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## DO YOU KNOW THAT

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Two new forms of copper are sheets as thin as paper and an alloy that looks like gold.

A platinum nugget weighing over thirteen pounds has been found in the Ural Mountains.

A psychologist reports that the hand with which a person throws a ball is a better test of left-handedness than tasks and activities, such as writing.

A new kind of thermometer has been made to check the temperature of grain in bins as deep as 40 feet, so that dangers of heating can be averted.

Vaccination protects against smallpox for about seven to ten years, physicians find; and persons successfully vaccinated twice are usually immune for life.

Checking up on the potency of rattlesnake venom, a scientist kept some venom in a dry state for 23 years and found it still as dangerous as when fresh.

## BOTANY

## Twig's Growth Shown by Huge Automatic Model

VISITORS at the science exhibits of the Century of Progress Exposition in Chicago next year will have an opportunity to see in a minute and a quarter how the twig of a tree puts on a year's growth. A huge model, seven and a quarter feet in diameter, is now being constructed to represent an enlarged cross-section of a basswood or linden twig a quarter of an inch through. It will be so arranged that when a motor drive is started it will increase its diameter an additional eight-een inches, adding wood on the inside of the growing zone and bark on its outside, in the most realistic manner.

Every microscopic detail of the three-year-old twig is represented. Each cell of the three annual rings of the wood, with its central pith and the radiating pith-rays, is outlined. At the outside, between wood and bark, is the cambium or growth layer. It is here that the main action takes place when the motor is

Monkeys are not pestered by fleas.

Vegetables which have been "quick-frozen" cook in about half the time needed for fresh vegetables.

Even hogs shouldn't be allowed to make "hogs" of themselves, for experiments show that moderate feeding is more profitable in terms of pork sales.

The ancestor of the modern pineapple was a runty, sour little fruit no bigger than a hen's egg, that grew in Brazil and was valued for the fiber of its leaves.

Unemployed workers in England volunteered to help scientists excavate and restore an old Roman road, the men receiving transportation and a small food allowance.

The Director of the National Park Service declares that if the desert vegetation peculiar to the New World is not to be entirely wiped out, a desert national park or national monument should be established without delay.

## See Front Cover

started. Outside the cambium is the complex structure usually lumped as "bark," but detailed here into phloem or food-conducting strands, parenchyma or rind and the true bark. The choice of basswood as the twig to be represented is an especially happy one, because that is the species studied by practically every beginning botany student.

The "growth" of the model is accomplished by means of a series of sliding plates and moving canvasses, which bear the outlines of the new, expanding cells. Each sliding plate is driven by a special worm gear; coarse-pitched gears for the outside "bark" growth, finer-pitched for the inside wood growth. The canvas is wound on rollers, and its unwinding simulates the twig's growth in diameter. When the motor is started the fourth year's "growth" is completed in 75 seconds; then the twig is automatically returned to its three-year condition, ready for the next "show."

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