

## Parallelepipedon

A presentation to Templum Lucis Lodge No. 747

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This presentation includes some of the research that found its way into an article accepted for publication in *Ars Quatuor Coronatorum* Vol 133 for 2020. Plus there is a bunch more information that is just for fun.

Every EA I've spoken with after his Initiation is overwhelmed. There are so many new ideas and actions presented in a short while. And as I ask is there a word you remember from your Initiation, there is an answer. Yes. Parallelepipedon!

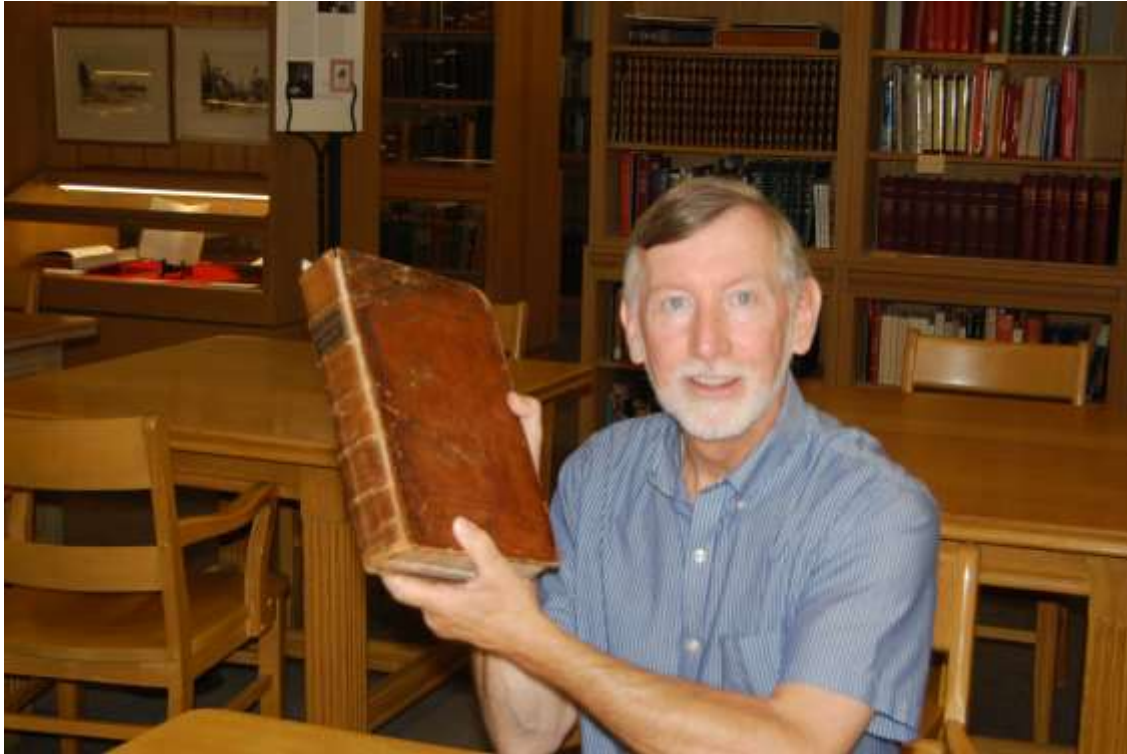
Early in my Masonic career I didn't know the meaning of parallelepipedon beyond that explained in the Ritual. Recall that it is the form of the Lodge. It extends from East to West, from North to South, and from the centre of the Earth to the heavens. That makes it clear doesn't it! I was told to see what might be available in the Sarnia District Masonic Library. And that wasn't really useful either. The four main encyclopedias of our Craft don't include the word parallelepipedon. But the Oxford English Dictionary did an online promotion a few years ago and gave a short time where I could research a few words. Parallelepipedon was one. And I learnt 2 important things:

*First*, I learnt that the word parallelepipedon entered our English language in 1570 in a book by Sir Henry Billingsly.

*Second*, I learnt that the book is the first translation into English of the works of Euclid.

So there is a contextual connection with our Fraternity. Euclid is the father of geometry. And we learn in our Ritual that geometry is synonymous with Freemasonry.

With a bit more searching I found that a few copies of that 1570 book exist. Here I am at McGill University holding a copy – that is a 550-year-old book.

