

X-ray treatment for cancer should be given very slowly, Dr. Wood advises. The slowness is the secret of the success of radium treatment. Radium has always been used in moderate quantities and over long periods because it was impossible to get large quantities

of it and physicians had to get the effect by prolonging the treatment.

When physicians do the same thing with X-rays, they get the same beneficial results that radium gives, Dr. Wood declared.

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is better off now than at any time in its history.

America must stand on guard while this world policy of force exists, Mr. Johnson added, but its preparedness is aimed for defense, not offense; for protection and not aggression; not to wage war but to keep out of war.

The industrial plans for America's participation in war are now laid, Mr. Johnson indicated. Ten thousand plants, throughout the nation, are earmarked for immediate wartime production if the need arises. Their managers know the tasks assigned to them and have expressed their ability to carry out these tasks.

Mr. Johnson paid tribute to mechanical engineers, as the key men in industrial production, for their cooperation with the Army in its preparedness program.

It was the U. S. Army, Mr. Johnson pointed out, which took Eli Whitney's idea of interchangeable parts for rifles and the concept of mass production and made it the basis of military ordnance.

These basic ideas are still paramount in American military policy. Thus the Army, said Mr. Johnson, ever seeks simple equipment which can be manufactured most easily.

"There is a tendency manifest among military designers of arms, ammunition and accessories," he declared, "to develop complicated machines not readily adaptable for mass production. Against such a trend, we must continually guard. We should strive to develop simple

AVIATION

Plywood Airplane Parts Built By Revolutionary New Method

U. S. Army and Navy Officials Keenly Interested In Process Promising Cheap and Rapid Production

THE CHEAPEST and simplest process for mass production of airplanes ever devised is now under secret development at a factory in Bendix, N. J.

Airplane wings, seaplane floats and other large aircraft assemblies are made by wrapping sheets of flexible plywood around formers. The process is very much like the job of building a suit of clothes around a tailor's dummy. This revolutionary new method of plane construction is pioneered by Eugene L. Vidal, former chief of the now non-existent Bureau of Air Commerce.

Watched by Army, Navy and government aeronautical engineers with the keenest of interest, the process dispenses with costly molds and skilled labor required by other methods of using plastic-bonded plywood. The U. S. Navy is already testing seaplane floats made by the Aircraft Research Corporation, of which Mr. Vidal is president.

Cheap production of 10 or 10,000 planes of a given type is now possible for the first time. Standard methods of all-metal aircraft construction or of molding plastic-bonded plywood all require extremely expensive dies and molds whose cost can be borne only if a large number of planes are made.

After the thin plastic-bonded plywood sheet is wrapped around the formers and has been reinforced by the use of stiffeners, the whole wing or other section is placed inside a rubber bag, from which the air is then evacuated. Air pressure collapses the bag around the plywood, forcing it around the formers.

The wing and rubber bag are then placed in a steam curing oven. After the wing has been cured, the bag is removed. The formers are collapsed and withdrawn from the wing section, and are

ready for use again. The rubber bag may also be used over, it is understood.

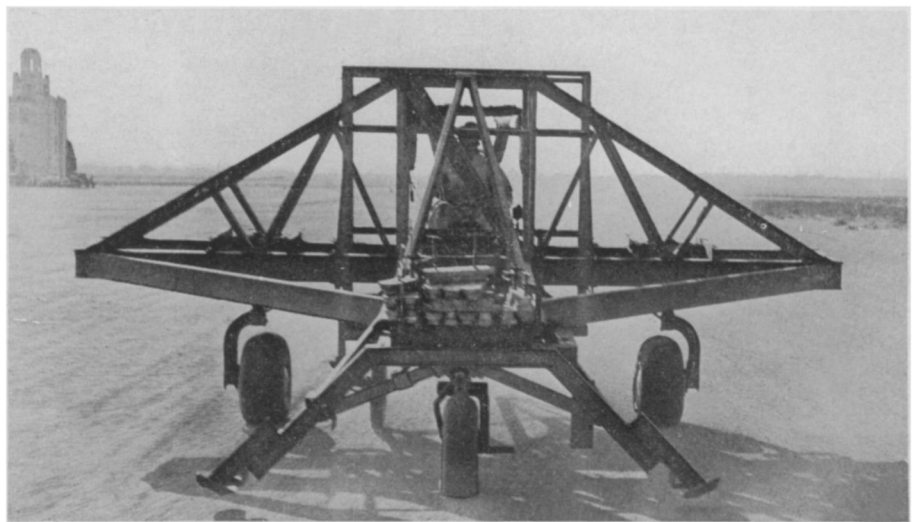
Mr. Vidal and his associates have not yet manufactured a whole airplane, confining themselves thus far to making the most difficult individual sections.

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ENGINEERING

Industrial Mobilization Planned For U. S.

WARNING that force and the threat of force govern the national policy of a number of nations in the world, Assistant Secretary of War Louis Johnson told members of the American Society of Mechanical Engineers that in industrial preparedness the United States



FOR HAPPIER LANDINGS

This curious-looking cart is no cart at all but a frame used for testing the three-wheeled landing gear with which more and more airplanes are being equipped because of its greater safety. All possible take-off and landing loads were duplicated with this apparatus by shifting the weights on the frame and by towing the apparatus behind an auto.