

A SELSI Projection Microscope

**Michael Reese Much FRMS EMS
Bethlehem, Pennsylvania USA**

Recently a few friends and I made a pilgrimage to The Surplus Shed in Fleetwood, Pennsylvania (www.SurplusShed.com). The Surplus Shed is a resource for used electronic and optical odds and ends. While there I noticed a small "toy" projection microscope on top of a filing cabinet and offered to buy it for \$5 USD, which the owner accepted.



The film cassette is there simply for scale, but I think this Plus-X cassette is about the same vintage as the microscope.

The SELSI Company

In the United States in 1854 a company called Sussfeld Lorsch Company was created to import optical products from Europe. The business flourished as it became a leader of imported optics such as binoculars, microscopes and telescopes as well as watches, clocks, barometers and compasses. The company was an exhibitor at the

Centennial Exhibition in Philadelphia, USA that ran from May to November 1876.

In 1876 it was located at 13 Maiden Lane in New York City and later relocated to 37 and 39 Maiden Lane. Eventually the company moved to New Jersey.

Before the turn of the 20th century, it was renamed Sussfeld, Lorsch and Schimmel when a new partner joined the company.

The trademark "SELSI" was registered in 1925 using the initials of the partners (S-L-S) to form the name. The company was incorporated in 1929.

After World War II, much of the optical market moved from Europe to Japan and SELSI was one of the first United States importers to open an office in Tokyo.

The company closed in 2010 and its remaining merchandise was sold to various optical companies.

The Microscope

As seen in the first photograph, this is a projection microscope. The image is projected from the objective to a first-surface mirror to another first-surface mirror which is then reflected to a ground-glass viewer.



The electronics of the illuminator are fairly basic. In my restoration I replaced the tungsten bulb with a 28,000mcd white LED. I burnished the oxidation from the battery contacts with a Dremel electric motor tool.



On the right side there is a corrugated cardboard shim to insulate the contacts of the D-battery holder from the chassis of the microscope. Interestingly, the cardboard was scrap from a Japanese battery package for D-cells.

The turret for the objectives has two positions, selected by a lever. Above the objectives is a focusing dial.



The objectives are rotated with a lever.
Just below the stage and above the lamp is a symmetrical double-convex lens which serves as a condenser.



The "50X 30X" magnifications labeled on the microscope apparently refer to the final size of the projected image. Here are two samples of a Cat Flea produced by the microscope.

30X



50X



Michael Reese Much can be contacted at Amoeba1@rcn.com

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