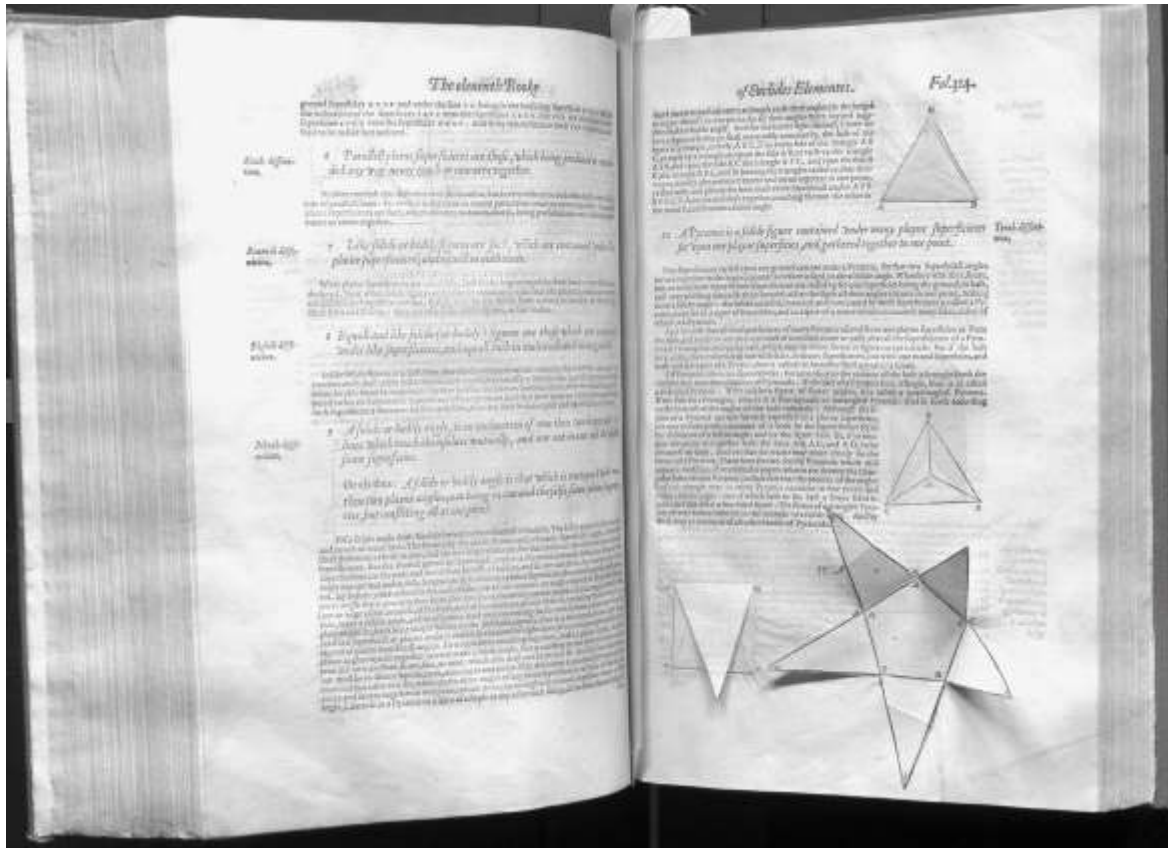


*Photo of Marshall Kern and an Euclid by Patricia Kern*

There is a copy of this book at the University of Toronto, and the University of Waterloo has a copy, plus older works of Euclid in Latin.

Don't get your hopes up about having a personal copy of that ancient book. In 2007 Christie's in New York sold at auction a copy in fair condition – it had wormholes, and water stains, and previous repairs. Still, someone bought it for US\$54,000.

Look – not only is this the first English translation of the works of Euclid, it is also an early pop-up book. This is an image of the copy at the University of Toronto (see below). Several dozen of the described shapes are presented with cut-out forms carefully pasted onto the page. So, in addition to the text, and the drawings, a student of Euclidean geometry could fold these pieces to create the shape.

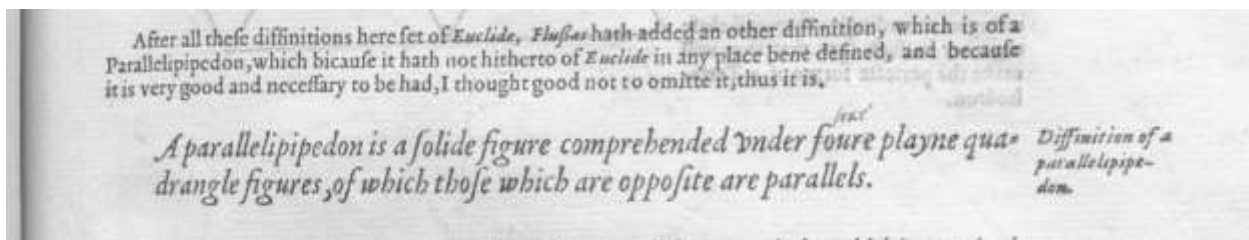


Scan of an Euclid at the Fisher Rare Book Room of University of Toronto by Marshall Kern

Not only is there the text, and the drawing, and the pop-up bits, but the book also has pages intended to be cut! For example, there is a page describing how to cut along some lines that can then be folded to create a parallelepipedon. No, I didn't do that.

The text compares the parallelepipedon to a cube. For comparison, in some Masonic rituals the form of the lodge is described as an "oblong square". That is essentially a 2-dimensional drawing of a rectangle.

And here it is -- the definition of a parallelepipedon (below). You can see that the word 'four' is crossed-out and the word six is written above it. This book has over five hundred pages. And there is a page at the end showing a list of errors. With the cost of publication, it is easier for the publisher to make a list of errors so the buyer can make the corrections, than to re-print the page correctly.



Scan of an Euclid at the Fisher Rare Book Room of University of Toronto by Marshall Kern

Thus, with the noted correction, the definition of a parallelepipedon is **A parallelipidon is a solid figure comprehended under 6 plain quadrangle figures, of which those which are opposite are parallels.**

Ahh, let's look at the paragraph at the top of this image. Sir Henry Billingsly says "after all these definitions here set of Euclid, Flussas hath added another definition which is Parallelipipedon, which because it hath not hitherto of Euclid in any place been defined, and it is very good and necessary to be had, I thought good not to omit it".

So the word parallelepipedon is not directly from Euclid. Nor is it from Sir Henry Billingsly. It comes to us from a French mathematician Franciscus Flussas Candalla, who lived from 1512 to 1594. Still, the word enters our language courtesy of the geometry of Euclid.

Thus in 2020 we celebrate the 550<sup>th</sup> anniversary of the word parallelepipedon!

Thank you for your attention.

Wor. Bro. Marshall Kern, FCF, Author

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