



Hepatica

➤ IF you look sharp as you make your way about the woods you may see the hepatica in flower. It is the earliest of the common woodland plants.

The flowers are white, pink or bluish. They stand in fresh contrast to the tough winter-purpled leaves of the previous season's growth.

The striking feature of this earliest of spring harbingers is the characteristically shaped leaves. Long ago it was noticed that the three-lobed leaves are suggestive of small livers. Hence the name "hepatica," which means liver-like.

Hepatica is an evergreen that is found frequently in association with pines, spruces, and cedars. It is usually found in shady spots standing in a rich well-drained loamy soil. It has a thickish hairy stem and the foliage lasts from one season to the next.

The liver-shaped leaves do not wither and die. Instead they seem to weather the cold in much the same way a boy's lips do when he swims in the creek too long: that is, they take on a purplish cast. It is usually easy for this reason to distinguish between this spring's leaves and last summer's. The newer leaves are not only smaller, they are also greener.

Following the ancient doctrine that any

plant or plant part that looked like an animal or animal organ was supposed to be good for the ailments of that organ, medical men of bygone days used to make pungent brews and potions of the little hepatica plant which were used to treat liver ailments.

Because of its early springtime appearance, some gardeners favor using it in borders, or in a rockery where it thrives on the north or east slope. It is very easy to propagate by dividing the roots. This method is favored over seed propagation, because with seed you have to wait until next season for flowering.

Science News Letter, March 4, 1950

#### NUCLEAR PHYSICS

### Chemical Crystals Help Detect Nuclear Radiation

➤ A NEW kind of radiation detector for use in locating nuclear radiation, revealed by Dr. R. M. Lichtenstein of General Electric, in Schenectady, N. Y., utilizes chemical crystals which become conductors of electricity when exposed to certain wavelengths.

The crystals used by him are potassium bromide. Normally they are non-conductors of electricity. In his work, the crystals were exposed to gamma or X-rays and illuminated by a special light. Electric charge then flowed through them when a voltage was applied through suitable electrodes. The amount of charge transmitted is a measure of the radiation dosage to which the crystals were originally exposed.

This method of detecting nuclear radiation is based upon a discovery made more than a half century ago relative to the crystal-changing characteristic. It promises to have wide application particularly in medical work and other places where isotopes from the atomic pile are employed.

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#### MEDICINE

### Movie May Help Save Lives of Cancer Victims

➤ A MOTION picture which may help save between 16,000 and 25,000 lives of breast cancer victims each year in the United States had its premiere in Washington, D. C.

The film, produced under the auspices of the U. S. National Cancer Institute and the American Cancer Society, is for doctors, and shows physicians how to recognize breast cancer in its earliest stages.

A companion film, to show women themselves the basic facts about breast cancer and a simple method of periodic self-inspection of the breasts, is being produced by these same organizations.

Nearly 50,000 women develop breast cancer each year and more than half of them die of it within five years. Current mortality figures show about 16,000 deaths from this cause in one year, and cancer

statisticians find the cancer death rate increasing, so there might be as many as 25,000 breast cancer deaths in a single year.

A brighter side of this picture, showing the life-saving value of early diagnosis, was presented by Dr. Austin V. Deibert of the National Cancer Institute at the cancer film preview.

He cited new figures from a cancer survey in Atlanta, Ga. This is one of 10 cities which were first studied 10 years ago and in which repeat surveys were just completed.

If the cancer at the time of diagnosis is at an early, localized stage, the probability of survival is 93%, Dr. Deibert reported. If there is regional involvement or beginning spread of the cancer, the probability of at least one year survival, though still favorable, drops to 88%. But if diagnosis is delayed until the cancer has spread to remote parts of the body or all over, the probability of survival drops sharply. One-half the patients will die within a year.

In Atlanta almost one-third, 30%, of the cases were actually diagnosed at an early, localized stage. But slightly more, 31%, were advanced cases with spread to remote parts of the body at the time of diagnosis.

The cancer film was given its premiere at the meeting of the American Medical Association in Washington, D. C.

Science News Letter, March 4, 1950

#### INVENTION

### Flame-Thrower Clears Roadside of Weeds

➤ ROADSIDE shoulders and roadside ditches will be completely cleared of vegetation down close to the earth, so that surface irregularities will be visible to the automobile driver, by use of a new weed-burner, or flame-thrower, on which a patent has been issued. Its efficiency is partly due to the use of a liquefied gas as a fuel.

The patent, 2,485,391, was awarded to Arthur S. and Etienne J. Lasseigne of Reserve, La. In addition to the type of fuel used, such as liquefied propane gas, this flame-thrower is so mounted on a frame that its nozzle can be adjusted to various positions desired.

The blast flame, created by the fuel and the special burners in which it is used, is projected with enough force so that it will penetrate thick and matted vegetation and effectively consume moist green growth. Other roadside flame weed-killers use oil for a fuel and their flame is apt merely to sear off the vegetation without clearing it to the surface of the earth, leaving ruts and gulleys concealed.

The entire equipment, including its fuel tank, is mounted on a sulky that can be attached to a truck or tractor. Its burner is on an elongated frame, pivotally attached to the sulky.

Science News Letter, March 4, 1950

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