

Plants are even able to make the attacker serve them, it is pointed out by the writer of another chapter in the book, Dr. W. C. Price of the Rockefeller Institute for Medical Research. Numerous researches by various investigators have shown that if a plant is invaded by a certain virus disease, like tobacco ringspot, and recovers from the attack, the virus remains in the plant in more or less attenuated form, and that as long as it is present the viruses of related diseases are unable to gain a foothold. It sounds a little like the time-honored inoculation procedure of Jenner, in which cowpox voluntarily contracted conferred immunity against smallpox.

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#### MEDICINE

## Synthetic Sex Hormone Now Safe For General Use

**P**RESENT restrictions on the general medical use of the synthetic female sex hormone, diethylstilbestrol, should be removed, now that two and one-half years of careful tests show the synthetic hormone is both safe and effective, four St. Louis physicians advise (*Journal, American Medical Association*, Oct. 11). The physicians are: Dr. Cyril M. MacBryde, Dr. Dante Castrodale, Dr. Ellen Loeffel and Dr. Harold Freedman.

The synthetic hormone is as effective as female sex hormone preparations from natural sources in relieving the hot flushes, emotional instability, headache and insomnia of young women whose ovaries have been removed or of middle-aged women whose glands have stopped supplying them with this hormone.

Good relief of symptoms were obtained by the synthetic hormone treatment in 128 of 150 women, the St. Louis doctors report, with fair relief in 18 and poor results in four.

The synthetic hormone can be given by mouth instead of by hypodermic injection. For most patients the best method is to give a daily dose for two weeks each month, with a two weeks' interruption of the treatment each month. This method, the St. Louis doctors point out, reduces the amount of hormone that must be given and thus cuts the cost of the treatment. It also imitates the normal cycle and presumably would simulate the normal ovarian effects on uterus and breasts and reduce any tendency to stimulating cancerous growth.

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## New Machines And Gadgets

### Novel Things for Better Living

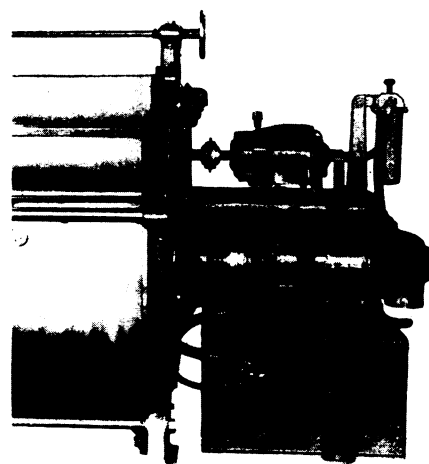
A transparent film, one-quarter of a wavelength of light, or about five millionths of an inch in thickness, is being applied to lenses and movie projectors to diminish reflections. Ordinarily about 4 per cent. of light falling on a glass surface exposed to air is reflected back and does not pass through the glass at all. In a lens combination containing eight such surfaces the light loss would amount to more than 30 per cent. In a projector, much of this light eventually reaches the screen, where it tends to wash out the picture. Hence the use of coated lenses in a double way increases the clearness and brightness of the picture.

Setting radio tubes to control the motion of heavy machinery, to keep it smooth and uniform, may seem like setting an ant to regulate the pace of an elephant. Yet they are very useful for this purpose, because of their sensitiveness, high amplifying power and practically instantaneous action. The slightest variation in speed is at once detected and the proper machinery set into operation to correct it. Prompt correction is particularly necessary in paper-making machinery where the paper, wet at first, must pass over and under innumerable rolls. A slight change in speed will tear the paper. Imagine the tenderness of wet tissue paper.

Gummed sealing tape that does not stick or does not stick strongly enough, is not to Uncle Sam's liking. So—the Bureau of Standards has a machine for testing the stick-to-it-iveness of such tape, from which specifications for government purchases can be drawn up. No tape that does not have the required sticking power need apply.

What color of lips best suits milady's complexion, her type, her mood of the moment and the rest of her ensemble? Selection of exactly the right delicate nuance of shade is made easy by an ingenious mirror just patented. In it, you may see your face. But just where your lips would appear, the silver on the back of the mirror has been removed in a manner conforming to the outline of your lips. You see through this opening a color disc which can be revolved to bring different shades into view, so that the one which looks the very best on you can be quickly and easily selected.

Unwinding cloth from one roll and winding it up on another, meanwhile passing it through a dyeing vat, is not so simple a matter as it might seem. The dyeing process requires that the



cloth travel with constant speed while other considerations demand that it be subjected to constant tension. But the roll that unwinds diminishes in diameter; for constant speed of the cloth, it must turn faster and faster. The roll that winds up increases in diameter, must turn more and more slowly. The motor that winds must increase its effort (torque) in proportion as the diameter increases. Quite a problem! However, engineers have devised motors that have just the right characteristics. One motor winds while the other acts as a drag on the unwinding roll to maintain the proper tension. They are reversible, so that the cloth can be wound back on the original roll if desired.

To prevent slipping on icy pavements, spikes are effective, but pretty uncomfortable. To the rescue comes a lady from Nebraska with a patented invention, a sort of rubber cuff of ribbed construction, wider at one end than the other. It slips snugly over the toe of the shoe and offers an excellent non-skid tread.

If you want more information on the new things described here, send a three-cent stamp to SCIENCE NEWS LETTER, 1719 N St., N. W., Washington, D. C., and ask for Gadget Bulletin 78.

#### ENGINEERING

## 50,000,000 Watts of Power For New York City Area

See Front Cover

**F**FIFTY MILLION more watts of electrical power will be available for New York's metropolitan area when the partly built turbine generator, shown on the front cover of this week's SCIENCE NEWS LETTER, is finished and installed. Shown in the illustration are the 90-ton outer frame and its windings, within which a rotor will spin at 3,600 revolutions per minute. The generator is being built by Westinghouse.

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