

Harvard Medical School, has separated from whole blood. These give promise of effective uses, Commander Bortz stated. Serum albumin is being used now in concentrated form for treating shock, which he characterized as the "most serious battle emergency."

Science News Letter, November 27, 1943

Research Medal Awarded

► CONTINUING to search for the cause and methods of treating nutritional deficiency diseases "is a practical mat-

ter having dollars and cents value to every citizen," Dr. Tom D. Spies, of the University of Cincinnati Medical College and Hillman Hospital, Birmingham, Ala., declared in accepting the association's research medal.

"The number of malnourished persons, the great expense involved in caring for them, and the cost in loss of manpower leave no doubt," he continued, "of the imperative need for uninterrupted scientific research in the field of nutrition."

Science News Letter, November 27, 1943

CHEMISTRY

Salt Taken from Water

Navy approves new de-salting chemical that quickly makes sea water drinkable. Briquets of chemical are the size of a candy bar.

► A NEW chemical that takes the deadly salt out of sea water in 20 minutes and permits a flier to carry the makings of a 14-day supply of life-sustaining drinking water in his rubber life-raft has been recommended by the Naval Medical Research Institute, and is already in production, climaxing

more than a year of all-out research in which innumerable de-salting devices have been invented and demonstrated.

The new chemical de-salter, which weighs only 3½ pounds and converts more than 14 pints of sea water into drinking water, was designed to prevent death from thirst and tissue dehydration among fliers drifting on rubber life-rafts.

At least a dozen methods of distilling or chemically de-salting sea water for fliers have been tested by Naval Medical Research Institute chemists and physicians but were rejected because of awkwardness, poor yield, excess weight or harmful reactions. A small can is the only water supply which downed fliers have been taking aboard rafts.

The new chemical, which is carried in the form of briquets the size of a small candy bar, is the result of many months of research on the part of the Permutit Company of New York. When dropped into a plastic bag filled with sea water, the chemical quickly absorbs the dissolved salts, permitting them to be filtered out as the flier sucks the water through a plastic tube. Each briquet weighs only one-sixth as much as the drinking water it produces and takes up only one-tenth as much space, thus keeping within all-important plane-loading limits.

As a result of original tests made by the Navy Department and later corroborated by the American Airlines, officials of the American Airlines announced that they had adopted this sea water



JUST A HANDFUL—Packed in this water-tight plastic container the desalting materials weigh only 3½ pounds. The kit is rolled into the deflated life-raft pack during over-sea flights.

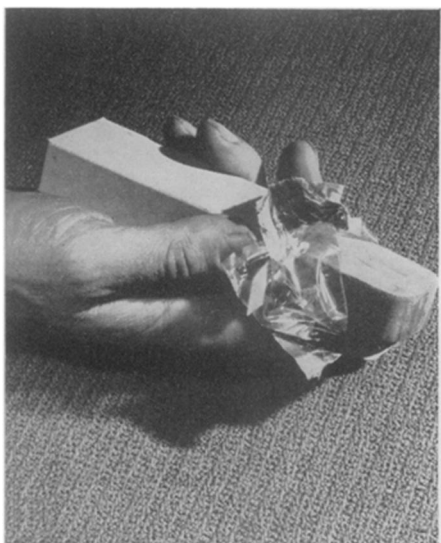
de-salting process for all over-water cargo and passenger flights and had recommended it to other airlines operating flights under the Air Transport Command.

At a "shipwreck demonstration" in the Atlantic Ocean off Long Island, sea water was scooped up in the transparent bag and a briquet was dropped in. The bag was sealed and shaken and the chemical absorbed. Salts were retained by a cloth filter as the water was sucked out.

Chemical methods of converting sea water to drinkable water have been sought by scientists for centuries. Since man first went to sea thousands of shipwrecked sailors and airmen have died from thirst and many thousands of others have lost their reason.

Attention has been focused on the problem of water-supply for life-rafts by the vast amount of over-water flying and fighting, especially in the Pacific war zones where two- and three-week raft "squattings" have become commonplace. The Rickenbacker and Doxon-Aldrich-Pastula sagas, describing the tortures of thirst aboard life rafts, showed that lucky catches of fish, birds and rain-water were all that prevented their deaths from thirst. Medical opinion holds that water is more important than food in sustaining life, for dehydration of tissues is usually fatal.

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LIFESAVER—This briquet is a secret chemical to take the salt out of sea water so that it can be used for drinking. The chemical was developed by the Permutit Company. It is wrapped with cardboard, foil and pliofilm to prevent damage from salt air, and water in case of submersion.