BOTANY

NATURE RAMBLINGS by Frank Thone

Versatile Violets

VIOLETS are among the earliest of our spring flowers. They burst forth with an abundance of blossoms as soon as the returning sun has mellowed the earth even a little, and the rains and thaws of spring have got it properly moist. Like certain ladies, they are just a wee bit fussy about the way they want things, but if those conditions are reasonably well met they are very gracious indeed.

Violets and spring have been associated by poets for so long that we lose track of the plain fact that they can be found in bloom during practically the whole year except the hot months of summer. There is a small but unmistakable crop of violets every autumn, and they can be found blossoming during January thaws even in such regions as Wisconsin and Ontario. Spring is their main flowering season but by no means their only one.

Violets are so often thought of as blue that we forget their wide range of color until we are confronted with white and yellow violets in the field. And the color we call violet is not properly speaking blue at all, but the seventh region of the spectrum, beyond blue—the last of the visible wavelengths at its shortwave end.

While most violets stick to one color with reasonable consistency, contenting themselves with, at most, white bases on blue petals or violet-colored veinings in white ones, there is at least one species that combines all three of the violet's principal hues in one flower. This is the tricolor violet, a much-developed cultivated form of which is better known to us as the pansy.

Again, we so habitually think of violets as flowers of the woods that it is a perennial surprise to find many species that refuse to grow in the shade of trees at all, and disport themselves in the open. Some of them insist on the wetness of marshes. Others, especially in the West, will grow only on well-drained, open soil, often on the coarsest of gravelly hillsides, in the company of the hardiest herbs and grasses.

With this great versatility and adaptability, it is not surprising to learn that there are many species of violet: at least 300, of which about 80 are native to this continent.

Science News Letter, April 2, 1938

INVENTION

Non-Glare Auto Lights May Come as Patent Tangle Clears

HIGHLY important news for glare-blinded night-driving motorists is contained in the announcement that the conflict over patent rights on the use of polarized materials for automobile headlights has at last been cleared.

The Polaroid Corporation, manufacturers of sheet polarizing material which is finding wide applications, has acquired the basic patents of Dr. L. W. Chubb for the use of any polarizing material in headlights. Dr. Chubb is director of research of the Westinghouse Electric and Manufacturing Company, but the patents were those of Dr. Chubb personally.

Previously the application of polarizing material in headlights, to eliminate the hazardous glare at night, has been at an impasse. Dr. Chubb had the patents on the use of materials for this purpose and had demonstrated headlights so equipped. The trouble, in the past, was that the materials which could be used were highly expensive and such headlights would have cost as much as $100 or more.

Edwin H. Land, young Boston scientist who formed the Polaroid Corporation, had invented the cheap, easy-to-make, sheet Polaroid material but was unable—because of the Chubb patents—to apply it to its most valuable use in automobile headlights.

The present pooling of Chubb and Land patents with control vested in the Polaroid Corporation was accomplished by a transference of stock to Dr. Chubb and his associates.

Polaroid was originally invented to solve the headlight problem but while the patent tangle was being unravelled it found wide use in sun glasses, photographic and scientific equipment.

As foreseen by scientists, non-glare headlights will some day be standard equipment on all motor cars. The headlights of each car would polarize the light they emit in a single plane. This plane-polarized light vibrates in a single direction instead of in all directions.

In the windshields of other cars, or in special driving glasses, would be other polarizing material which is "crossed" with the material in the auto headlights. This "crossing" prevents the headlight rays from coming to the eyes of the other driver. Instead of a blinding glare which motorists know so well the oncoming car shows only two blue-purple glows for its headlights and the outline of the approaching car is revealed by the lights of the motorist's own car. Driving highways at night in a glaring splash of blinding light would change and become comparable with driving down a lonely moonlit road, as far as visibility is concerned.

Now that the patent worries over the application of non-glare headlights have been surmounted there comes the problem of installation. Concededly, this will come slowly for the system only works when both the headlights and the windshields of the two cars have the installation of "crossed" polarizing materials.

Which means that if you, as an individual driver, install polaroid headlights alone your night-driving problems will not be solved unless other cars have similar installations also.

Science News Letter, April 2, 1938