

MEDFORD MAIL TRIBUNE

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Electrons Used for 100 Per Cent Sterilization by Makers of Drugs

By DELOS SMITH
United Press Science Editor
Kalamazoo, Mich. (U.P.)—The extremely difficult puzzle of how to achieve 100 per cent sterilization is being solved now in an extremely simple way. Or, rather, it is simple because we're living in the atomic age.

Sterilization here means absence of bacteria. When you consider that bacteria are both invisible and everywhere, you understand why science now considers sterilization a "relative" matter—that there is rarely if ever any such thing as 100 per cent sterilization.

But now the atomic particles called electrons are being used on a commercial and therefore practical basis to achieve the 100 per cent, at least theoretically. The substances being sterilized by electrons are drugs.

First, you seal drugs into a container—bottle or plastic envelope. Then you put the container into a stream of electrons traveling at 175,000 miles a second which gives them a charge of 2,000,000 electron volts.

That's all there is to it. Fast-moving electrons pass through the containers like light through a window. Any bacteria which may be inside are killed. Since the container is sealed, no more can get in. Thus 100 per cent sterilization becomes quite simple in this new "by-product" way of the atomic age.

Electrons traveling at 1,700,000 miles a second (20,000,000 electron volts) will split atoms and release the awesome and frightful power of radioactivity. At much lower rates, electrons power television tubes. At 175,000 miles a second they're instantly fatal to bacteria but do nothing to atoms.

That's important with drugs. If electrons broke into their atoms, the composition of the

drug would be changed—and there might be radioactivity. The research laboratories of the Upjohn Company, a leading manufacturer of pharmaceutical products for the medical profession, spent five years developing a completely safe and effective sterilization by electrons technique.

Ointments Sterilized
It is now sterilizing with electrons two ointments used by

physicians in treating eye and ear infections. Ointments are very hard to sterilize by the three conventional methods—heat, by the addition of bacteria-killing chemicals, or by filtration. And the closest possible approximation of 100 per cent sterilization is particularly important.

Dr. Richard S. Schrieber, vice-president and director of research, said the electron method

was "feasible" for sterilizing any pharmaceutical product. Not all products require a theoretic 100 per cent sterilization and some are susceptible to theoretic complete sterilization by the older methods.

However, Upjohn has a Federal Drug Administration okay to sterilize such antibiotics as penicillin with electrons. Schrieber left the impression that the method will be applied to more and more drugs as facilities are increased. The electron accelerator now in use can sterilize only 100 drug units a minute, which pass through its electron beam on a conveyor belt.



OFFERING to quit outside business activities, though denying they are improper for a man in his place, Secretary of Air Force Harold E. Talbott testifies before Senate subcommittee. (International)

Education Board Accepts Gifts

Portland — (U.P.) — The State Board of Higher Education today accepted \$188,394 in gifts and grants for its eight campuses, including Atomic Energy Commission grants of \$50,000 for research in experimental medicine at the University of Oregon medical school.

The AEC will continue research at Oregon State College on 2, 4-D and similar agents with \$12,750.

University of Oregon received National Science Foundation grants of \$26,700 to study Oregon coast prehistory, an isolated forest remnant and effects of environmental change on community organization over long periods of time.

Large private grants accepted for medical school research were \$15,000 each from International Chemical Corporation, Skokie,

Hood River Youth Found Injured in Pit

Hood River — (U.P.) — Walter Baynam, 19, Hood River, was taken to a hospital in The Dalles with serious injuries yesterday after laying helpless 14 hours at the bottom of a gravel pit where he had fallen late Sunday.

Baynam suffered a possible compound fracture of the left hip, a broken right ankle, a broken jaw and severe cuts and bruises when he tumbled some 120 feet into the pit. He said he was walking to Mosier when he fell.

For those long motor trips with stops few and far between, carry along a package or two of cellophane wrapped fresh California dates. This delicious non-sticky fruit is easy to eat and gives quick energy in a hurry.

Ill., and the Damon Runyon cancer fund.

