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number of missing parts. Missing components were replaced and in 1956 the artist's wife, Sibyl Moholy-Nagy, gave the object to the museum. Aluminium paint was applied to temporarily hide some of the corroding surfaces and conservator Jack Washeba succeeded in getting it to run 'for only a few minutes'. Still painted and unmoving, **Light Prop** was loaned in 1961 to several kinetic sculpture exhibitions in Europe. In 1966 Sibyl Moholy-Nagy, upset by the object's poor condition, asked to have it back. But, instead, restoration was discussed. The restoration by William Wainwright removed the paint, made the machine run, and, for better or worse, re-plated many components. Serious problems occurred during its subsequent operation at an exhibition in Eindhoven in 1966 and at MOMA in 1968.

The continuing difficulties in running the machine safely led to the decision in 1970 to have an engineering instructor, Woodie Flowers of MIT create two working replicas, now in Eindhoven and Berlin. Copyright permission for these replicas was obtained from Sibyl Moholy-Nagy. Flowers's work was assisted by the research of a Harvard graduate student, Nan Piene. Concerning the copies, Piene wrote: 'Given Moholy's prophecies about multiples and his ordering of enamel "paintings" over the telephone from a sign factory in 1922, as well as his devotion to the light machine and his regret that it was hardly appreciated in his lifetime, one can imagine that the artist would applaud the fact of the replicas.'

The new 2006 replica makes it possible for the art museums to run the device on a regular basis, providing the public a better understanding of the original, which is displayed nearby. The replica has been displayed with its own slightly darkened room where a repeated showing of the six-minute 1930 film of the original by Moholy-Nagy, **Light Play: Black, White, Gray**, was projected on a wall. Low, directional light illuminated the moving machinery, throwing reflections around the room and projecting moving shadows on one wall.

The replica was made by German engineer and fabricator, Juergen Steger. After careful study of Moholy-Nagy's 1930 photographs, the 1930 film, and the original sculpture, Steger created a CAD file of the object. This made it easier to visualise components and their movement as he worked on the project in Germany, and to submit drawings for the fabrication of many components. The art museums received a copy of the CAD file along with the replica. Better support at the base made it possible for the Steger copy to eliminate the arching frame added to stabilise the original, and a glass spiral and wedge were fabricated to match the artist's 1930 design. The variety of surface finishes were also intended to match the original appearance rather than current, damaged and chromed finishes of the artwork. Several slight adjustments were made to help ensure better, more reliable operation. Notes on these variations and on general issues related to running and maintaining the replica were made by staff members when Mr Steger was in Cambridge. As they provide insight into some of the subtleties of design, operation and maintenance, they are appended to this document.

Light Prop **replica**

Notes from discussions with the fabricator Juergen Steger (JS) during his visit to HUAM to tune up the machine and repaint damaged paint surfaces, 5/8/07.

fixed to the central pole.

- A Plexi panel was substituted for cellulose acetate. JS found a source for acetate sheets in Switzerland, but it was too flimsy and did not appear different from the Plexi. He tried unsuccessfully to layer the acetate to make it stiffer.
- JS's platform was made in layers: two layers of aluminium core screwed together, 1 mm metal top and bottom, 2 cm ring of wood around the periphery. The original was wood and had slumped from the weight of the elements resting on it. JS was very proud of his platform design.

Cam hole

JS copied the shape of Flowers's adjusted cam hole for the flags in the lower platform. It is broader than the original and allows for a smooth rotation of the flags. The original hole had more acute angles which prevented the flags from following the contour of the hole and caused the flags to bind and stop the machine. Flowers corrected this shape and this facs

- Clutch will prevent the box from dropping.
- HDPE 2 rings inside box to slide up and down double helix. Spindel Gleitlager (?).
- Loctite adhesive was used on some screws to prevent loosening. They will yield with a little more torque when disassembly is needed. There are no 'left-handed' screws.

Glass rod

- The glass spiral was based on design (drawings?), not on photos or the art film. It was successfully made on the glass fabricator's fifth attempt in two parts, the spiral and the rod. The spiral was formed on a metal rod, removed, and attached to the glass rod at the top and bottom. Forming them together resulted in slumping of the assembly.
- JS thought the original glass spiral rod may have been a found object.
- Moholy-Nagy substituted a metal spiral rod after the glass one broke.
- We should consider having a spare glass spiral and wedge made in case of breakage.

Ball

- The ball is not painted black (like the original) for any particular reason.

Surfaces

- JS could not determine original surface colours. Archival pictures showed only differences in texture (e.g. polished vs. matte).
- All the surfaces that appear frosted are spray-painted. Nothing was be textured by sand-blasting. Some paint was damaged during the shipment from Europe and NYC. This visit included repainting the lower disk plane. The large perforated vertical disk was repainted prior to this visit.
- JS chose a single matte appearance with his choice of the grey paint: **Glasurit** brand **Seidenmatt Metallhaftfarbe Kunstharzbasis**. Colour: Metallic. Mfg: Akzo Nobel. www.color.de
- The large pierced and painted disk should be secured during transit.
- JS cleaned the chrome with Shellsol to remove 'halos' of tarnish. Mineral spirits can be used for chrome and painted surfaces.
- Touch-ups can be done with a brush.
- JS thinned grey paint (repairs) with Agateen thinner found in the lab. He repainted the damaged large disk with a spray gun.

Mechanical

The clutch is on the central rod just below the lower disk plane. It allows slippage in case the machine binds during movement. The top rqbi(J:5VHAVb (2qJJJp:p:pqApdun nMohouqbn(E5VA7jbh(E5VA7jqb-(RH5:7:qHbu(E5

from W. Flowers):

- **‘F’ = flags**
- **‘K’ or ‘B’ = ball**