

tolerable pain. The flasher cut-off valve he had contrived for lighthouses had been adapted for the administration of partial anesthesia, and it was used to keep him in a kind of twilight sleep.

On December 9, 1937, Gustaf Dalén died in his lovely villa overlooking Stockholm harbor. As Swedish and foreign ships made their way through the icy harbor, that dark December day, each ship reduced speed, each flag was lowered, in mourning for the man who had lighted their way home.

*Science News Letter, January 15, 1944*

## RADIO

## Color Television Produced By Subtractive Method

► AS EXPERTS debate whether post-war television must be restricted to black-and-white reproduction or whether color pictures can be brought to American homes at once, color reception has been advanced still another step.

Adapting the "subtractive method" of ordinary color photography to television, instead of using the "additive method" often proposed, Adolph H. Rosenthal of New York has produced pictures of equal brilliance with only a fraction of the illuminating light necessary in the latter method.

White light is passed through successive transparent image screens which "subtract" the unwanted color wavelengths of the light. A patent is pending on the ionic crystal type of screens used.

*Science News Letter, January 15, 1944*

## ORDNANCE

## Time Fuse Uses Gas Instead of Powder Train

► A NOVEL type of time fuse for artillery shell is the subject of patent No. 2,334,182, obtained by Stanley Farrow of Denville, N. J. For the customary powder train, whose slow burning determines the moment of explosion, a container of gas under pressure is substituted. This is punctured when the gun is fired, and its rate of escape is regulated by a pre-set mechanism. When enough of the gas has passed through a pellet of a chemical catalyst to heat it to ignition temperature, it sets off a booster charge of powder, which in turn explodes the main charge.

Mr. Farrow has assigned to the U. S. Government the right to manufacture and use his fuse without payment of royalties.

*Science News Letter, January 15, 1944*

## METEOROLOGY

## Your Coal Bin Should Now Be More Than Half Full

► DOES the top of your coal pile, or the gauge on your oil tank, still stand a bit above the half-way-down mark?

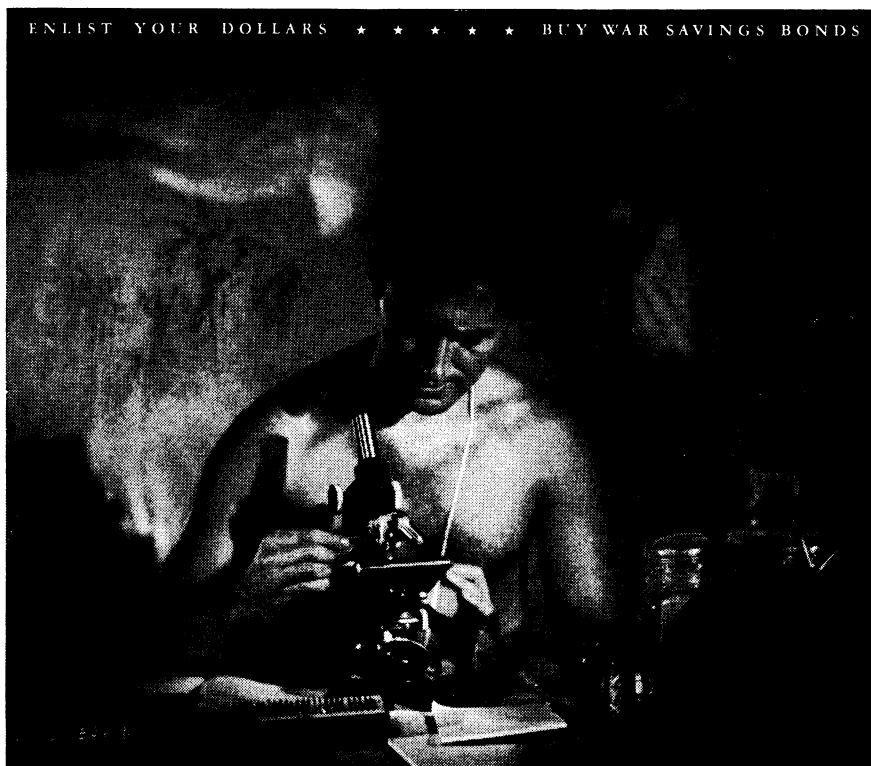
If so, OK. If not, get set for chills, warns the U. S. Weather Bureau.

The middle of winter, measured in practical terms of days of really cold weather, normally comes about Jan. 15 in the South, Jan. 17 or 18 in the central

and northern Plains, and Jan. 22 to 24 in the Great Lakes region and the Northwest. So the farther north-northwest you are, the higher that coal-pile top or oil gauge should be.

There's a joker in this, though—as there always is in the weather deck. The Bureau hedges: "As these dates are normals, or long-time averages, the mid-season for individual years frequently differs considerably from them, depending on whether the first half or last half of the winter is the colder."

*Science News Letter, January 15, 1944*



## How Americans Are Kept in Fighting Trim



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Bausch & Lomb Microscopes follow the flag, over land and sea, to help keep your fighting sons in fighting trim. Medical research . . . and the routine checkups and analyses that must be done in the field . . . are a vital part of military preventive medicine. Through the microscope the Medical Corps knows of the enemies . . . disease and infection . . . that lurk behind every battle line.

Microscopes are typical of the many Bausch & Lomb optical instruments that are performing vital war duty on the home front . . . in the industrial research and control that speed the production of the tools of Victory . . . and in the medical and scientific research that will make it a better world to which these boys will return. Here again, optical science is *seeing it through*.

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