

vail, tear gas is the weapon used by police to reduce crowds, temporarily, to non-resistance.

But next year, perhaps, tear gas will find a new use and one far removed from violence. It will help produce weed-free putting greens for the nation's golfers!

J. A. DeFrance, of the Rhode Island Experiment Station, traces the use of tear gas to kill weeds back to the shell-battered No Man's Land of France. The gas squads of wartime contained men trained in chemistry. One of them noticed that where the tear gas liquid spread on the ground, weeds were quickly killed.

Out of this remembrance has come soil sterilization by tear gas which renders the future soil of golf greens free of weeds.

In the present practice the soil destined for the green is placed in a large box and several holes drilled in the earth. Down each hole are poured a few drops of liquid tear gas, a canvas cover applied and left for about two days.

The soil is then removed and placed directly on the golf green and seeded. All the weeds in the soil are killed and the grass takes root without competition from its fast-growing rivals. The putting green is thus free from weed contamination until wind-blown weed seeds alight on it and take root, something which is not too easy when a thick, velvety coat of grass is already there first in husky growth.

Commonest sterilization method for greenhouse soils is the application of live steam while heat, applied by flame, is often used in outdoors locations such as highway roadsides and railroad rights-of-way.

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#### ARCHAEOLOGY

### Robbers Evaded Curse, Looting Noble's Tomb

**A** RCHAEOLOGISTS in Egypt have unearthed a nobleman's tomb guarded by an extraordinary curse—and found it already plundered.

It was curious, the faith ancient Egyptians put in tomb curses. The most ingenious malediction apparently frightened none of the daring racketeers who kept track of rich tombs and lost little time plundering them. Either Egypt's tomb crackers could not read, or they were not superstitious.

An interesting point about this discovery, however, is that the robbers did plaster the facade of the tomb after ex-

tracting the valuables. They left the nobleman, whose name was Ny-ankh-Pepy, undisturbed in his big sarcophagus. Painted eyes on the coffin stared at them, and according to Egyptian belief, the dead man could see with those painted eyes. But even that failed to shake the robbers' nerve—unless that was why they made the gesture of leaving the place plastered and superficially "undisturbed."

The curse they risked was this: if any one disturbed the tomb, the owner would expose him in the Judgment Hall of the Great God, and his head would be twisted off like a goose.

Prof. Selim bey Hassan, of the Eyp-

tian Antiquities Department, is the discoverer of this and other tombs of ancient nobles at Sakkara, where the Step Pyramid stands.

Tombs he has recently entered there date from the fifth and sixth dynasties. Built and used about 2600 B. C., the tombs show how Egyptians of rank were then beginning to assume the advantages of royalty in their preparations for future life. Earlier Egypt strove to provide gloriously for the king's godlike future. Now, about 2600 B. C., nobles adorned their tombs, also, with the pictures and writings considered so magically real and useful in the world to come.

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#### PHYSICS

## New 100-Ton Cyclotron Is To Be Built By M. I. T.

**A**N ATOM-SMASHING cyclotron to be devoted exclusively to medical and biological research, will be constructed at the Massachusetts Institute of Technology during the coming year, Dr. Karl T. Compton, president, has announced.

The machine, to weigh more than a hundred tons, will be of the most approved type and of the same general size as the largest yet built, with the exception of the giant one now under construction at the University of California by its inventor, Prof. Ernest Lawrence.

In announcing plans for the cyclotron, enabled by a grant from the John and Mary R. Markle Foundation of New York, Dr. Compton said:

"The Institute is in a fortunate position to undertake this work for two reasons. First, because Prof. Robley D. Evans, under whose direction the cyclotron will be built and operated, has developed an unusually successful technique for the detection, measurement and handling of radioactive chemical elements of the type which can be produced in large quantities by a cyclotron. It was for this technique as applied specifically to radium poisoning that he was awarded the Theobald Smith prize of the American Association for the Advancement of Science a year ago.

"Working up to the present with a relatively very feeble source of radioactive materials, Prof. Evans has nevertheless done some very interesting exploratory work regarding the medical

possibilities in the use of particular radioactive elements, in collaboration with several members of the Harvard Medical School and local hospitals, and also in collaboration with members of the department of biology and public health at Technology.

"The new cyclotron will permit work of this type to be greatly extended in power and scope and the program may be considered as a joint program between Prof. Evans' group of physicists together with biologists at M.I.T. and medical research men in neighboring institutions.

"The second fortunate element in the situation at M.I.T. is the parallel program of the high voltage electrostatic generator of Prof. Van de Graaff, who with his colleagues is engaged in a very comprehensive program of atomic physics. This program comprises not only the very important medical X-ray applications, which a cyclotron is inherently unable to handle, but includes also a comprehensive program of investigation in atomic physics which will parallel the investigations which can be made with the cyclotron."

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Scientists are finding it hard to raise apple maggot flies in captivity, in order to learn how to destroy them.

A waterfall is hotter at the bottom than at the top, because of the heat generated as the water strikes ground.