that stand on 1, 2, 3 or more legs. Put life in old and new toys.

SELF-MOTION

Historical Note: Self-motion has eluded thinkers throughout history. Aristotle attributed self-motion to *Soul*, Newton said the motion is due to a “*certain most subtle spirit*,” and Einstein wondered why self-motion did not obey Newton’s Laws of Motion. Our extensive research produced self-motion in thousands of models and toys.

Proof of Concept: The Motions of 70 models and toys in the Videotape and many other tests establish “proof of concept.” Also, we built and delivered to the Defense Advanced Research Projects Agency (DARPA) a few robots using our natural motion mechanism. The robots were successfully tested in 1999, and the Contract, with Walcoff & Associates, Inc., established further “*proof of concept*.”

Reproducibility: All Research Centers should be able to produce the motions shown in our Videotape and others. Simply apply two pulse trains at symmetric points on a body. To change speed, vary the amplitude and/or the frequency of the pulses. We suggest that you begin with standard shapes; e.g., a box or a cube.

Features Not Shown in the Videotape:

1. Mechanical-Muscle models (emulating brain-muscle system) that move.
 2. Motion of the hand, arm, or the whole body. When the body moves with our mechanism, the mind is completely puzzled by the spontaneous motion!
 3. Diverse maneuverability and direction control by changing frequency, phase, polarity, geometry, location of center of gravity, etc.
 4. Uphill motion, pendulum motion and motions on carpets, dirt, grass, asphalt, etc.
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- **To see any, or all, of the Models and Toys shown in the Videotape,**
- **To make a copy directly from the master videotape,**
- **To produce broadcast quality video of the Models or Toys;**

- **To evaluate using mechanism in motion disorders and artificial limbs,**
- **To evaluate applicability in engineering, physics, biology, etc.,**
- **To see how the mechanism affect modern systems,**
- **To compare runway length with modified propellers,**
- **To use the mechanism in robotics and other applications,**

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