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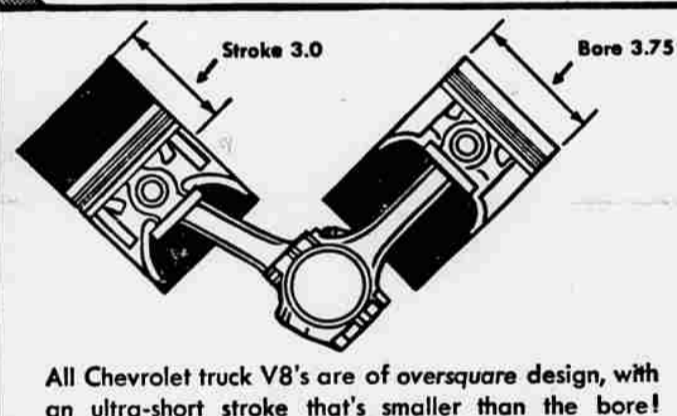
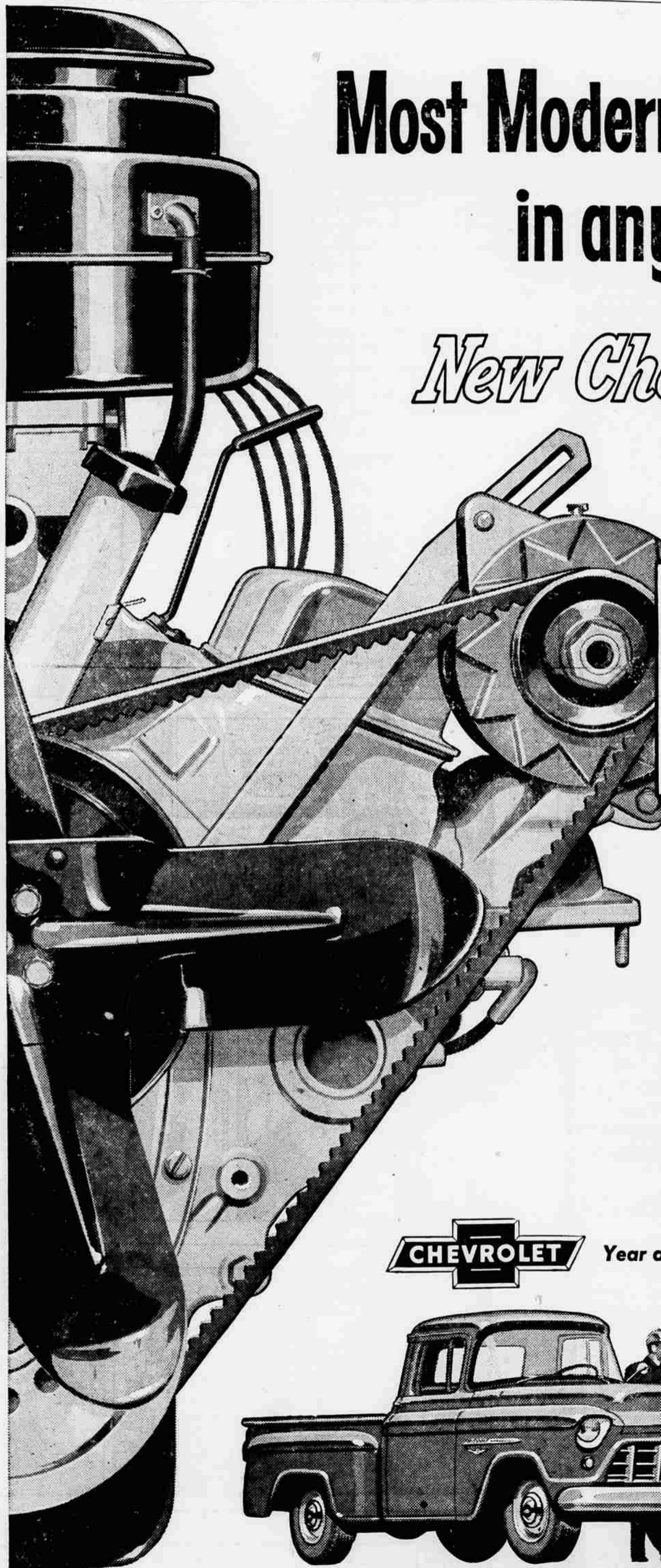
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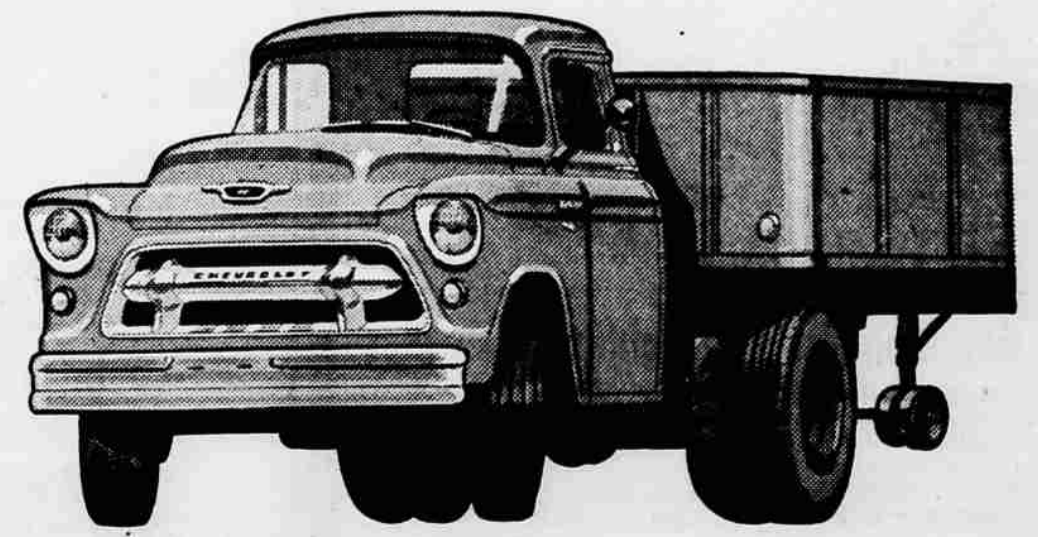
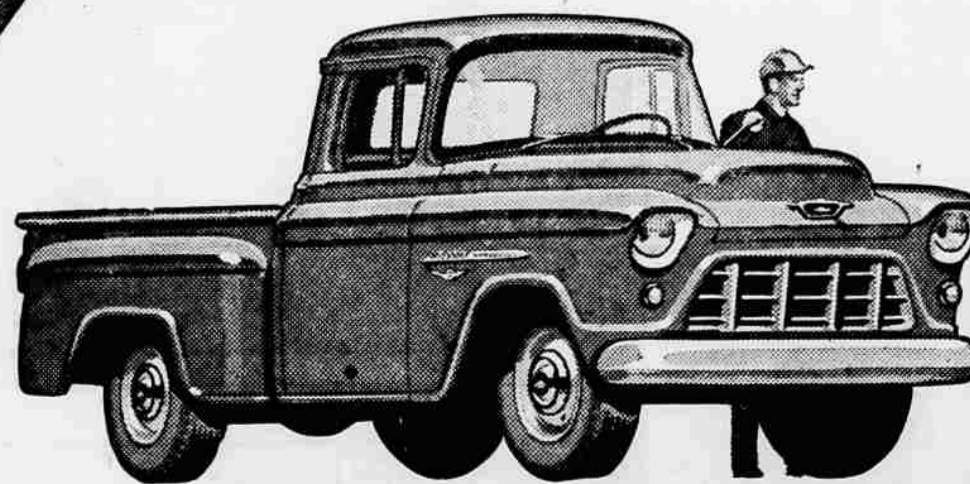
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'Y' Summer Camp Period Under Way

