

Space for Art and Industry

Collected work of Matthew Lewandowski



Saturday, January 28 - March 15, 2012

Space for Art and Industry is pleased to announce our second exhibition: *Collected work of Matthew Lewandowski*. The exhibition will open Saturday, January 28 and run through March 15th. Space for Art and Industry is located at Building 92 in the Brooklyn Navy Yard. The public entrance is on Flushing Ave. at Carlton Ave. We are open 12-6pm Thurs-Saturday.

Matthew Lewandowski (b. 1932 Warsaw, d. 2011 New York) was a tool and die maker based in Brooklyn who specialized in the production of steel dies (called *hubs*) used for the stamping of hollow-form earrings. Over his career, Lewandowski worked with a close knit group of designers and tool-makers to realize thousands of earring designs for the wholesale market. The hubs that he made during this time were unique dimensional engravings; at once original works and tools used for mass production.

Matthew began working in the jewelry industry in the early 1970's, before the digital revolution in manufacturing and when there was still a connection to production techniques developed during the Industrial Revolution. With the Industrial Revolution came the advent of machine tools, a family of devices for the forming, cutting and shaping of various materials; precisely and indefinitely, and it was out of this technology that metal stamping and the mass production of jewelry arose. The mass production of jewelry was an important development for two basic reasons.

First, it made high style design accessible to a class of people that would have been unable to afford expensive hand-wrought jewelry. (The manufacture of lower quality, mass produced jewelry would

later evolve into the costume jewelry trend that exploded in the early 20th century.) Secondly, the ease with which designs could be translated into tooling for manufacture lent itself to the appropriation of images taken directly from popular culture. This newly developed manufacturing process had a democratizing effect, it brought high culture within reach of the average person and popular images into the purview of luxury goods.

This exhibit focuses on the work produced by Matthew Lewandowski over a thirty year period and features examples of hundreds of different hubs in a wide variety of styles. While each hub is readable on its own as a unique form, an introduction to the process of tool and die making employed by Lewandowski may shed light on the technical side of these objects.

The process begins with a design rendering on paper. The tool and die maker translates this sketch into a working drawing that describes the exact shape, profile and elevation of the piece. This working drawing is transferred to a block of steel, which is carved into a three-dimensional form of the design and details are engraved into the surface.

The steel block is then hardened; this is now the master model (called a *hub*). Next the hub is pushed into another steel block, using a strong hydraulic press. The negative image of the hub is called the die. With the die completed, the tool maker can push another block of steel into this form to produce a second master model (called a forcer), this one to be used in the production of the actual jewelry. The pair of working forcer and die is called a *die-set* and is sent to the manufacturer for use in production. The manufacturer places this tool and die-set in a mechanical press which reciprocates many times per minute, stamping the form out of continuous strips of precious metal. The original hub is kept by the tool and die maker in case the production tool needs to be replaced.

Matthew Tool and Die Co. produced die-sets in this same manner with one variation: they incorporated the use of an EDM (electric discharge machine) in the process. Hollow form jewelry differs from ordinary stamped jewelry in that rather than having simply a front side and a back side of a solid element (e.g. coins, pendants) hollow form jewelry is composed of two symmetrical shells which are then soldered together. True symmetry is essential to this process and is technically very challenging to achieve. An EDM machine uses a copper electrode to precisely cut into metal, and Lewandowski incorporated it into the fabrication of the hub. Using the EDM, Matthew was able to cut the completely symmetrical earring profiles in steel plate. The hub was then pushed through this steel plate, extruding a precise form ready for carving and engraving. This process ensured a tool that was capable of producing exactly matched pairs of finished stamped parts.

This exhibition draws together examples of designs, dies and ephemera produced by Matthew Lewandowski between the years 1980-2011. On four large tables, hundreds of steel dies ranging from Modernist abstractions and detailed animal forms to contemporary door-knocker style hoops and bangles are laid out in orderly rows. Along the wall are illustrations, working drawings and catalog pages describing the manufacturing process, from initial conception through the marketing of finished goods for wholesale. Across the room on a monitor, a video animation by Scott Gursky illustrates the process of hub and die manufacture. On the far wall is an array of the original boxes

that Lewandowski used to store and catalog the vast number of hubs; each box bears an image, or in some cases an actual example, of the finished earring. Samples of hubs in various stages of completion as well as complete tool sets, electrodes and copper intermediate dies are also on display.

Matthew Lewandowski was born in Warsaw in 1932 and grew up during the Second World War as a child soldier in the resistance. After the war he studied economics and was employed by the state setting up factories and manufacturing centers before emigrating to the U.S. in 1973. Like many new immigrants he took various jobs when first arriving in New York. One of these jobs was as a diamond setter at a factory in Manhattan, where he learned about jewelry manufacture solely through keen observation and practice. In 1980 he opened his own shop, Matthew Tool and Die Co. Joined by his son George, who engraved some of the hubs included in this exhibition and his daughter Barbara, Matthew produced die sets for the jewelry industry until his retirement in 2011 at the age of 79.

For more information: www.spaceforartandindustry.com