

A Science Service Feature

Released upon receipt
but intended for use
February 26, 1932

? WHY THE WEATHER ?

Mailed February 19, 1932

By Charles Fitzhugh Talman,
Authority on Meteorology.

SUNSHINE-RECORDERS

Instruments that register the duration of sunshine are called "sunshine-recorders." One kind (the Campbell-Stokes recorder, widely used in Europe) works on the principle of a burning-glass. In another kind, now little used, the sun's rays trace a record on photographic paper. The instrument employed by the U. S. Weather Bureau consists of an air thermometer having a bulb at each end, one bulb being coated with lamp-black. There is a small column of mercury between the two enclosed masses of air. The thermometer is enclosed in a sheath of glass, from which the air is exhausted. When the sun shines on this instrument, the air in the black bulb warms and expands, and the mercury is forced toward the other bulb until it comes in contact with a pair of electrodes, thus closing an electrical circuit. While the circuit is closed, the registering apparatus connected with the instrument makes a step-shaped mark once every minute. When the sun stops shining, the mercury drops back, the circuit is broken, and the recording pen merely traces a straight line.

(All rights reserved by Science Service, Inc.)

SCIENCE SERVICE
21st and Constitution Ave.
Washington, D. C.