

**Slide maker “WLS”**  
**probably William Low Sarjeant, 1851-ca. 1930**  
by Brian Stevenson, Kentucky, USA

Slides from this maker bear rectangular labels with hand-drawn grids, handwritten specimen descriptions, and the initials “W.L.S.” (Figure 1). The amateurish nature of these labels suggests that the maker was not a big-time professional mounter. Almost all of them also carry a retail label from Stanley, Railway Approach, London Bridge. I have not seen any WLS slides that carry a retailer’s label from anyone beside Stanley – if any readers know of such a slide, please contact me with information.

The most likely candidate for having been slide-maker WLS is William Low Sarjeant, who lived in the London area and produced microscope slides from 1873 onward. Moreover, he is known to have had a business relationship with W.F. Stanley.



**Figure 1.** Examples of microscope slides bearing the initials “W.L.S.”. Another slide by this maker is illustrated in Bracegirdle’s *‘Microscopical Mounts and Mounters’*, plate 34, slide D. Almost all known slides by this maker also carry trade labels from William F. Stanley. It is possible that slides such as that shown on the right originally bore a trade label, which was removed by an owner. Alternatively, they may have been acquired directly from the maker.

William Low Sarjeant was born in January, 1851, in Bethnal Green (now part of London). William’s father, whose name is currently not known, was a “*commercial traveler*” (traveling salesman). He was not at home on the day of the 1851 census. The household consisted of William’s mother, Mary, a one year-old sister (also named Mary), a 17 year-old servant girl and a 12 year old “*nurse*” (possibly William’s wet-nurse). The employment of two servants suggests that the Sarjeants were moderately well-off.

William grew up to be a scientist / engineer. The 1881 census recorded his occupation as “*Scientific Experimentalist*”, and the 1891 census listed him as a “*Civil Engineer*”.

Sarjeant developed interests in numerous aspects of biology. In 1873, he wrote brief notes to *Hardwicke’s Science-Gossip* on the self-heal plant, *Prunella vulgaris*, and the goat moth, *Cossus ligniperda*. The following year, Sarjeant advertised in the same magazine for butterfly specimens in exchange for microscope slides (Figure 2). At that time, his address was 6 Dagnall Park Terrace, Selhurst, Surrey.

**A** WANTED, Larvæ of *P. cratægi*, *C. Duvus*, *E. Medea*, *L. Sibylla*, *A. Iris*, and ova of any hairstreak except *Quercus*, for Microscopic Slides, or other Lepidoptera.—W. L. Sarjeant, 6, Dagnall Park Terrace, Selhurst, Surrey.

**B** A FEW specimens of *Synapta* and *Chirodota violacca*, or other good micro material wanted in exchange for well-mounted objects, &c.—W. L. S., 6, Dagnall Park Terrace, Selhurst, S. E.

**C** WELL-MOUNTED specimens of young of Swan Mussel (*polariscope*), Spicula of *Gorgonia* and *Alcyonium*, in exchange for other good Slides or material.—Wm. Low Sarjeant, 6, Dagnall Park-terrace, Selhurst, S. E.

**Figure 2.** Exchange advertisements from William Low Sarjeant, appearing in *Hardwicke's Science-Gossip* in 1874 (**A**) and 1877 (**B and C**). Note that he used his initials for the exchange offer shown in panel B.

Sarjeant joined the Croydon Microscopical and Natural History Club on September 19, 1877. He displayed a “*new and very ingenious section cutting machine*” which he had invented, at the December 18, 1878 meeting of the club. At that time, he lived at Andaman Villa, Portland Road, South Norwood, S.E. The club’s “*Proceedings*” recorded numerous exhibits by Sarjeant over the years. During his early years with the club, many of these were objects for the microscope, some or all of which may have been his own preparations. These included “*diatoms from Peruvian guano*”, “*radial section of pine, polarized*” and “*horizontal section of human foot (foetal); vertical section of scalp*” (all during 1879), “*quill of porcupine stained, skeleton larva under polarised light*” (during 1880), and “*dredgings, Mid-Pacific, 2425 fathoms (H.M.S. 'Challenger')*” (during 1890).

At the time of the 1881 census, Sarjeant lodged with a widow at 11 Wallston Road, Croydon, Surrey.

From the early 1880s onward, Sarjeant exhibited a strong interest in photography. For the December 12, 1883 meeting of the Croydon Microscopical and Natural History Club, “*Mr. Low Sarjeant .. read a paper, entitled 'The Photography of Microscopic Objects, and Lantern Transparencies'. Mr. Low Sarjeant practically illustrated his paper by taking Photographs of Microscopic Objects which were afterwards shown by means of a magic lantern upon a screen. .. The following objects were exhibited: .. Mr. Low-Sarjeant, Apparatus for MicroPhotography, in illustration of his paper*”. Sarjeant was an active member of the club’s Photographic Sub-committee.

On April 2, 1886, William F. Stanley and W.L. Sarjeant were issued patent number 4624 for a new form of actinometer. A surviving example of their device is shown in Figure 3. This early exposure meter was useful for determining exposure time when taking a photograph. The circular brass box holds a roll of light sensitive paper (having been soaked in bromide salt). A short length of the paper would be pulled out and exposed to light. The paper then darkened, and its tint was compared with a reference.



