

blanket recommendations can be given in a short space. At the first sign of disease or insect damage, consult your state college or agricultural experiment station's local agent. Experts there will be able to tell you the proper poison dust to apply. Insects and diseases can easily ruin the best garden, so an alert eye is needed.

Your garden need not be confined entirely to vegetable production. Several of the small fruits, such as the blueberry, strawberry, raspberry, blackberry and grape, will give you added variety as well as a taste treat during the summer.

Plant a few flowers, too. Here you can choose annuals, quick-producing perennials, or biennials planted now to bloom next year. You can have almost any size and shape and almost every color in the rainbow, so for your flowers, plant whatever suits your fancy best.

For the suburban or farm family which wants more information on garden possibilities for this year, a copy of "Suburban and Farm Vegetable Gardens" (H.G. No. 9) is available from the Office of Information, U. S. Department of Agriculture, Washington 25, D. C.

Science News Letter, March 15, 1952

Reliable specific *tornado* forecasts cannot yet be made but meteorologists have learned the conditions which are favorable to the development of tornadoes over a wide area.



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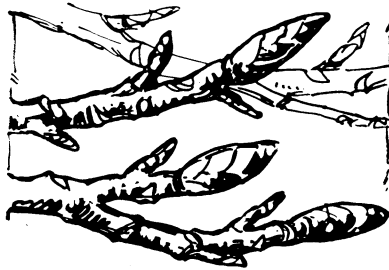
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Makers of SIMON, the Mechanical Brain, and SQUEE, the Robot Squirrel. (See cover pictures and articles in Radio Electronics, Oct. 1950, and Dec. 1951) Mr. Berkeley is author of Giant Brains or Machines that Think, Wiley, 1949.

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BOTANY  
**NATURE RAMBLINGS**



**Dry, But Not Warm**

➤ JUST ABOUT now, or in a couple of weeks more at most, trees and shrubs will be unwrapping their buds and getting ready for another season of green growth.

The varnished scales that have enclosed them for months have served their turn and are now discarded; they litter the ground at the base of trees. Almost inevitably, some one will liken them to garments that have kept the young leaves and flowers dry and warm all winter long and can now be shed. Warm-blooded egocentrists that we are, we think of plants in human terms.

We would be nearer the facts if we stopped at the halfway point in our nursery metaphor. For bud-coverings keep the buds

dry, but not warm. The tight-packed beginnings of leaves and flowers within the closely shingled roofs of scales become zero-cold when the outside air drops to zero.

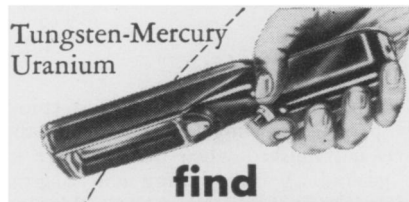
The real job of the bud scales is to keep outside water out, and inside water in. Wet snow may fall until every twig is "ridged inch-deep with pearl," freezing rain may sheathe all the trees and bushes with ice, but within the tight little houses of the buds the coming spring's leaves and flowers reckon nothing of it.

The scales are waterproof, so that moisture cannot penetrate; they are tenacious against outside pulling and buffeting. Only the pressure of swelling new life within will serve to push them open and finally break them off.

Probably even more important than their function in keeping buds dry is their opposite task of keeping them from drying out.

Science News Letter, March 15, 1952

**PROJECTS EXHIBITED** — Left to right, beginning at top: Ilmar Raudsep demonstrates the effects of ultra high frequency sound waves on moisture in the air; E. P. Papadakis, thrust tester for carbon dioxide cylinders used on model aircraft; D. Y. Smith, home-made Geiger counter; M. B. Boat, growing radish seeds without soil; J. R. Seaman, learning ability of hamsters; Louise Schmir, unusual films formed by soap solutions on metal shapes; G. W. Lubrermann, organisms in bacteriological culture; R. T. Braden, electric computer; W. W. Hooker, producing hydrogen peroxide by electrolysis; A. E. Beck, work of an archaeologist; and R. A. Bideaux, specimens from his mineral collection.



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**The Nature of Some of Our Physical Concepts**

by **P. W. Bridgman**  
Professor of physics at Harvard University and Nobel Prize winner

Three lectures were given at the University of London in the spring of 1950. The particular object was to distinguish between the "instrumental" and the "paper and pen" component of the operations of the physicist. In the first lecture, among others, the concepts of field and empty space are examined, and it is shown that there is no instrumental operation by which action at a distance can be distinguished from action through a field. In the second lecture the fundamental concepts of thermodynamics are examined, and in the third the phenomena of conduction of electricity in massive conductors. \$2.75

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