

METEOROLOGY-ENGINEERING

Smoke Blanket Makes The City Warmer

SURPRISINGLY great differences in temperatures between a smoke covered city and nearby country have been found by Fred L. Disterdick, of the U. S. Weather Bureau at Des Moines, Iowa. He has just reported his researches to the Bureau's headquarters in Washington.

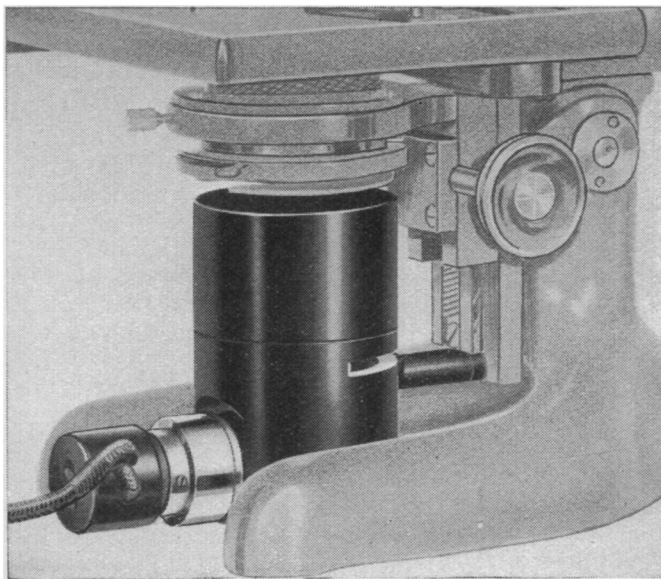
Comparing minimum temperatures in the city at his office, and in the country, only five miles away, he found that on one occasion when the temperature in the country was 35 degrees it was 52 degrees in the city. When conditions in the country were favorable for the radiation of heat from the ground and the city was covered with its usual blanket of smoke, the city was always at least 5 degrees and most of the time 10 or more degrees warmer.

Mr. Disterdick says that at his station they observed some time ago that the minimum temperatures tended to be lower on Sunday and Monday mornings than on other days of the week, and that in predicting the lowest temperatures to be expected each night, this has been taken into consideration. It is attributed to the fact that most of the industries, which pour smoke into the air, are closed over the week-end, and the air is relatively smoke-free on Sunday and Monday mornings. He points out numerous effects of the warming influence of the smoke.

Directly west of Des Moines is a large open area more than half a mile wide. In this area the effects of frost are observed early and there is never any smoke to ward off an injury when the temperature is at a critical point. Rather early during September, 1929, a frost occurred that killed practically everything in the unprotected area. In advancing eastward, the extreme edge of the city showed only traces of frost and as the city was penetrated even the most tender vegetation was not injured in the least and continued to thrive for more than a month after areas immediately adjoining were entirely without vitality.

Calling attention to the fact that smoke pots are frequently used to prevent frost damage in orchards, Mr. Disterdick declares that the smoke factor should be considered and that the uncorrected data from smoke-infested cities should not be taken as indicative of the climatological conditions.

Science News Letter, November 29, 1930



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