**Figure 3.** An actinometer produced by Stanley, from the design patented by Stanley and Sarjeant. It is roughly the size of a pocket watch, and was intended to be similarly worn on a chain.

By 1886, Sarjeant was elected Honorable Secretary of the Croydon Microscopical and Natural History Club. He was noted in that post by the 1888 *Naturalists' Directory*, which also recorded his address as 7 Belgrave Road, South Norwood, London. The 1891 census reported him to have been a lodger at that house. In 1891, Sarjeant was elected to the Club’s Council.

William Low Sarjeant emigrated to New Zealand in 1895. The *Proceedings and Transactions of the Croydon Microscopical & Natural History Club* reported, “*former Hon. Secretary, Mr. Low Sarjeant, has unfortunately been obliged to leave England during the year on account of his health. Mr. Low Sarjeant was*

*an accomplished worker in the Photographic Section. As a mark of appreciation of his services a testimonial, consisting of a gun and accessories, was subscribed for by members of the Club, and presented to him on April 6th. Mr. Sarjeant was also, on March 20th, elected an honorary member of the Club, so that his connection with us is not entirely severed. I may add that Mr. Sarjeant has presented to the Club, a camera and stand and 273 lantern-slides".*

The 1905-06 New Zealand electoral rolls recorded Sarjeant working as a "machinist" in Kohukohu, Bay of Islands, Northland. The long-time bachelor had finally married, to Margaret Dennison. The couple were at the same location on the 1919 electoral rolls. The 1938 rolls note that Margaret was a widow, living in Te Mata, Raglan, Waikato. She was still alive in 1954, in Ohineway, Franklin.

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This and other illustrated essays on historical microscopists can also be read at the author's web site, <http://microscopist.net>

## **Resources**

Bracegirdle, Brian (1998) *Microscopical Mounts and Mounters*, Plate 34, page 173, Quekett Microscopical Club, London

*Early Photography* (accessed July, 2011) Picture of a Stanley-Sarjeant actinometer, [http://www.earlyphotography.co.uk/site/entry\\_E100.html](http://www.earlyphotography.co.uk/site/entry_E100.html) - E100

Encyclopedia of 19th century photography (accessed July, 2011) Actinometers and exposure measurement, <http://19th-century-photography.blogspot.com/2010/12/blog-post.html>

England census and birth records, accessed through ancestry.co.uk

*Hardwicke's Science-Gossip* (1874) Exchange offers, Vol. 10, page 48

*Hardwicke's Science-Gossip* (1875) Exchange offers, Vol. 11, page 284

*Hardwicke's Science-Gossip* (1877) Exchange offers, Vol. 13, pages 24 and 216

*Hardwicke's Science-Gossip* (1886) Note on Croydon Microscopical and Natural History Club, Vol. 22, page 42

*The Naturalists' Directory* (1888) Sarjeant, W. Low, page 256, S.E. Cassino, Boston, Mass.

New Zealand electoral rolls, accessed through ancestry.com.au

*Patents for Inventions* (1897) "4624. **Stanley, W. F., and Sarjeant, W. L., April 2. (1886), Actinometers.-The sensitive paper, which is prepared from a bromide salt (instead of the usual chlorine salt) is rolled round a pin in a small circular metal case and brought out through a slot in the case and through a box with a glass top fitted on the edge. The glass is partly covered with tinted paper, by which the exposure is estimated. The **actinometer** may be suspended from the watch chain". Her Majesty's Stationery Office, London**

*Proceedings and Transactions of the Croydon Microscopical & Natural History Club* (1878) Notes on meeting of Dec. 18 (page xii) and List of Members

*Proceedings and Transactions of the Croydon Microscopical & Natural History Club* (1879) Notes on specimens exhibited at meetings, pages xxv, xxviii, xxxi, xxxiii and xxxviii

*Proceedings and Transactions of the Croydon Microscopical & Natural History Club* (1880) Notes on specimens exhibited at meetings, pages xliv, xlv, xlvi, liv and lx

*Proceedings and Transactions of the Croydon Microscopical & Natural History Club* (1883) Notes on specimens exhibited at meetings, pages cxlv and clix

*Proceedings and Transactions of the Croydon Microscopical & Natural History Club* (1889) List of exhibitors of microscopes and objects of interest at twentieth Annual Soiree, November 20th, 1889, page cxx

*Proceedings and Transactions of the Croydon Microscopical & Natural History Club* (1890) Notes on specimens exhibited at meeting, page clviii, and report of the Photographic Sub-Committee, page cxlix

*Proceedings and Transactions of the Croydon Microscopical & Natural History Club* (1891) Officers for 1891, page 20

*Proceedings and Transactions of the Croydon Microscopical & Natural History Club* (1894) The President's address, pages liv-lv

Sarjeant, W.L. (1873) Self-heal, *Hardwicke's Science-Gossip*, Vol. 9, page 46

Sarjeant, W.L. (1873) Cossus, *Hardwicke's Science-Gossip*, Vol. 9, page 188

Sarjeant, William Low (1875) Sphinx convolvuli, *Hardwicke's Science-Gossip*, Vol. 11, page 278

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