

THE LENS— a great invention

by Jerome S. Meyer

HUNDREDS OF MILLIONS of lives have been saved by curved glass. Hundreds of millions of eyes have been helped toward better vision, and countless millions of people have been entertained through the use of curved glass which enables them to read books, magazines, newspapers, movies, and television. With out this curved glass, otherwise known as the lens, there could be no microscope, and the sciences of optics and bacteriology which have wiped out the epidemics and plagues of years ago, would be unknown. Photography would also be unknown and millions of us would be cheated out of proper vision. Navigation would be affected adversely without the lens; so would surveying and mapping and modern building since all engineers' transits contain telescopes. As important as the lens is, nobody knows who actually invented it.

Spectacles were worn for

nearly a hundred years before the microscope and telescope were born. Salvani D. Armato, an Italian, and Nicholas Bullet, a French priest are credited for being the inventors of curved glass spectacles as early as 12-82.

Anton Van Leeuwenhoek, the inventor of the microscope had designed 419 lenses, most of which were double convex type, which is the kind used in photography and moving picture projection today.

The science of optics was developed through the efforts of Christian Huygens who invented new methods of grinding and polishing lenses, the principle of which is used this day.

Newton was the first to show that light is composed of many different colors and that when light is bent these colors appear in the form of a spectrum. He explained this in terms of waves, wave lengths and vibrations.

THE THOUGHTS and researches of these men enabled the scientists that followed to formulate new laws of optics based on the nature of light rays, and soon photographic lenses began to appear. Instead of one piece of double convex glass, these lenses consisted of several pieces cemented together in many different ways.

There are six types of lenses; the plano convex, plano concave, convexo concave, concavo convex, double concave and

double convex. The double convex lens is the one most frequently used, since it is a magnifying lens as well as projecting lens. Both the surfaces of a double convex lens are curved outward like the outside of a watch crystal or a section of the outside of a sphere.

The double convex lens also reduces. This is otherwise known as a reducing glass and is used occasionally, together with lenses in the construction of optical instruments.

* * *

Pink Snow?

The snow that falls in the Arctic is white snow but Arctic snowbanks sometimes look pink because of microscopic plants. When you stand close to the snow bank the color isn't noticeable, but at a distance of 100 feet or so the snow will seem to be pink and sometimes quite red. At times the reflected color of these snowbanks give the sky a pink tinge.

*