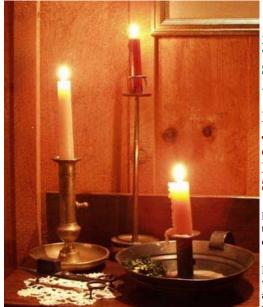
## Allison-Antrim Museum

Greencastle, PA

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Peking Man.

2003
Thursday, February 6, noon – 3 p.m.
Sunday, February 9, 1 – 4 p.m.
Appointments may be made by calling 717.597.9010

From the collections of Joseph Henson and Judge John Walker and from the collections and families of Hermione Brewer, Nan Conrad Flaherty, John Henson, Evelyn Pensinger, Nancy Rice, Bonnie Shockey, and Matilda "Tillie" Wine.

From the primitive to polished brass candlesticks, from buggy and barn to ship's lanterns, this exhibit will lead you back in time when the definition of candlepower had real meaning.

No one knows when, but fire was probably discovered by accident and was first used to meet man's primal needs of warmth, food preparation, and light. Archaeological research proved when clay hearths were unearthed that fire was used as far back as 350,000 years ago by the

Written records indicate that lamps with liquid fuel sources preceded candles of either tallow or wax. The various "vehicles" used to hold the fuel source or the candles were as great in number as the imaginations of those who needed and used the basic element of fire. The list of early accoutrements needed for lighting was endless – strikers, tinder boxes, wicks (from single strand to plaited), snuffers, fuels (animal, vegetable, tallow, wax, kerosene), candle stands, candle screens, hooks, molds, and grissets, to name but a few.



Candlelight did not have the romantic connotation hundreds of years ago that it has today. It was a daily necessity after sunset. The first fuels, whale and other animal fats, had a wretched smell and produced smoke as badly as tallow candles.

In most probability, the **tinder box** was a very early invention on the timeline of the history of fire. The tinder box evolved from boxes of dug-out wood to sheet iron, brass, and leather chukmuks. There were even pocket tinder boxes that could easily be carried on one's person while away from home. They were a necessity for ease of starting a fire that kept the strikers (steels), flints, and sulphur matches handy and tinder of shavings, amadou, or hemp dry.

**Sulphur matches** were used to transfer the fire from the tinder to light a spill. The tinder was then extinguished by smothering. A **spill** was a twist of paper or slip of wood that was used to light the hearth fire or candles.

The next generation of lighters was tinder pistols or "strike-a-lights" which were mechanical tinder lighting devices.

The early 1800's brought complicated contraptions that used chemicals such as hydrochloric acid, zinc, and hydrogen or sulphuric acid, potassium chlorate, sugar, and gum Arabic.

By 1827 in the U.S., **John Walker's 'friction lights'** made the tinder boxes obsolete. The 'friction lights' were the predecessors of today's matches. When pulled quickly from between a folded sheet of glass paper, the tip, coated with a gummed mixture of chlorate and antimony sulphide, ignited into flame.

The first reliable mention of a candle was made in the first century A.D. by Pliny the Younger. **Candles** from the beginning of their existence were either made of tallow or wax. Tallow and beeswax candles were important sources of light for the Romans who introduced the dipped candle, rolled and bleached wax candles, and their style of socket candlesticks to **Britain**. Before this, rushlights were used to light the British homes and in northern Scotland people used the candle-fir. Candles were either dipped or molded. Beeswax could also be rolled around a wick. In the seventeenth century, colonists in America discovered that a pleasant berry scented wax was produced by boiling the berries of the bayberry tree.

**Rushlights** were made from the soft rush and common rush plants. The stalks or stems were gathered, soaked, and then the outside "skin" peeled away revealing the inner rib. After drying the pith, it was then soaked in melted animal fat or fish oil in preparation for burning. **Rushnips** were the vessels that held the soaked rush wicks.

Tallow was used by the cottager because of its easy availability and cheap cost. The more affluent used beeswax candles which were superior in burning compared to tallow but also more expensive.

Candles were sometimes used to tell time. Uniform candles of weight and size were "banded" at equal intervals indicating the passing of one hour per band.

Early wicks were strands of peeled Scarpas, a rush-like plant, or two rolled pieces of papyrus soaked with sulphur. Later, in the eighteenth century twisted cotton strands and then plaited cotton wicks were used. The Frenchman Cambaceres discovered that

the plaited wick, as compared to the twisted wick, burned most similarly to the peeled rush wick. When lit, the plaited wick curled over into the outer mantel of the flame where it was consumed, thereby self-trimming itself which caused less smoke. The single plaited wick was the easiest to use for molded candles. Plaited cotton wick could be purchased by the yard by the mideighteenth century.

Candle molds were made of rolled sheet metal, copper, and pewter. In the sixteenth and seventeenth centuries molds were polished hardwood "clamp" types.

To snuff a candle means to trim the wick, not extinguish the flame. **Snuffers**, also known as wick trimmers and candle shearers, appeared in the late fifteenth century out of the need to trim the wicks of twisted cotton strands. The twisted wicks did not burn off and produced a large, smoking flame if not trimmed periodically.

Snuffers look like a pair of scissors but only open beginning at the snuff box. The point on the snuffers was used to straighten the wick before trimming it. Early (sixteenth century) snuffers were made of iron. Brass, bronze, and polished steel were used from the early to mid-eighteenth century. The design of the snuff box varied by time period. The first was heart shaped, then a semi-circle evolving to a fence blade, and variations of the rectangular box. The boxes were decorated and the handles were fancy. One of the last improvements to the snuffer was the addition of a spring which kept the blades in alignment and ensured that the glowing snuff would be safely kept inside the box once it was trimmed.

