



M A R T I N
G A R D N E R



The

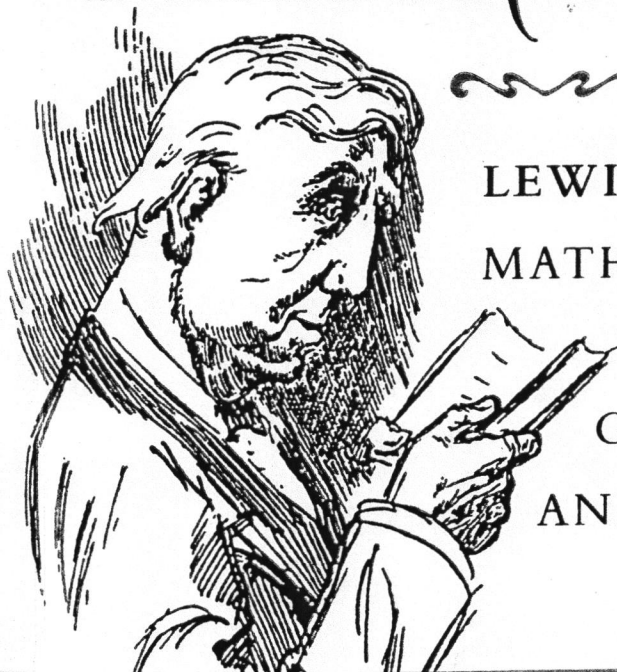


Universe
in a
Handkerchief



LEWIS CARROLL'S
MATHEMATICAL

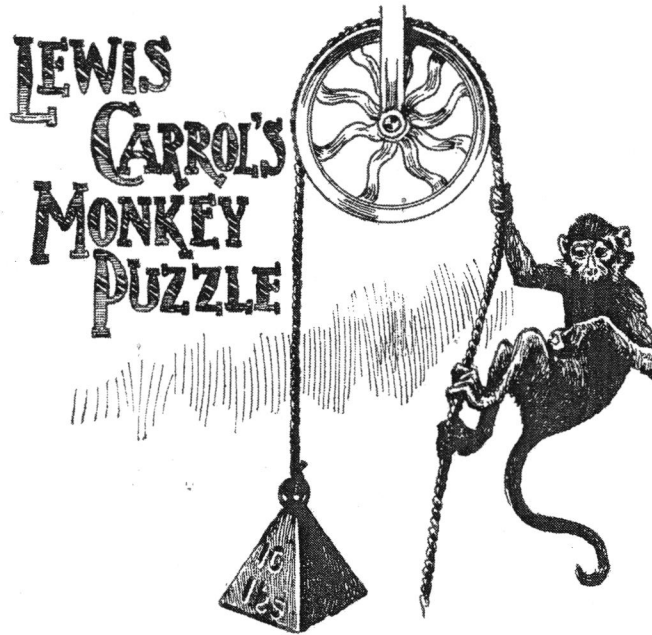
RECREATIONS,
GAMES, PUZZLES,
AND WORD PLAYS.



symbolic logic one can simply list the eight possible combinations of lying and truth-telling for the three men, then explore each combination, eliminating those that lead to logical contradictions.

Carroll was fond of devising puzzles based on truth-tellers and liars. Many can be found in *Lewis Carroll's Symbolic Logic*, edited by the late William W. Bartley, III. Some of them are almost as bewildering as the clever truth/lie puzzles presented by mathematician and Carrollian Raymond Smullyan in his many puzzle books.

A problem in physics, hotly debated in Carroll's day, involves a monkey clinging to one end of a rope. The rope goes over a pulley with a weight on the other end that is equal to the monkey's weight. The monkey and the weight are at the



An illustration from Sam Loyd's *Cyclopedia of Puzzles* (1914).