Notes from the Oesper Collections

Stumping the Curator

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The Oesper Collections receive numerous phone calls and e-mails from people either seeking to identify various pieces of chemical apparatus in their possession or wishing to donate said items to the museum. When visiting the donor in order to pick up the items in question, I am often offered yet additional objects not mentioned in the initial conversation and it can be something of a challenge to identify them on site in order to reassure the donor that they are also of interest to the museum. Indeed, several years ago I recounted some of my early adventures in this regard (1).

More recently I received a phone call from Mary Cosgrove, widow of the late Stanley Cosgrove (figure 1) of the UC Department of Engineering. She was downsizing her apartment and had some items left by her late husband that she thought might be of interest to the museum. A graduate of Oxford University, Dr. Cosgrove had joined the faculty of the University of Cincinnati College of Engineering in 1962, where he taught organic and polymer chemistry until his retirement and also served as an Associate Dean.

Among the items offered were some old chemistry books and some glass-stoppered bottles and retorts that had been used as decoration. But the real challenge involved an unidentified apparatus made of copper that Dr. Cosgrove had converted into a lamp base. Mrs.

Figure 1. Dr. Stanley Cosgrove
(1926-2013)

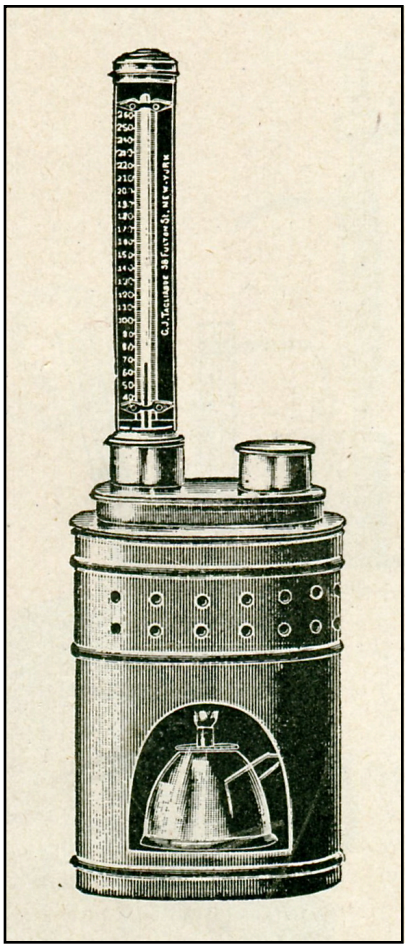

Figure 2. A Foster flashpoint apparatus as depicted in the 1913 catalog for The Denver Fire Clay Company (2).

Cosgrove told me that many family friends and visitors had examined the lamp but none could identify the piece of equipment that had been used to make it nor tell her if it could still be salvaged. On examining it, I was fairly certain that it was an apparatus used to determine the flashpoint of flammable liquids, and that any missing parts could be supplied from our extensive museum store room. I had never seen nor used a real flash point apparatus, but I had looked through enough older laboratory supply catalogs to know one when I saw it.

Once back at the museum, I removed the electrical cords, sockets, and rods used in making the lamp and quickly confirmed, using our extensive collection of laboratory supply catalogs (2), that what remained was a circa 1913 Foster flashpoint apparatus (figure 2) sans the thermometer and oil lamp, both of which we were able to supply using items from our store room. After repair of several holes that had been drilled to accommodate the electrical cords and support rods, the final result was a fairly acceptable example of this apparatus suitable for display purposes (figure 3).

The flash point of a flammable liquid is defined as the temperature at which its vapor pressure in air is sufficient to ignite on exposure to a small flame. A wide variety of apparatus was designed to measure this parameter, though they seldom gave values that agreed with one another so that it was always necessary to specify which type of apparatus was used to measure the values in question (3-5). This type of commercial testing apparatus was of most interest to industrial chemists and/or chemical engineers specializing in fuel chemistry and it is most likely that the example used by Dr. Cosgrove had been discarded by the School of Engineering rather than the UC Chemistry Department.

Figure 3. The restored 1913 Foster flashpoint apparatus.

References and Notes

1. W. B. Jensen, "Of Beehives and Babo Generators: The Adventures of a Museum Curator," *Bull. Hist. Chem.*, **1990**, *8*, 34-35.

2. *Assayers' and Chemists' Supplies*, Denver Fire Clay Company: Denver, CO, 1913, p. 24.

3. A. H. White, *Technical Gas and Fuel Analysis*, McGraw-Hill: New York, NY, 1913, p. 180.

4. A. F. Kunberger, Ed., *Gas Chemists Handbook*, American Gas Institute: New York, NY, 1916, pp. 48-52, 233.

5. S. W. Parr, *The Analysis of Fuel, Gas, Water and Lubricants*, McGraw-Hill: New York, NY, 1932, p. 331-333.