Gabriel Jonas Lippmann Biography

Gabriel Jonas Lippmann

The following sections of this BookRags Literature Study Guide is offprint from Gale's For Students Series: Presenting Analysis, Context, and Criticism on Commonly Studied Works: Introduction, Author Biography, Plot Summary, Characters, Themes, Style, Historical Context, Critical Overview, Criticism and Critical Essays, Media Adaptations, Topics for Further Study, Compare & Contrast, What Do I Read Next?, For Further Study, and Sources.

The following sections, if they exist, are offprint from Beacham's Encyclopedia of Popular Fiction: "Social Concerns", "Thematic Overview", "Techniques", "Literary Precedents", "Key Questions", "Related Titles", "Adaptations", "Related Web Sites".

The following sections, if they exist, are offprint from Beacham's Guide to Literature for Young Adults: "About the Author", "Overview", "Setting", "Literary Qualities", "Social Sensitivity", "Topics for Discussion", "Ideas for Reports and Papers".

BOOKRAGS

Contents

Biography

Lippmann was born in Luxembourg, but his French parents settled in Paris when he was a young boy. In 1875, he received a Ph.D. in physics from the Sorbonne, but not before inventing a sensitive voltmeter called the capillary electrometer. In 1886, Lippmann, a physics professor at the Sorbonne, lectured on a means to use optical " interference"--the same phenomenon that causes the color seen in soap bubbles, mother-of-pearl, and oil on a wet road--to induce the appearance of color on a photographic plate. Lippmann's photographic method used a thick emulsion over a thin photographic plate coated with fine-grain silver bromide. The plate was placed in a camera with the emulsion side away from the lens in contact with mercury. When the incoming light struck the light reflected from the mercury, stationary light patterns were produced that left their impression in the emulsion. This impression reproduced the natural colors of the object photographed. In 1893, Lippmann produced a photograph that rendered all colors, approximating their natural brilliance. As early as 1839 others, such as J. F. W. Herschel, Edmond Becquerel and Abel Niépce De Saint-Victor, had produced color images using various methods. But none were able to keep their images from rapidly fading away. Lippmann's image was permanent. Lippmann's color photographic method had too many drawbacks to achieve commercial success. A two- to three-hour exposure was required, the photographs were difficult to see (they had the appearance of a dense negative), and no copies of them could be made. Nevertheless, color photography had at last been achieved and Lippmann received the 1908 Nobel Prize for Physics for the invention. In addition to his work in color photography, Lippmann also fabricated numerous instruments, including the capillary- electrometer and the coelostat, before his death at sea on July 13, 1921.