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Bifilar sundials with negative wires.

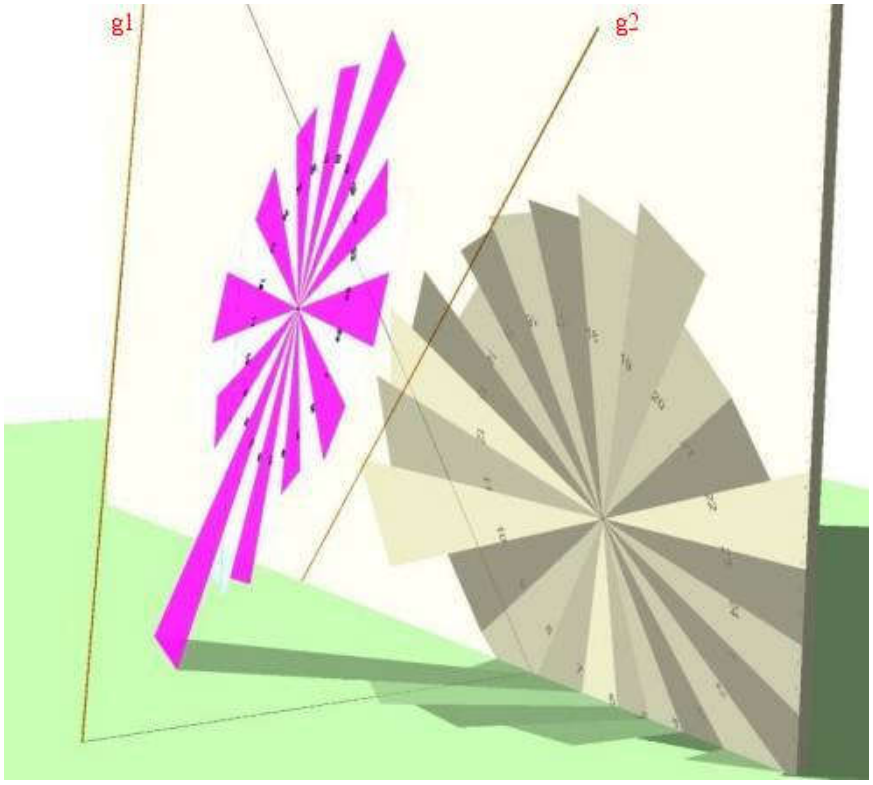
A short note concerning a new development in bifilar gnomonics, 2003.
Idea: Fabio Savian, Italy.

The horizontal bifilar sundial with two crossing wires as a shade device was invented in 1923, by Hugo Michnik of Germany.
The wires lie parallel to the sundial face but at different heights and are perpendicular to each other, the one wire running north-south, the other east-west.
The hour line pattern of the sundial is homogeneous; there are hour lines every 15°.

For a long time, it remained quiet around this new sundial, and not much was published about it until in 1978, our member Thijs de Vries discovered the concept and started working on it.
An entirely new idea of Thijs de Vries was to replace one of the wires by a bent wire.
Because of this it became possible to construct entirely different hour line patterns, and even to realise particular patterns, such as parallel hour lines or parallel date lines.

It also became clear that the wires do not necessarily have to be perpendicular to each other or parallel to the sundial face.
Meanwhile, many alternatives on this topic were invented, several sundials with or without bent wires were realised, and much was published in the gnomonics magazines and on Internet.

Nevertheless, all these alternatives still have one main point in common: both wires lie on the same side of the hour line pattern.
Here is where Fabio Savian brings a change.



Savian separates the hour line pattern from the reading surface and places the two wires in front of, behind, or on either side of the hour line pattern. He refers to this as "positive" and "negative" wires.
In his drafts the wires are always straight and parallel to the hour line surface, but the wires do not have to be at right angles.

On Internet, Fabio Savian has already made public some of his ideas developed in 2002. We show an example here.
The hour lines are formed by the edges of the triangles in a translucent plane. In front of this plane is the one wire, g1; a positive wire.
Behind the plane is the second wire, g2; a negative wire.
This second wire lies in a surface on which the sun projects the hour lines and the shade of the positive wire, and on which the time is read.
For this reason, Fabio Savian calls these sundials projection sundials.

Concerning the theory behind this alternative not much has yet been published. Fabio Savian is, however, working on a book, and Gnomonica Italiana will publish papers by Savian.
In the future, we hope to be able to report more concerning these bifilar gnomonics. Meanwhile, with this note we wanted already to inform you about the development.

Fer de Vries

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