I. Ancient Times

Spruce Tree House cliff dwelling at Mesa Verde
Ref: www.solcomhouse.com

Map of Priene, Ancient Greece
Archimedes credited with saving Syracuse (Sicily) from a Roman siege with burning mirrors in 213 B.C.

A large Roman window facing south to collect solar heat.
II. Renaissance to 1700s

da Vinci drawings suggesting knowledge of solar optics, parabolic reflectors

Dello Specchio da Fuoco:

A Renaissance drawing of a concave mirror focusing the sun's heat.

“Burning Mirror” used by scientists in 1500s and 1600s
Salomon de Caux (Caus) (1576–1626) was a French engineer and physicist with an English education. He is renowned for his exposition *Les Raisons des Forces Mouvantes avec Diverses Machines* (1615), in which he describes some of the basic principles of the steam engine. De Caux also constructed one of the first solar devices: a solar engine. His device was made of glass lenses, a supporting frame, and an airtight metal vessel containing water and air. When the air is heated during operation, a small water fountain is produced. (Ref: Encyclopedia of Earth)

Horace Benedict de Saussure
1740-1799

Cross-section of Langley's hot box, which was similar to de Saussure's later models. A thermometer penetrating the walls at right was used to measure the air temperature inside the inner box.
III. Solar Thermal Power

Augustin Mochot, Professor of Mathematics, 1860
"Eventually industry will no longer find in Europe the resources to satisfy its prodigious expansion... Coal will undoubtedly be used up. What will industry do then?"

6 August 1882: The operation of a solar-powered printing press, which produced copies of Le Chaleur Solaire by Augustin Mouchot, a newspaper that he created especially for the event. The press rattled off 500 copies an hour. The experiment was conducted in the Garden of Tuileries, Paris, for the festival of L'Union Francaises de la Jeunesse.
An undated illustration (circa 1870) of Captain John Ericsson's new solar engine, which used concave mirrors to gather sun radiation strong enough to run an engine.

Frank Shuman’s Solar Engine, 1907
The Utilization of the Sun's Energy

It has been given to meteorologists to measure the heat generated by the sun and calculate the force emanating from it. We know that the surface of our luminary gives out a heat estimated to be about 6,000 centigrade, and that its light equals that of 27,000,000,000 candlespower a quarter of a mile away. The heat which the

earth receives from the sun in the course of a year would suffice to melt a belt of ice about 53 yards in thickness extending clear around the earth. Only the 375-millionth part of the total energy given off by the sun reaches our earth, but, if this

A Successful 100 H.P. Sun Power Plant Located at Meadi, on the Nile, Egypt.

Shuman’s parabolic trough power plant, Egypt