

Released on receipt  
but intended for use  
January 12, 1929

A Science Service Feature

? WHY THE WEATHER ? Mailed January 5, 1929

By Charles Fitzhugh Talman,  
Authority on Meteorology

THE WEATHERMAN'S BALLOONS

The small balloons that the weatherman sends aloft for the purpose of observing the direction and force of the winds at high levels are called pilot-balloons. Those used in the United States and Canada are 6 inches in diameter when uninflated and are made in three colors -- white (uncolored rubber), red and black. They are manufactured by the dip process; hence they are without seams and are nearly spherical when inflated. An extension of about 2 inches in one direction forms a neck through which inflation is accomplished. The balloon is inflated with hydrogen by the observer immediately before the ascent, an "inflating-balance" being used to show when just enough gas has been admitted to give the balloon the desired "lift" and ascensional speed.

The different colors are appropriate to different conditions of the sky. The uncolored balloon is easiest to distinguish when the sky is clear; and blue; the black is best when the balloon is viewed against a background of continuous clouds; while the red is the most clearly visible against a white or grayish clear sky or against feathery clouds, and is the best for all around use.

Bi-colored balloons have been used experimentally in Europe. The balloon tends to rotate during ascent and colors suitable for different backgrounds are thus shown alternately.

(All rights reserved by Science Service, Inc.)

-----  
SCIENCE SERVICE,  
21st and B Sts.,  
Washington, D.C.