

like them, war-born, will be used in peace and bring forth new applications for factory, transport, community and home.

#### UHF . . . FM.

One hundred plus octane gasolines for fighting planes mean better gasolines for new automobiles we shall drive a few years hence. Ironically, kerosene is the fuel of jet-propelled craft. That new car will benefit from the machines for war, and farm machinery and tractors will be improved by the test of mechanized warfare. And not just jeeps pulling plows and herding cattle. Intensive engineering and production experience in all industry should roll the peacetime products into use with better value for the dollar and more money in the pay check. From bomber-factories—that were—will come the insides of new homes, bath, furnace, kitchen units. Or personal planes that become the trans-country air car of the executive. Or complete little houses to dot landscapes unfilled. Or peacetime “ducks” and “weasels” to blend the country cottage with the motor boat.

#### Faster . . . better . . . cheaper.

Atoms rule the world. When plutonium cyclically fissioned over Hiroshima, either extinctive future war began or a very energetic future world of goodness was made possible. Controlling the human beast is now more important than man's mastery over inanimate nature. What goes on in human minds and emotions precasts the future more irrevocably than any conversion of mass into energy. The human equation can negate or use the Einstein equation. Human behavior must learn to use atomic behavior. Statesmen need scientists who understand human thoughts and emotions to help them control the people who can keep the atoms under control. We face the world's grandest opportunity or largest disaster.

#### U . . . Pu.

For the opportunity of remaking a brave, new world, thanks. For powers large enough to do it, thanks. For confidence and understanding among all who inhabit the earth, we hope.

*Science News Letter, November 17, 1945*

#### ENGINEERING

### Simplest Engine in World Helps Launch Gliders

➤ A MODEL of an engine, claimed to be the simplest engine in the world today, was demonstrated recently at the Polytechnic Institute of Brooklyn by Zygmunt Fonberg, the Polish rocket expert and inventor of the first bazooka in Poland prior to the war. It is a ram jet motor of new and unusual design.

This new engine was designed to help launch gliders into the air. It consists of a cylindrical tube, which appears to be just an empty pipe, mounted on a restraining structure which has a free moving arm to permit the engine to swing in a circle around it when in operation.

The lining of the tube expands from a smaller diameter in the front end to a larger diameter at the other. The space on either side of the lining and the outer wall contains the gas which runs into a nozzle at the forward end of the cylinder. Air mixes with the gas coming through the small holes of the nozzle during combustion, thus providing the force of propulsion.

*Science News Letter, November 17, 1945*

## On Antibody Formation

It is well known that severely underfed patients with nutritional edema are excessively susceptible to infections, that infections superimposed on wasting diseases or marasmic states show a rapid, frequently fatal course: In the light of recent findings, both of these facts—heretofore but poorly understood—may well be on the way to conclusive explanation.\*

Evidence is rapidly accumulating that antibodies, our chief weapon against infection, are modified proteins of the globulin type. During active immunization, antibody formation presents a continuous process, requiring its share of amino acids.

Experimentally it has been demonstrated that induced hypoproteinemia reduces the capacity to produce agglutinins, precipitins, hemolysins. Adequate protein intake thus gains increasing significance as an essential factor in the resistance to infectious disease.

Among the protein foods of man meat ranks high, not only because of the percentage of proteins contained, but principally because its proteins are of high quality, able to satisfy every protein need.

\*Cannon, P. J.: *J. Am. Diet. Assn.* 20:77 (1944)



The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

# AMERICAN MEAT INSTITUTE

MAIN OFFICE, CHICAGO . . . MEMBERS THROUGHOUT THE UNITED STATES