

## METEOROLOGY

# Help in Water Problem

**Weathermen can aid in the water supply problem by exploring rain-making, the evaluation of water supply and the governing of industry in areas by weather data.**

► THE weatherman can help in the nation's water supply problem. Capt. Howard T. Orville, past president of the American Meteorological Society, suggested three main ways in which weathermen could help. He spoke as a guest of Watson Davis, Director of Science Service, over the nationwide Columbia Broadcasting System.

First, the possibilities of artificial rain-making should be carefully looked into, said Capt. Orville, who is also head of the Aerological Service of the Navy. Second, better and longer-range weather forecasts will help us in evaluating the potential water supply in any given area. Third, the already amassed climatological data about our country should help in governing the amount of industrial expansion in any area.

Pointing out that New York City's water shortage was not the first in our country, Capt. Orville nevertheless said that, "it isn't true that our water supply is going down. There is an abundant supply over

the United States as a whole."

He said that water supply problems were more local in character and usually resulted from exploitation of areas without thinking about the amount of available water. More knowledge of past rain and snow fall and better long range forecasting, he said, if given attention by industry and agriculture, would go a long way toward solving some of the water supply problems.

Capt. Orville pointed to the Weather Bureau's extended forecasts, recently released on a regular basis to newspapers and publications. He said that these were still in the experimental stage.

Artificial rain-making, he said, has not been entirely proved, but the preliminary results from Project Cirrus and other projects have been encouraging enough to warrant more, carefully controlled, experiments. He said that these future experiments may require careful evaluation by an impartial group of scientists.

Science News Letter, March 25, 1950

## GEOLOGY

# Clue to Gold in Ashes

► THE prospector's campfire will do more than keep him warm in the future. By testing the ashes scientifically, he may get a clue to gold, silver, perhaps even uranium in the area.

Two British Columbia geologists, Dr. Harry V. Warren and Robert E. Delavault, say the system for gold and silver works. Burning samples of various trees and forest plants which they cut near known gold deposits, they found measurable amounts of both precious metals, according to a paper in the monthly bulletin of the Geological Society of America.

But before you rush out to burn down the willow tree in your yard, consider the "measurable amounts"—something like one ounce of gold in 450 tons of wood, even if our house stands on a mother lode.

The relatively new science of hunting underground metals from their chemical traces in plants and trees, ground water and soil is called geochemical prospecting.

The Scandinavians made an important strike of manganese in the 1930's by using such techniques. Geologists and chemists of the U. S. Geological Survey told Science Service they have been working for about five years to find fast, rough tests prospectors might use in the field to unearth such

metals as copper, nickel, lead and zinc. These are vital to U. S. industry.

Whether or not uranium may also be found by these methods was not disclosed by the Geological Survey scientists. But uranium is a heavy-metal cousin of gold and lead.

Dr. Earl Ingerson, head of the geochemistry unit of the Geological Survey, said, "We hope these new techniques will someday furnish a valuable tool for prospectors."

Science News Letter, March 25, 1950

## INVENTION

## Shaking Dust Mop Out Window Outmoded

► DRY-mop-shaking out the window is scheduled to go. A simple bellows cabinet newly patented, will take the dust out of the mop and collect it in a bag, and does the job without polluting the atmosphere or pestering the neighbors.

It is not the first device developed for cleaning the dry mop but this one is an improved type, easily carried from place to place and easy to operate. The bellows are at the top. The dust bag is at the bottom. The mop to be cleaned is placed be-

tween. Manipulating the cover up and down with one hand works the bellows.

The moving air agitates the fibers of the mop and carries the dust from it to the bag below. The bag is similar to those used in ordinary household vacuum cleaners. The air goes through while the dust is filtered out. The bag is easily removed for emptying when required.

Albert Deans Fairgrieve, Vancouver, British Columbia, received American patent 2,499,183 for this invention.

Science News Letter, March 25, 1950

## AERONAUTICS

## Needed: Improvement in American Civil Airports

► THERE is much need for improvement of America's 6,200 civil airports, it was revealed in Washington by the 1949 ratings of the Aircraft Owners and Pilots Association.

Only 709 of these 6,200 airports are rated either as "superior" or "above average" by the nearly 40,000 pilot-members of the association. These figures for 1949 show a decrease of 16 rated airports over 1948.

The association's rating system is based entirely on reports received from members throughout the year. Special rating cards are supplied to all members. They are urged to fill the cards in for all airports they use on any flight, and mail them to the national headquarters.

A list of the superior and above-average airports is published by the association for the benefit of its members. The list indicates also whether the ports have transportation, overnight accommodations and restaurant facilities.

Science News Letter, March 25, 1950

## CHEMISTRY-ENGINEERING

## "Toothpaste-Tube" Pump Handles Corrosive Material

► A NEW pump which utilizes the principle of the common toothpaste tube in handling highly corrosive liquids and gases has been designed and built by two University of Texas chemists.

Mixtures which would quickly ruin metal parts of any ordinary pump are squeezed through a plastic-lined rubber tube by a series of rollers mounted on the side of a revolving disk. As the disk spins, the rollers successively flatten the tube against a semi-circular frame and push ahead anything inside.

The pump is described by E. E. Glenn, Jr., and Norman Hackerman in the REVIEW OF SCIENTIFIC INSTRUMENTS (Feb.).

They report one gallon per minute can be delivered against a three-foot head. Corrosive mixtures with a high gas to liquid ratio can be carried. They touch only an inner tube of Tygon, a synthetic resin plastic material. The rubber outer tube takes the wear from the rollers.

Science News Letter, March 25, 1950