The first of three YMCA summer camp periods at Diamond lake started Sunday, July 24, according to Robert Jones, general secretary.

Donald E. Day, physical director, and the Rev. Kenneth Korby, board member, are camp directors for the period ending July 30, Jones said. The two, with the help of seven teen-age counselors, will conduct swimming, canoeing, sailing, mountain climbing, camp craft and nature study.

Boys wanting to attend the camp who are without the necessary fee may earn it by selling soap, Jones said. Two boys, Jimmy Johnson, 230 North Ivy st., and Mike Kline, 1691 Grand ave., both 10, earned their camp fee of \$18 by checking out 72 boxes of soap apiece Thursday night, and had them sold by Saturday afternoon, just in time to register for camp. Jones added that earlier last week, during a special Day's Adventure trip sponsored by the YMCA, the boys had learned of the program from a friend. Until then they had no way of earning camp money, Jones said. Both are now at Diamond lake.

A few openings are still left for the next two camp periods starting Aug. 1 and 7, Jones said. Each period is limited to 50 boys.

Brooks Boy Injured By Shotgun Blast

Salem — (U.P.) — A 12-year-old Brooks, Ore., boy was in fair condition at a Salem hospital today after being wounded in the chest by an accidental shotgun blast Sunday.

James Dennis Harris, was wounded by a 12-gauge weapon that accidentally fired when he tripped and fell against it while the gun was leaning against a trailer. The boy and his three brothers were shooting at targets when the accident occurred, according to state police.

Dead line Sunday. Classified is at noon Saturday, 10 a.m. Monday for Monday; other days 5:30 previous day.



Daily's U-Drive Medford Airport