



Goodyear

**RAVIOLI ANYONE?**—What appears to be a dish of ravioli would make a jaw-breaking meal. Actually, it's the exposed portions of a stack of circular steel spacing bands, used in assembling dual wheels on trucks, outside Goodyear Tire and Rubber Company's metal products plant in Akron, Ohio. The corrugated edges give the bands added strength.

TECHNOLOGY

## Targets Shoot Back

➤ **WITH ENOUGH** on his mind about going into combat, now a soldier cannot even trust the rifle range. The Army has designed a new target that shoots back.

"To test the efficiency of riflemen under fire," an automatic gas-operated pellet gun keeps up a steady attack, firing every half second. And just to make matters worse, a plywood back-stop sees to it that every pellet not hitting the soldier makes itself known with a resounding crack.

Though the BB-sized pellets merely sting, without doing permanent damage, protective padding covers all vital parts

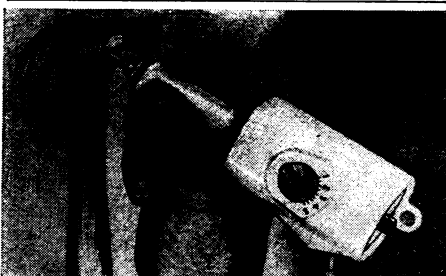
of the soldier's body. An elaborate hood extending down over his shoulders and chest contains electrodes to measure heartbeat as well as an electric fan for cooling.

Electronic equipment records raising and lowering of targets, number of shots fired by the rifleman, number of hits and BB-gun fire.

Each soldier is exposed to a sequence of seven targets, shaped like the silhouette of a kneeling figure. The BB gun may shoot back for only two of them, but the threat of return fire provides "sufficient stress." Stress can be varied by controlling the number of hits on the soldier.

The amount of stress affects not only a rifleman's accuracy, but also his rate of fire and the time it takes him to fire his first round, according to scientists at the Army's Human Engineering Laboratories, Aberdeen, Md.

The GIs may be unable to hide from the sharpshooting targets, but by comparison they are armed to the teeth—with M-14 and M-16 rifles.



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TECHNOLOGY

## Ship Assembled at Sea May Carry Million Tons

➤ **SHIPS** able to carry a million tons of cargo, more than six times as much as the world's largest present cargo vessel, may be possible by building the ships in sections and assembling them at sea.

The 151,000-ton tanker Tokyo Maru is currently the world's biggest ship. The Japanese are building the 209,000-ton Idemitsu Maru, and both they and the Norwegians have declared that 500,000-ton tankers are feasible.

Such ships would drastically reduce the cost of transporting petroleum products to refineries.

The new assembly technique was developed by Associated Shipbuilders Ltd., Newcastle-Upon-Tyne, England, which claims that taxation has in the past prevented British shipbuilders from adopting the Swedish and Japanese methods of construction in specially made dry docks.

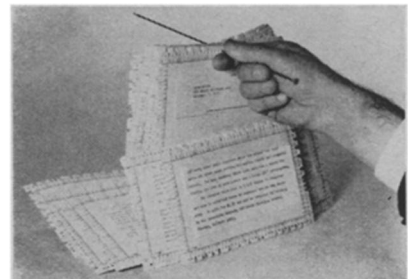
The million-ton ship would reportedly be 1,800 feet long, 246 feet wide and 125 feet deep.

The 83,000-ton Queen Elizabeth, largest passenger ship afloat, is 1,031 feet long and 119 feet wide.

Tonnage cannot be compared directly because different measurements are used to describe weight of passenger and cargo ships.

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