How the Modern Mirror Has Developed Through the Ages

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MIRRORS ARE older than man — they even go back to mythology, for Narcissus bending over his pool was one of the earliest mirror gazers. If not Narcissus, surely some human being, early in the development of the human race, first saw his reflection in a pool of water and sought some means of producing a portable reflector in which he might see himself at will for the fascination of looking at ones own reflection is an instinct, dependent not upon race, sex or age.

There is little doubt that the first reflecting surfaces were developed by men of the stone age by polishing granite, obsidian and similar materials. As man developed methods of producing metals from ores, and in reasonably flat sheets, he must have early undertaken to polish these surfaces and produce much more satisfactory mirrors than those previously available. In later days, as metal workers became more skilled, these metallic mirrors became magnificent pieces of art, reaching great heights during the reign of Cleopatra. Unfortunately, the only mirror which could be depended upon to maintain its beauty of reflection was the gold mirror, naturally difficult to obtain and very expensive. Silver mirrors were satisfactory except that repolishing of the surfaces always produced scratching which in time impaired their usefulness. Steel and copper were subject to this same destruction of surface, and also broke down rapidly through oxidation.

Mirrors of glass were introduced some time later, but for a long time were inferior to metal mirrors due to the difficulty of casting glass with a true surface. In fact it was not until polished plate glass was made that really satisfactory mirrors of glass were possible, mirrors which gave back true and undistorted images.

For many years mirrors were made by applying thin metallic films or foil to the back of polished glass. About 1668, a tin amalgam as a mirror backing was a further development. These methods brought glass mirrors into more general use, in spite of several disadvantages caused by the shrinkage of the mercury used in making the amalgam. Cracks and crazing of the film occurred frequently and early, and exposure to sunlight was sure to destroy them. It was not until about 1865 that the chemist Le Blanc found a method of precipitating metallic silver against a glass surface which gave a mirror with the reflecting value of pure silver and is the method still used today. This basic layer of silver is covered first by a coat of shellac, then one of paint as protection against exposure. As additional protection and for use in very damp rooms or climates, an added layer of electro-copper plating over the silver effectively seals the back of the mirror and indefinitely defers deterioration.

Different chemicals for mirror backing are also used to produce different color effects. Gun-metal mirrors are backed with lead sulphide, while gold and other shades of mirror are produced with other types of backing. Flesh-tint, blue and pale green mirrors are made from glass which is of those respective colors. Water-white glass fashions the crystallex mirror, so-called because of its pure and accurate reflection of colors ,and especially adapted for make-up or dressing table use.

The so-called X-ray or transparent mirror has aroused considerable curiosity on the part of the public. Apparently an ordinary mirror on one side, it can be seen through from the other. The explanation is relatively simple. They are made by depositing a very thin layer of metallic silver upon a piece of glass. Such films may be made so thin as to transmit considerably more than 10% of the light so that they are partially transparent when viewed from the darker side of the glass. The transmission of light is so small, however, that the reflections from objects on the darker side of the glass are not sufficiently intense to again penetrate the glass and produce a sensible image on the retina of the eye, hence a mirrored reflection. This means, of course, that in use, the side toward the more intense light is the mirror side.

New uses for mirrors are on all sides creating great interest. Scarcely a new shop or restaurant is being built that does not include wide areas of mirror as an important feature of the decorative scheme. Architects and decorators are stressing their importance for home use. Whole or partial walls of mirror are used to double the size of small rooms. Mirrors are being installed to bring light to dark corners and to repeat decorative motifs. Entire doors which would make an unsightly break in a wall are camouflaged with mirror. Table tops, book shelves, over-mantels and screens are but a few of the many places where mirrors are finding wide use in the home.

The Mirror Maker

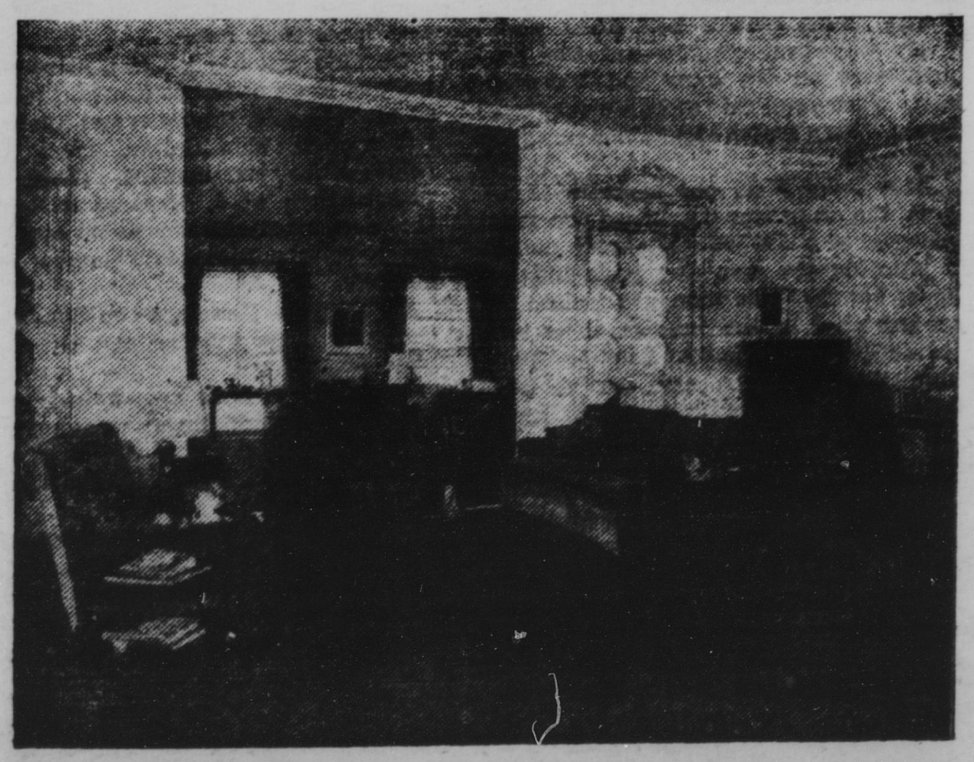
The Mirrorer as he is quaintly called is shown in this woodcut of Hans Sachsen (1568). Taken from a contemporary book describing all professions and trades. A poem describes his activities:

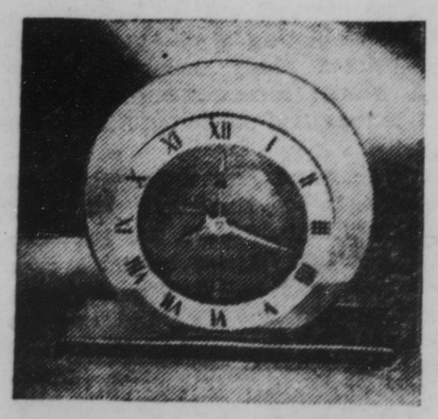
I make the bright mirror glass
And back it up with lead
Turning then the wooden frame
To which the disc will pass
Then painting it with colors free
Fine mirrors I produce
In which, truly and clear,
Your face, you undistorted see.

Narcissus, gazing into a still pool, discovered the first mirror.

The mirror is an indispensable part of the theatre . . . but this girl at New York's Paradise Restaurant also keeps a mirror-backed thermometer on her dressing table.

Mirrors are used in homes to create an appearance of spaciousness. They have become an important element in interior decoration.





Among the many uses of mirrors today is the use here shown. This new electric clock has a mirror background.