## Contents in Detail

### KINETIC CURIOSITIES

1. **Hovering Rings**  
   Discover a new mode of hula hoop motion.

2. **Dynabrolly**  
   Take away the folding struts of the umbrella and replace them with centrifugal force.

3. **Gravity Reversal**  
   Make your own negative gravity, but don't expect to do anything useful with it.

4. **Maypole Drill**  
   Learn the knack of drilling small holes without the help of Black & Decker.

5. **Rotarope**  
   Try out a peculiar high-speed jump rope for intelligent midgets.

### STRONG STRING THINGS

6. **String Nutcracker**  
   If you can't crack nuts with your bare hands, try using a piece of string . . . and a few chunks of wood.

7. **Twisted Sinews**  
   Animate animal models in the simplest conceivable way.
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17 Bernoulli's Clock
Find out why a fluid-driven clock doesn't make the floor wet and how it uses some properties of an air jet.

CURIOUS CONVEYANCES

18 Dougall or Vibrocraft
Discover an alternative to fitting your pet centipede with a hundred pogo sticks.

19 Follow That Sunbeam
Use a bicycle lamp to provide the steering signals for the simplest imaginable beam-guided vehicle.

20 Duobelicon
Propel a vehicle by contra-rotating adjacent wire helices.
(Beware, this project is easy to “screw up”!) (Beware, this project is easy to “screw up”!)

21 Fishy Boat
Use the remarkably efficient tail of a fish to propel a boat—something nature neglected to invent.

22 Rotarudder
Replace the rudder on your boat with an enigmatic cylinder.

23 Cable Yacht
Test the surprisingly high speed of a sail-driven cable car.

ANTEDELIUVIAN ELECTRONICS

24 Beard Amplifier
See how a beard of iron filings adhering to an electromagnet allows a small current to control a larger current.

25 Tornado Transistor
Learn why stirring a cup of tea provided the model for this ingenious use of the surface of a vortex to amplify an input current.

ELECTRIC WATER

26 Meltdown Alarm
Add electrodes to an ice cube for a sensitive freezing-point detector.
27  Electric Rainbow Jelly
   Form a rainbow of colors in a special jelly,
   thanks to the magic of electrolysis.

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INFERNAL INVENTIONS

28  Binary Match
   Ignite an emergency campfire using two innocuous substances.

29  Ultimate Bunsen Burner
   Make a cooking-gas flame hot enough to melt steel.