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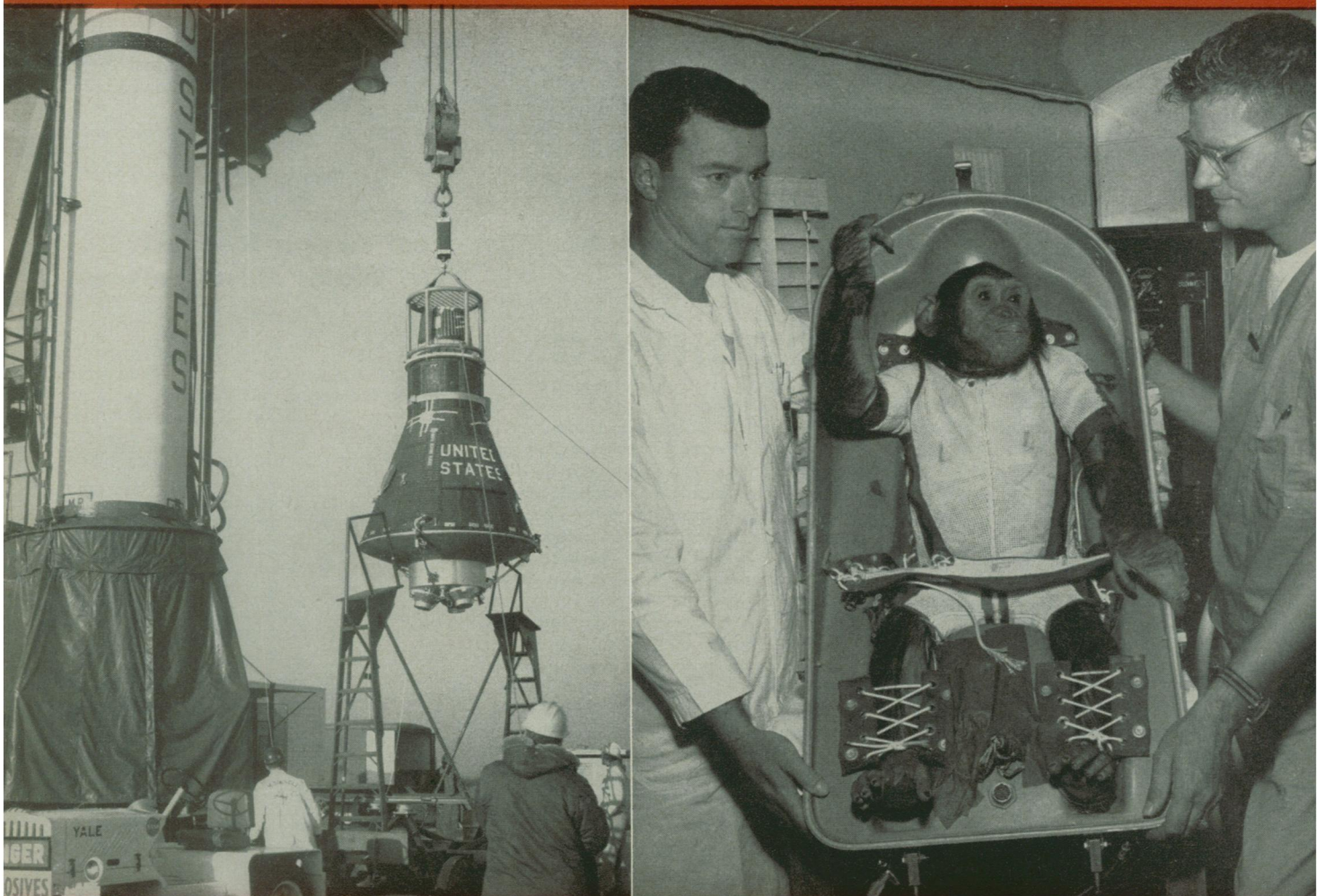
February 11, 1961

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SCIENCE NEWS LETTER

®

THE WEEKLY SUMMARY OF CURRENT SCIENCE



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See Page 83

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Straight Line—Can you draw it freehand? Did you know that it is a curve? James Watt not only invented a steam engine but also the first linkage, used in guiding a piston in a straight line, which you can assemble out of this unit. A fascinating assemblage of 30 pieces of material with which you can draw your own original straight line and other curves.

Make Your Own Electric Motor—No better way to understand how electricity does work and the role played by magnetism. Full assembly directions of all parts—20 of them.

Cloth Without Weaving—For the future, textile-like materials that have never seen a loom. Actually, non-woven fabrics have been known for some time—felts made from fur, hair or wool. But now there are new types of such fabrics, made from vegetable and synthetic fibers. You can feel them, test them, use them and imagine clothes of tomorrow that are so

cheap that they can be discarded instead of washed.

Hexaflexagon?—You can do tricks with it and learn about mathematical forms even if you have never heard of it (and cannot find it in your dictionary). Just how to fold paper into startling structural patterns. Everything you need for nine experiments.

Twirl This Color Top—Discover for yourself the laws of the mixing of colors. Usually science laboratories spend many dollars for apparatus with which to perform color experiments. Test yourself: Red and green make what? 27 experiments.

Rainbows Produced at Your Command—The heart of the Spectroscope, which you can put together with this unit, is a replica diffraction grating. You can demonstrate as Newton did in his classic experiment that white light is made up of all the colors of the spectrum. 13 experiments.

Stars and Constellations—Can be located and observed with the aid of this star-finder. Planet table allows you to locate other members of the solar system. Make a simple planetarium. A first step to astronomy study. 10 experiments.

Exotic Butterflies—Unusual imported specimens of colors and species not seen in the United States. Discover the world of Papilionoidea. A starting collection for a young biologist. Yel-

lows, reds, iridescent grays and browns—from Taiwan. Full scientific descriptions. 11 experiments.

Measurement—The basic fundamentals of all the sciences—length, volume, weight—are simply demonstrated. Make a beam balance. Compare the English and metric systems. 12 experiments.

Optical Illusions—Seeing is often deceiving. You cannot always trust your eyes. A set of 14 drawings shows how misleading figures can be. Bird in a cage, distorted room, the window shape and other illusions. 21 experiments.

Codes and Ciphers Made to Order—Principles of Cryptography explained and demonstrated. Can you read this: I HLR TRSA LEUN? A cipher slide-rule allows you to write in your own code. Make your own invisible ink. 12 experiments.

Crystals—Can be used to help tell the composition of chemicals. You never see table salt in anything other than a cubic form. Samples of chemicals typical of crystal systems. Patterns for crystal models. 13 experiments.

Build a Sextant—Shoot the sun, determine angles, get acquainted with principles of navigation. All materials furnished, easily put together. 11 experiments.

Parents—This will be a helpful educational present for son or daughter—or niece or nephew.

Teachers—Here is the chance to get these valuable teaching aids while they are still available. They will augment your laboratory.

Students—Not only will these experiments be fun, but they will help get you started on science projects for clubs and fairs.

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WHO IS EDMUND C. BERKELEY? Author of *Giant Brains or Machines That Think*, Wiley 1949, 270 pp. (15,000 copies sold); Author of *Computers: Their Operation and Applications*, Reinhold, 1956, 366 pp.; Author of *Symbolic Logic and Intelligent Machines*, Reinhold, 1959, 203 pp.; Editor & Publisher of the magazine, *Computers and Automation*; maker and developer of small robots; Fellow of the Society of Actuaries; Secretary (1947-53) of the Association for Computing Machinery; Designer of all the Tyniacs and Brainiacs.

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