Do You Know?

Liquid *oxygen* is attracted by a magnet.

Much long-fibered *asbestos* comes from Rhodesia.

Garden *mulches* do not add to the soil but they do hold for crop use the moisture already there or added later by rain.

The *oyster* is equalled or excelled only by liver in the amounts of iron and copper that it furnishes in an average serving at a meal.

Chemical treatment of *dirt roads* with a small quantity of resinous material makes the earth water-repellent and keeps the road dry.

The familiar moth repellent, *naphthalene,* when oxidized and combined with methyl alcohol forms dimethyl phthalate, a valuable insect repellent odorless to humans but obnoxious to mosquitoes and other pests.

needed for our soldiers or which we will want when Americans can once again satisfy their love of travel is based on the average temperature or climate of a region.

The amount of dry clothing you need depends on the amount of heat you are producing and the temperature of the air at which the heat is lost. Thus the air temperature can be used in determining the clothing which a soldier should have for walking or doing some light exercise. The amount of clothing needed is determined by its thickness—it is bulk and not weight that keeps you warm. If the clothing is dry, its value can be measured by its thickness.

A layer of clothing a quarter-inch thick, or about the thickness of a man's suit, has been taken as the basic standard layer of clothing in working out the clothing almanac. This is the amount of clothing you would probably need when the temperature is around 68 degrees Fahrenheit, if not exercising. For each cooler climate zone you need one extra layer of equal thickness.

The climate zone classification has been used for other types of maps than those showing clothing needs. One example is the mapping of insect-borne diseases according to climate. Malaria breeds at temperatures above 59 degrees Fahrenheit, which is mid-temperature of the mild climate zone. Outbreaks of malaria have been known to occur in Siberia, but only when the average temperature reaches the critical point of 59 degrees.

The amount of fuel needed to keep warm in New York is about the same as in London, though winters in the British capital are much warmer, it is shown in fuel requirement maps made by the climatology section of the quartermaster corps. Areas which have cool summer, spring and autumn weather, such as England, may require more fuel than those having cold winters but warm spring and fall seasons.

During the fall months, a man shipwrecked without drinking water may expect to survive at sea three or four days longer toward the north than near the equator where he can count on living only six or seven days. This is brought out in maps showing water requirements and survival times without water for oceans and deserts. These maps have been used to chart the need of rescue equipment.

In some sections of Arabia and India, a man can survive only one day in the desert without water. Here in the United States in the deserts of California and Arizona, he can probably live at least two days without liquid. Maps showing the expected time of survival at sea and in deserts for men without water were based largely on the precipitation of the region, and on field tests to determine water requirements.

These are just a few of the special maps based upon those showing the climate of various sections of the world. The maps were the idea of Maj. Paul A. Siple of the Climatology section of the office of the Quartermaster General, of Dr. Samuel Van Valkenburg, now with Clark University and expert consultant for the section, and of Maj. Weldon Heald, noted mountaineer and also climatology consultant.

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INVENTION

Solar Water Still for Desert Dwellers

➤ PERSONS whose jobs require them to live in desert regions where the only available water is alkali or salt are offered a way to distill fresh water out of it with no fuel other than sunlight, in the invention on which patent 2,383,234 has been granted to W. S. Barnes of Tucson, Ariz.

The unpotable water is held in a long tank, preferably oriented with its long axis on an east-west line. This is covered with a gabled glass roof, or a sawtooth series of such roofs, with a sprinkler-pipe running along the ridgepole. Daytime heat evaporates part of the water, and cooling sprays over the outside of the glass condense the vapor on the inside, where it trickles down into appropriately placed troughs and pipelines. Incidentally, the glass roof is hopefully provided with gutters and spouts, to catch such occasional rains as do fall in almost all deserts.

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