



**WIND TUNNEL FROM GERMANY**—This is one of the captured tunnels shipped to this country which is now helping American guided missile development. Here a model is being mounted in the Naval Ordnance Laboratory rotary wind tunnel preparatory to a "blow." (See SNL, July 2, p. 6.)

## ENGINEERING

## Superior Weapons

➤ TRUE security consists in being as far ahead as possible of any unfriendly nation, Dr. Karl T. Compton, chairman of the government Research and Development Board and formerly president of the Massachusetts Institute of Technology, declared before an audience of scientists and government officials at the dedication of wind tunnels and ballistics ranges at the Naval Ordnance Laboratory in White Oak, Md.

He was reviewing lessons learned from the recent war and his statement referred to improved weapons. "It was the overwhelming production of airplanes, of cargo vessels, of bulldozers, of landing craft and radar, all handled by brave and skillful men, that enabled our forces to stop, then to drive back, and finally to overwhelm our enemies," he said.

"The importance of beating the enemy in the race for new technical developments had many illustrations," he continued. "We beat him with microwave radar and with strategic bombers. He beat us to the snorkel submarine and V-1 and V-2 types of bombs; if he had got these things going several years earlier, the war might have had a different ending."

"To a rather astonishing degree, in the public and even in the military mind, security has come to mean secrecy. Secrecy is one aspect of security, for it is evident that,

if we should freely broadcast all information about our new developments, we would permit our competitor to keep pace with us at relatively little expense to himself.

"Thus secrecy is the negative, or defensive, aspect of security. But if we sit tight and lock up our secrets, it will not be long before our active competitor forges ahead of us. So we must press forward the positive, or offensive, aspect of security by making rapid advances in our own science and its practical applications.

"Unfortunately secrecy and progress are mutually incompatible. This is always true of science, whether for military purposes or otherwise. Science flourishes and scientists make progress in an atmosphere of free interchange of ideas, with the continual mutual stimulation of active minds working in the same or related fields. Any imposition of secrecy in science is like application of a brake to progress."

Another lesson of World War II is the power of teamwork, Dr. Compton stated. The outstanding characteristic of the attitude of our people during the war was the determination to go all-out for victory. It was "total war" from top to bottom. It was national teamwork in an unprecedented sense. It brought national success, and it brought personal satisfaction. And,

he added, there was far better teamwork in our democratic country than in the totalitarian countries of our enemies.

The wind tunnels that were dedicated are of German origin (See SNL, July 2, p. 6). They were captured in Bavaria late in the war, dismantled and shipped to White Oak for the use of the American armed services in studying aerodynamics, and particularly in applications to guided missiles. They are the same tunnels in which the famous German V-2 rocket was developed.

Science News Letter, July 9, 1949

## GENERAL SCIENCE

## Economy Drive May Block Science Foundation

➤ THE Congressional economy drive, timed to the end of the government's money-year, may be the newest hurdle blocking a National Science Foundation.

A bill to establish the foundation has thus far failed to get approval of the House Rules Committee. Economy-minded members of the committee are understood to be balking at approval of the bill which would set up a new government agency for supporting scientific research and science training.

The House bill, introduced by Rep. J. Percy Priest, D., Tenn., and a similar one which passed the Senate in March do not appropriate any money, but they call for a foundation which would spend money. In his budget for the new fiscal year President Truman listed a total expenditure of \$15,000,000 for the proposed science agency, \$2,500,000 of appropriations and the remainder in contract authority.

Budget for the last fiscal year also included this estimate for the foundation, but the bill died in the House in the second session of the Eightieth Congress, after an earlier measure was vetoed by the President in 1947.

Science News Letter, July 9, 1949

## ENGINEERING

## Giant Magnet Assembled For New Atom Smasher

➤ WHAT is believed to be the largest magnet of its kind ever made has been assembled in Urbana-Champaign, Ill., for the University of Illinois' giant, new 300,000,000-volt betatron.

The laminated electrical transformer magnet for the new atom smasher is 23 feet long, six and a quarter feet thick and 13 feet high. It weighs 275 tons and was assembled by Allis-Chalmers from 70,000 sheets of magnet iron, each sheet being only 0.014 inch thick.

Dr. Donald W. Kerst, who developed this type of atom smasher and is directing the construction, estimates that the new scientific instrument is now half completed.

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