

Diptych Dial

Inventory no. 41986

Diptych dial

Diptych sundial attributed to a Tucher family workshop in Nuremberg c.1600, made of ivory, gilt brass, silver and glass.



A diptych dial gains its name from the two hinged leaves which open like a book. When opened, a cord holding the top leaf of the dial in its upright position allows it to act simultaneously as the gnomon (the shadow-casting part of the dial). To use the dial to tell the time, it should be placed outside on a horizontal surface, and orientated so that the gnomon is pointing towards true north. This is done with the help of a compass which is embedded in the horizontal leaf within the main dial.

Once the dial has been arranged in the correct manner, the shadow of the gnomon, cast by the sun, falls onto the main horizontal dial indicating the local time. As the sun travels through the day, the shadow moves across the dial indicating the passing of time.



These types of dial were made in Nuremberg in the 16th-century by craftsmen from a small number of families who specialised in manufacturing these instruments. This one was probably made by the Tucher family. Made from ivory, these were intricately decorated and expensive personal timepieces generally afforded only by wealthy merchants or nobility.

These dials were often complex and had many additional features and accessories. Many of these were far from essential and merely catered for a growing market consumers looking to display their wealth and sophistication.

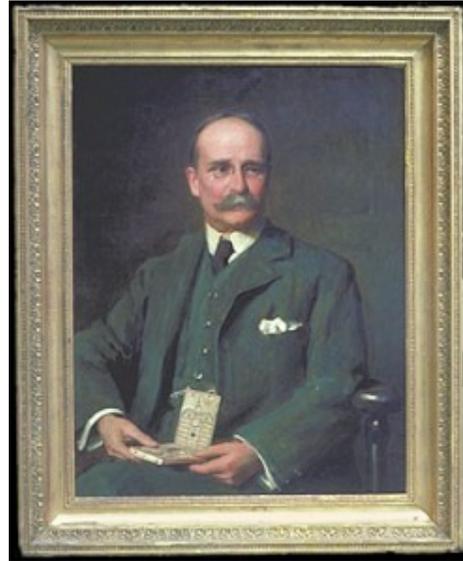
Like many of its type, this dial could be adapted for different latitudes, a useful feature for a travelling merchant. On the inside of the upper leaf is a table which shows the different latitudes of a number of European cities. By threading the gnomon through the appropriate hole on the upper leaf, the user could ensure that the gnomon is at the correct angle to

indicate the time at that latitude. This is necessary because the apparent height of the sun in the sky at any one time varies as you move to different latitudes.

On the inside of the lower leaf there are two other smaller dials with pin gnomons; these can be used to calculate alternative time systems based on systems of 'unequal hours' by which the time between sunrise and sunset on any day is divided into twelve hours. One of the dials indicates 'Italian' hours and the other, 'Nuremberg' hours.

The dial also has a wind rose on the outside of the upper leaf. The direction of the wind would be indicated by inserting a small wind vane when the dial was closed. A lunar volvelle on the underside allowed the user to calculate the time at night, by converting the shadow of the gnomon cast by moonlight to corresponding solar time.

This diptych dial was owned by Lewis Evans, an avid collector of scientific instruments in the late 19th-century who bequeathed one of the founding collections of the Museum. In the painting of Lewis Evans that hangs in the entrance gallery of the Museum you can see him holding the dial.



Portrait of Lewis Evans in the Museum