**Dousing cones** were used to extinguish burning candles.

Candle boxes were placed conveniently in the house. They were both free standing and hung on the walls. They were made of wood, brass, sheet iron, and tin. Every home would have had some kind of a candle box.

Brass or bronze metals were the materials from which **candlesticks** were made for the affluent segment of the population. Wrought iron and tin were the metals used for the cotttagers's accoutrements along with a cheaper brass ('kitchen' quality) in the late 18<sup>th</sup> century.



There are two kinds of candlesticks, the pricket and the socket type, both probably invented about the same time. The **pricket candlestick** is a simple spike on which the candle is impaled for support. Wrought iron, cast brass or bronze (for ecclesiastical and affluent use), and some copper was used to make pricket candlesticks. The pricket candlestick was eventually overshadowed by the popularity of the socket candlestick. There is one example of the pricket candlestick in the exhibit.

There are an enormous number of designs of **socket candlesticks** that evolved through the centuries. Bronze and then brass were the first two metals used for casting candlesticks and, of course, silver was the most elegant. Design details (knobs, drip pans, bases, shapes) changed from decade to decade. Improvements and methods of construction made use of the everyday candlestick easier. The aforementioned changes were greatly influenced by trade between countries. In the early eighteenth century the slide ejector was invented. It allowed the height of the candle to be adjusted and made it easier to eject the candle nub from the candlestick. About 1730-1740 the through pusher ejector was devised. The moveable rod ran the length of the stem ending with a button or nut screwed or riveted to the end of the rod on the underside of the base.

In the socio-economic average British household of the day, the lighting would have been provided by rushlights, and/or tallow candles in wrought iron candleholders or maybe the cheaper brass candlestick with a slide ejector.

**Chambersticks** were specifically used to light the way to one's bedroom each night. The bedroom was called the chamber in the distant past, ergo the name chamberstick. Some references place the first use of chambersticks to the late seventeenth or early eighteenth centuries.

**Lamps** preceded the candle as a light source. Liquid fuels of whale oil, cod liver oil, and animal fats were used. Camphene refined from turpentine and kerosene (paraffin) entered in the mid-nineteenth century and quickly overtook the fish and animal based fuels in popularity.

The **candle lantern** is another Roman invention. Candle lanterns were portable light sources that could be used outside the home. The surrounding "wall" protected the flame from drafts and wind.

The **liquid fuel burning lantern** is a combination of the oil lamp and candle lantern. The lamp vessel is surrounded by glass to protect the flame from being blown out and also enhances the brightness of the flame. Lamp wicks are considerably bigger than candle wicks and thereby provide more light.

American Indians used the friction method of starting fires and vegetable matter was probably used as tinder. The striking of pyrites was probably also used by the Indians. The Indians used the camp fire as their light source utilizing the turpentine and resin-rich fir logs and pine knots to increase the brightness of the fire. Bundles of tied fir splints were used when moving from place to place at night.



The **first settlers to come to America** would have had only the most basic implements needed for light – the tinder box, candlestick, and lantern. The candle, fat lamp, rushlight, and candle-fir (candlewood) were the four forms most often used by early Americans after 1725 to provide light for their households. Voyagers on the Mayflower were encouraged to: "Bring cotton yarn for your lamps." Outside lighting was produced by bundles of candlewood bound in torch fashion. Inside, splints were burned in the fireplace and single splints were wedged between the hearthstones. From the book <u>Fire and Light</u>, "...a Mr. Francis Higginson left us a brief contemporary comment on candlewood: "Clear as a torch producing much fuliginous smoak, and dripping a pitchy kind of substance around the hearth." In 1789, Rev. Nathan Perkins of Hartford writes about his trip through Vermont and the lodging "accommodations", "Was almost starved because I could not eat ye coarse fare provided for me, no candles, pine splinters used in lieu of them, bed poor and full of fleas."

The low numbers of livestock in America even by 1650 made it necessary to import raw tallow and ready made candles at a high price. Although the colonists discovered bayberry wax, the process was lengthy and more expensive than the tallow candle. Bear and deer fat and fish oil, especially along the coast, provided the fuel sources for lamps. The lower economic settlers probably brought with them wrought iron candlesticks and rushlights. The more affluent brought or imported brass, bronze, or silver candlesticks.



In America the **betty lamp**, of German, Austrian, or Hungarian origin, was made and sold in Pennsylvania well into the mid-nineteenth century. The betty (thought be derived from the German word besser which means better) along with the **hog scraper candlestick** (named after its similarity to the hog scraper butchering implement) were the most popular forms for lighting. The betty lamp made of sheet iron had either a hinged or sliding cover with a spout in which a wick rested. The Americanization of the betty was in the invention of a stand (often wooden) from which betty lamps hung.

 $Sources: \ \underline{Fire\ and\ Light\ in\ the\ Home\ pre-1820}, John\ Caspall,\ Antique\ Collectors'\ Club\ Ltd.,\ England,\ 1995$ 



Ship, Barn & Buggy Lanterns





Sconces, copper, glass reflectors



Candlestick, crystals with cut glass crystals



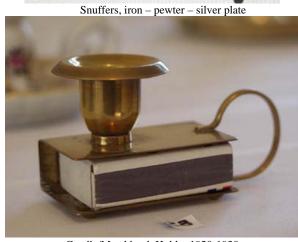


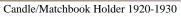


















Candlestick, iron with slide ejector candle release. 1800's