

## MILITARY SCIENCE

# War Weapons in Korea

Korean fighting techniques are not utilizing discoveries of World War II. However, new weapons may soon make tank warfare obsolete.

## See Front Cover

► WARFARE in Korea came too early for the scientific promises of new defense weapons to be fulfilled. Secretary of the Army Frank Pace, Jr., speaking at West Point's commencement in June, declared: "With guided missiles and rockets, target-seeking equipment and the possibility of tactical use of atomic weapons, it may well be that tank warfare as we have known it will soon be obsolete."

The North Koreans, with their tank-led advances, are now proving that "tank warfare as we have known it" is not yet obsolete.

The Korean war, in fact, has used little even that was learned by scientists during World War II. The retreat of the South Koreans dates back more to the rout of the French in 1940 than to the end of World War II.

Even the fast jet planes, developed largely since the end of World War II, have proved unsuitable both in ground support of the South Koreans and in combat against the much slower Russian Yaks.

The problem seems to be not whether our side is taking advantage of the scientific advances in warfare since 1945, but whether our side can use to any advantage at all the weapons that are available.

Bazookas—recoilless weapons easily manageable by one or two infantrymen—were developed during World War II. They are said to be extremely effective against tanks. The United States turned over to the South Koreans more than 2,000 anti-tank bazookas with 40,000 rounds of ammunition when American troops left a year ago. Their presence in South Korea had little effect on the first advances of North Korean tanks. The question seems not to be whether they were effective but whether they were used at all by the South Koreans.

Early in June the Army Department determined on a policy of revealing some of the scientific advances in new defensive weapons, hoping thereby to bolster the morale of western Europe. It was said that, with these new defensive weapons, in time western Europe could defend itself against the superior manpower of Soviet Russia.

The weapons mentioned included guided missiles, atomic warheads in artillery, 75 millimeter recoilless weapons, as shown on this week's cover of SCIENCE NEWS LETTER, new versions of the bazooka. One of the results of this war may well be to speed

up development and production of these new defensive weapons.

Science News Letter, July 15, 1950

## AERONAUTICS

## Missile Models Give Data Of 6,000-Mile Speed

► WRAPS were removed at Moffett Field, Calif., from a new and unusual wind tunnel in which tiny models of missiles are fired from guns against a powerful air current to provide the equivalent of speeds of some 6,000 miles per hour.

The new installation, known as a supersonic free-flight wind tunnel, is at the Ames Aeronautical Laboratory of the National Advisory Committee for Aeronautics. Additional equipment to be installed will permit aerodynamic studies up to 11,000 miles per hour, approximately 15 times the speed of sound.

The tunnel is already in use to study the characteristics of missile-type models at

high supersonic speeds. The models used are only a few inches in length but with this tunnel, research results obtained are comparable with those for far larger models. Conventional wind tunnels would require a model more than 10 feet long.

The hypersonic speeds in this free-flight tunnel are achieved by generating an air stream of from two to three times sonic speed and launching the model into this oncoming air stream at high velocities. Launching guns vary from .22 caliber up to three inches.

In the gun barrel, the model is housed in a tiny carrier which protects it from the hot discharge gases, keeps it properly aligned during launching and acts as a piston. Once out of the muzzle, the carrier falls away, leaving the model free to fly by itself through the tunnel.

The tunnel is of the type known as a "blowdown." The air is supplied by an adjoining 12-foot pressure tunnel at a maximum pressure of six times that of the atmosphere. The air passes through a settling chamber, supersonic nozzle, test section and diffuser and thence into the open air. Guns to fire the models are placed in the diffuser.

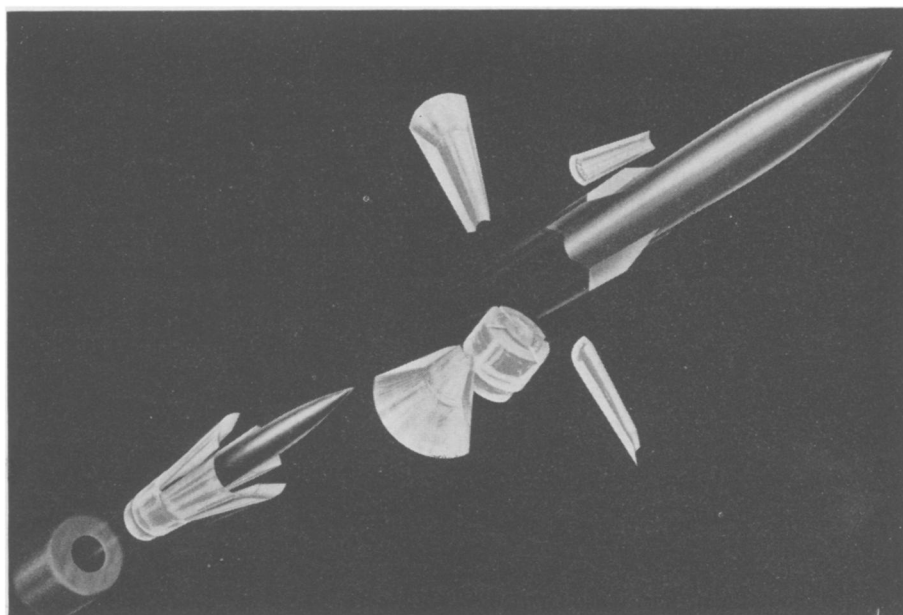
Science News Letter, July 15, 1950

## PHYSICS

## Say "Fishing" to Use All Speech Sources in Mouth

► SAY "fishing" and you will run the gamut of apparent sources of speech in your mouth.

Two Radio Corporation of America sci-



**SABOTS SEPARATE**—Models launched from guns in the new NACA wind tunnel leave the gun barrel in plastic "sabots" which keep the models correctly aligned and act as pistons on firing. When the model leaves the gun muzzle, the sabot separates and falls away, leaving the model free to continue its flight through the test section, where measurements are made.