



CHEAP X-RAYS

X-ray pictures only 4 by 5 inches, instead of the usual 14 by 17 inches, are now made by a Detroit hospital. Instead of letting the X-rays themselves fall on the film, and make the picture, they impinge on a 14 by 17-inch fluorescent screen, of the type used in making X-rays visible. The image on the screen is recorded photographically by a rigidly attached and permanently focussed camera, using an F. 1.5 lens. Lead glass installed within the assembly, in front of the lens, prevents the X-rays from reaching the film and fogging it. Advantages are reduced cost of film, as well as of processing and filing, making it possible to serve more patients on a limited budget. It is made by the General Electric Co.

PUBLIC HEALTH

Program For National Defense On Health Front Presented

A PROGRAM for national defense on our most vital and vulnerable front is presented to the American people. It is presented, not by a military

or naval authority, not by a statesman nor a politician, but by a man who has led millions of Americans to knowledge of scientific ways of fighting for life.

That man is the scientist-writer, Paul de Kruif. The program for national defense is the non-controversial national health program presented in his book, *Health Is Wealth* (Harcourt, Brace and Company).

The present threat of war does not lessen the need for enactment of a national health program. This is clear from the report of Colonel Lloyd B. Magruder, U. S. A., recruiting officer of the second corps area, that 32% of the young men volunteering for Army service in May had to be rejected as physically unfit to serve in the nation's defense and that 60% of those volunteering from urban centers will have to be rejected for health and other reasons.

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SCIENCE NEWS LETTER

2101 Constitution Ave. Washington, D. C.

Vast sums are about to be spent for tanks and guns and planes to defend the nation. Many will cry that this is no time to spend money on a health program. Tanks and guns and planes, however, cannot defend a nation by themselves. Men are also needed, men whose strength has not been sapped by "hidden hunger", whose hearts have not been crippled by rheumatic fever in childhood, whose lungs have not been damaged by tuberculosis. A program for the health of the nation is part of a program for its defense.

The cost of such a program, as presented by Mr. de Kruif, will save money in the long run by cutting the nation's bill for hospitalization of the mentally sick, the tuberculous, the crippled and for support of their families. Enough might even be saved to pay for part of the cost of the defense program now under way.

When Mr. de Kruif wrote his book, America had not started preparing to defend what the founders of the republic wrote into the Constitution as inalienable rights: Life, Liberty and the pursuit of Happiness. We may need again as in the past to protect those rights at the point of the gun.

In war or peace, however, we need also to protect the first of those rights with the weapons of the doctor and the

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health man: toxoid to defend life against diphtheria, sulfapyridine and serum to defend life against pneumonia, the surgeon's knife and X-rays and radium to defend life against cancer, vitamins to defend life against the "hidden hunger" starvation. To guarantee these rights to every American, we must push our program for national health, Mr. de Kruijff says.

The program he presents is not likely to meet with any opposition from the American Medical Association. It was drawn up by five Michigan physicians, three of them, Dr. Henry A. Luce, Dr. Thomas K. Gruber and Dr. L. G. Chris-

tian, members of the House of Delegates of the A.M.A., and the other two, Dr. Henry R. Carstens and Dr. A. S. Brunk, officials of the Michigan State Medical Society. All the features of a health program for which the A.M.A. has fought, maintenance of the doctor-patient relation, lack of regimentation of doctors, provision for high quality of medical care, administration by a federal Department of Health, are provided in this national health program.

It has the approval of Dr. Thomas Parran, Surgeon General of the U. S. Public Health Service.

Science News Letter, June 29, 1940

PSYCHOLOGY

Hitler's Success Attributed To Personality Factors

Research Urged on What Brings Some Persons to Fame And What Environmental Factors Hold Back Genius

HITLER'S present place of victory in Europe, is not to be explained by any extraordinary mental endowment, Prof. Lewis M. Terman, psychologist of Stanford University, told the Pacific Division of the American Association for the Advancement of Science, in his address as their retiring president.

The "phenomenon called Hitler" is to be explained instead, he declared, "in terms of personal frustrations, displaced hatreds and fanatical aggressions."

Urging research on what it is that brings some men to eminence and what environmental factors are hindering so many geniuses from becoming eminent, Prof. Terman said that "these questions are of such transcendent importance that they should be investigated by every method that promises the slightest reduction of our present ignorance.

"So little do we know about our available supply of potential genius, the environmental factors that favor or hinder its expression, the emotional compulsions that give it dynamic quality or the personality distortions that make it dangerous! And viewing the present crisis in world affairs who can doubt that these things are potent factors in deciding the fate of a civilization?"

Prof. Terman himself has been following the achievements of 1300 gifted children whom he tested when they were school children. These young geniuses, now ranging in age from 22 to 37 years, include many, he said, who are intellectual equals of Washington and some who are intellectual equals to Napoleon, the most eminent man of history. Yet he does not foresee for them any comparable eminence.

"I regard it as unlikely that more than a few score of my 1300 subjects will attain to a national reputation or that more than a half-dozen or so will become really eminent. It would be surprising if even one of them a hundred years hence should be found among the thousand most eminent persons of history."

The great economic depression was mentioned by Prof. Terman as among the factors which have served to hinder these young intellectual giants.

"It has made harder the way of many and has diverted some permanently from their original goals."

Yet, although the group is still one of young people, they have already made a considerable contribution to society. About 50 of the men and a dozen of the women are teaching in colleges or universities. Seven are already executive heads of departments.

They have published hundreds of articles in professional or technical journals, at least 20 books and a vast number of short stories, popular articles, and poems. Eighty or more patents have been issued to them.

Science News Letter, June 29, 1940

ENGINEERING

Steel Welding Process Produces Fireworks

See Front Cover

THE COVER illustration this week shows not a Fourth of July display, but what happens during the flash welding of two pieces of steel, in the General Electric plant at Lynn, Mass. Two semi-circular pieces are being welded into a magnet frame for a direct current motor. Asbestos curtains restrict the flight of the sparks.

Science News Letter, June 29, 1940

The first known *artificial eyes* were made for Egyptian mummies and statues.

Most of the world's *radium* comes from two widely separated regions—Canada and the Belgian Congo.

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● Earth Trembles

Information collected by Science Service from seismological observatories resulted in the location by *The Coast and Geodetic Survey* of the following preliminary epicenter:

Tuesday, June 18, 1:39 p.m., EST

North of Attu Island in Bering Sea. Latitude, 50 degrees north. Longitude, 173 degrees east.

For stations cooperating with Science Service, the Coast and Geodetic Survey, and the Jesuit Seismological Association in reporting earthquakes recorded on their seismographs, see SNL, Feb. 24.