

versity of California in Berkeley, Calif.

Oxytocin causes contraction of the uterus and is used to bring on labor in difficult childbirth cases. Vasopressin raises the blood pressure and cuts down kidney secretion. This double function of the hormone had been suspected, but Dr. du Vigneaud's research gives the first conclusive evidence for this. It is the only remedy doctors have for combating diabetes insipidus.

Although these two hormones had previously been partially separated by Dr. Oli-

ver Kamm of Parke-Davis and Co., Detroit, the separation had not been complete and some scientists thought vasopressin was an essential part of oxytocin.

Both hormones, Dr. du Vigneaud reported, are polypeptides made of amino groups with apparently eight amino groups in each. Six of these are identical in both.

Ultimate aim of the research by Dr. du Vigneaud and his colleague, Dr. John G. Pierce, is to synthesize the two hormones.

Science News Letter, October 25, 1952

SURGERY

New Noses From Steers

Cartilage cut from the end of a steer's breastbone has been used successfully in 144 operations during the last four years.

➤ NEW NOSES, chins, foreheads or other human features can be made from the breastbone cartilage of young steers. The xiphisternal cartilage for this purpose is prepared by Armour Laboratories in Chicago, according to a method developed by Sir Harold K. Gillies, British plastic surgeon.

The breastbone cartilage has been used by Sir Harold in 144 operations during the last four years and also by American surgeons. It is equal, they report, to any human or synthetic implants now in use.

The cartilage is removed from the end of the steer's breastbone immediately after the animal is slaughtered. It is dropped into a sterile solution and next is carefully stripped of all adherent tissues. It emerges from this process as a soft, rubbery, white

half-moon about four by two inches in area and up to a third of an inch thick. After further special treatment, it is packed in a sterile solution in a glass jar ready for use.

The surgeon cuts off as much as he needs to mend a damaged nose or other feature, carves the piece to fit, and leaves the rest of the cartilage for the next operation.

The material does not set up foreign body reactions in the host, takes well, resists absorption and does not curl or warp. Another advantage of the material is its relatively low cost, achieved through elimination of preliminary surgery on the patient or donor to get material for grafting, and also of the hospital cartilage bank for keeping such material from humans.

Science News Letter, October 25, 1952

PHYSICS

Nature Outdoes Bomb

➤ THE ENERGY in a thunderstorm is equal to 50 Hiroshima-type A-bombs.

The work done against the atmosphere by an average thunderstorm cell has been measured for the first time by Dr. Roscoe R. Braham, meteorologist with the University of Chicago. He finds that one thunder-

storm cell does work equal to 260,000,000,000,000 calories. There are about four to six cells in one thunderstorm. The Hiroshima A-bomb released energy equal to about 20,000,000,000 calories.

Nevertheless, Dr. Braham finds, the thunderstorm is a rather inefficient way of making rain. Only about 10% of all the moisture a thunderstorm gathers in from the surrounding atmosphere usually falls to the ground as rain. About half the total moisture never leaves the vapor stage to become water. About 20% which becomes water is re-evaporated in the down-draft of the storm. About 20% is dissipated when the storm breaks up. That leaves only 10% to become rain.

The tremendous amount of energy of the thunderstorm is used to accumulate all this moisture from the atmosphere and to carry it up in an up-draft inside the storm. Fifty A-bombs could not do the same thing, if touched off together, because their energy is dissipated so suddenly. The storm's en-

ergy is dissipated over a period of several hours, thus it has a chance to go to work on the atmosphere.

Dr. Braham's calculations of the energy of a thunderstorm were based on work done under the Thunderstorm Research Project sponsored by the University of Chicago and the U. S. Weather Bureau. They are reported in the *Journal of Meteorology* (Aug.).

Science News Letter, October 25, 1952

Do You Know?

Deaths from *tuberculosis* cut off an estimated 1,500,000 potential years of life annually.

An ordinary wrist *watch* ticks about 157,680,000 times a year.

A new sugar-free *ginger ale* is sweetened with a synthetic that is non-fattening.

Except for a close relative in western Mexico, the Gila monster is the only poisonous *lizard* in the world.

Dry cells can be carried loose in a car's glove compartment or in metal tool boxes without being short-circuited if their positive poles are coated with fingernail polish.

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The new and outstanding feature is the Automatic Calendar. This automatically indicates the day of the week and the day of the month. The name of the month is changed by the wearer each month at the proper time since the months are unequal in length.

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