

Some Early History of Photography

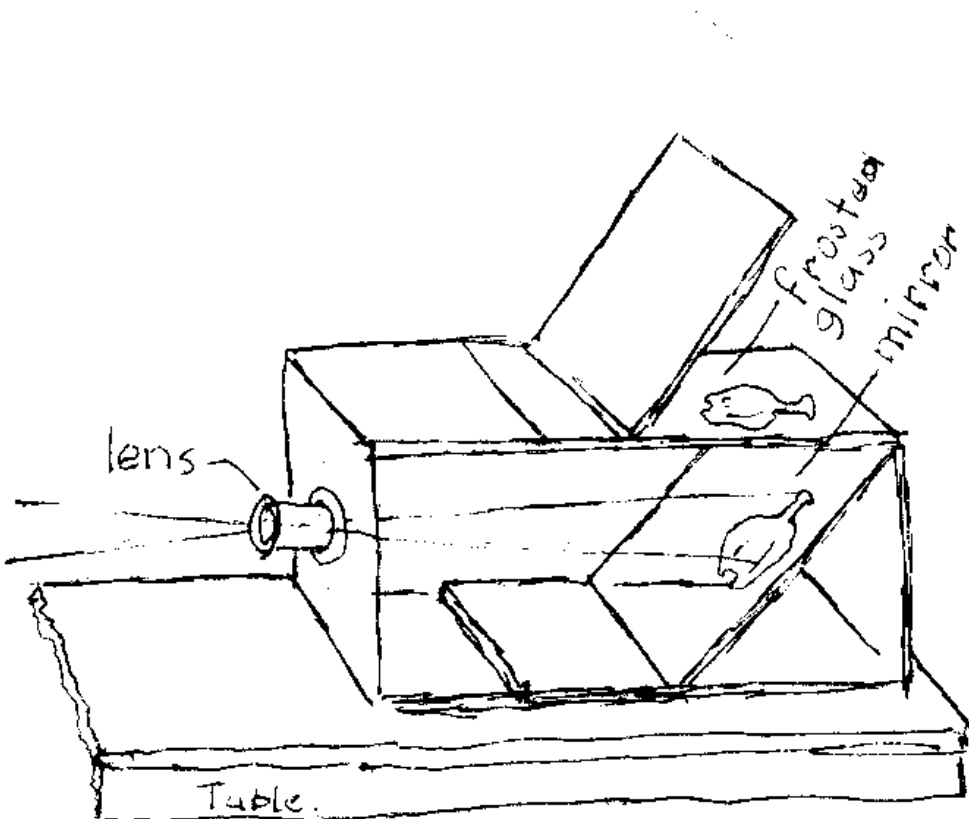
By Dick Hazelton

Do you ever wonder how your photo hobby got started? It had its beginnings a long, long time ago in a place far, far away, and at least as early as the fifth century B.C. A Chinese philosopher named Mo-Ti observed that light entering a dark room through a pinhole in one wall cast an inverted image onto the far wall. Later, the same phenomenon was observed by Aristotle, an Egyptian scholar named Abu ibn al-Haithan (or Hassan ibn Hassan), who is credited with the discovery in the tenth century, plus Leonardo Da Vinci, and others. As you might suspect, Da Vinci made drawings and explained how the phenomenon worked.

The astronomer, Johannes Kepler named the phenomenon camera obscura, Latin for dark room. Italian artists began using a camera obscura for their drawings and paintings in the 14-1500s. For an artist to make portraits, subjects would sit outside the dark room while the artist would be in it drawing on a paper where the faint, inverted image would be cast. Later the artist would paint over the image outline.

A scientist, Professor Philip Steadman in England, discovered that the great Dutch artist Johannes Vermeer used the camera obscura as an aid for making many of his paintings; one in particular is "The Music Lesson." It is also thought that he used lenses for brightness and better clarity.

Artists needed flexibility, something portable. Portable, enclosed chairs (sedan chairs) and tents were arranged to become camera obscuras so that artists could go to sites to make landscape paintings and the like. Obviously, although flexibility was acquired, artists found that the enclosed chairs and tents were cumbersome and something better was still needed. During the 1600s a German described a small, sliding box camera obscura. The image was cast inverted on a ground or frosted glass in the back of the box, much like that of today's view cameras. Another German improved the device by placing a mirror at a 45 degree angle to the back of the box to reflect incoming light upwards to a horizontal ground glass drawing surface. The reflected image was placed upright for the artist. With either arrangement a dark cloth was probably used by the artist as is used by view camera photographers. A rough sketch of such a camera obscura is shown below.



Camera Obscura

The latter arrangement is very similar to that used in reflex film cameras of the early to late 1900s. The photograph below shows a Navy photographer in 1945 with a Graflex camera.



The 4 x 5 in. Graflex has a lens, a bellows for moving the lens for focusing (it serves the same purpose as the sliding box of the camera obscura), a mirror placed at 45 degrees, a ground glass for viewing the reflected image, and a hood to prevent extraneous light from affecting the image. As you can realize, all of this is much like that of the camera obscura described above. The Graflex, however, is equipped with a focal plane shutter and cut film holders. When the shutter is released the mirror flips up (and stays up—a big disadvantage), and light from the subject strikes the film in the back of the camera. Early medium-format Hasselblads are similarly equipped, but, of course, were much improved.

Your 35mm single lens reflex (SLR) has similar features but still much more refined, especially with the addition of the penta-prism. Now you know a little bit more about the historical development of features of cameras.