

## **The Masonic Aprons - Geometrical Foundations**

Patrick G. Bailey, VIII Degree \*

Golden State College S.R.I.C.F.

Los Altos, California

August 23, 2015

Have you ever wondered where the designs of our Masonic Aprons came from? The true answers are probably lost in antiquity, sometime in the 1600s or 1700s, in Scotland or Europe. However, we can imagine the steps that our ancient brethren may or would probably have taken to design the Entered Apprentice, Fellowcraft, Master Mason, and Past Master aprons.

Now today, we would all think that these aprons would look pretty much the same, as that is what we have learned in our experience, since the early 1900s. Most Masonic Lodges today probably have ordered their aprons from Masonic supply houses, which may have made up their own designs. Some Lodges may even be under the directorship of their Grand Lodge for the design of the aprons that they are to use. The Grand Lodge of California does not specify the geometrical design of the aprons that we use, so they seem to be all the same size and pure white, with the Past Master's apron having a blue fringe around the edges and the flap. But still, I ask, what was the original geometrical design?

And why is it that, when you stand in front of the main doors to the Grand Lodge of England, you are found standing on a very large gold pentagram buried in the concrete sidewalk? Where did that come from?

We are taught in the Masonic Degrees that we are to build our Masonic Superstructure in degrees, using horizontals, right angles, and perpendiculars. So, if we were to start our own Mystery School, and we were to assign a geometrical form to each degree, then we would probably choose for each increasing degree: (1) the square, (2) the triangle, and (3) the pentagon. We will now construct our Mystery School aprons for each degree from those shapes.

### **The First Degree - Entered Apprentice**

The EA is told in that degree to stand with his feet forming the angle of a square. He is admonished to use the square as one his first working tools. It then makes sense that the EA apron would be in the form of a square. What then we do about the flap? We just add another square, rotated, as the flap, turned up, thusly:

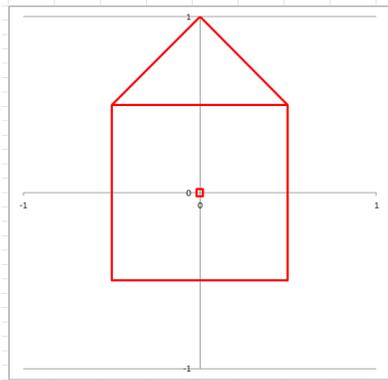


Figure 1. The EA Apron

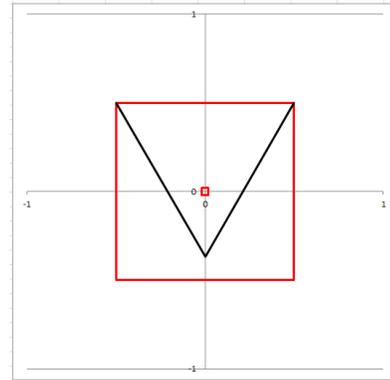


Figure 2. The FC Apron

The angle of the upward flap (to the horizontal) is then 45 degrees.

### The Second Degree – Fellowcraft

The FC is taught that Masonry is taught in degrees only, and that in his lecture there is a staircase of 3, 5, and 7 steps. The FC apron should be more complicated in form than the EA apron. Also, the FC apron must be easily distinguished from an EA apron whose flap may have fallen down. This is easily accomplished using an equilateral triangle whose flap is turned down, as shown above.

To our eyes, this looks like the down-turned flap is too long, and that it maybe should have a downward angle of only 30 degrees, instead of 60 degrees. I argue against that, because an EA apron whose flap has fallen down would look very similar to such a 30 degree FC apron. A 60 degree apron allows a much better unique design where no such mistake can be made.

### The Third Degree – Master

The Master has shown to him all the Light that he can receive at this time. It then makes sense that his apron would follow the logical sequence and be based on a 5-sided figure, the pentagon. Drawing a pentagon on the top of the square gives us the Master's apron, thusly:

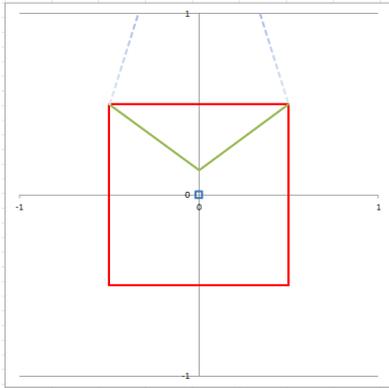


Figure 3. The MM Apron

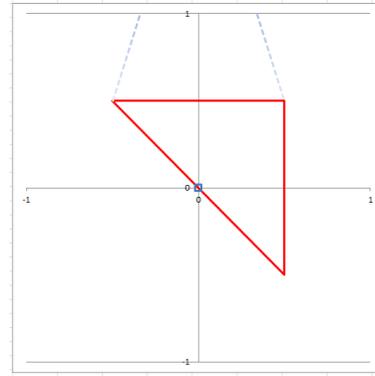


Figure 4. An Alternate MM Apron

The angle of the downward flap is now 36 degrees, very close to the suggest 30 degree FC apron flap that we did not choose above. So we see that all of these aprons are easily distinguished, whether the Master wore his flap differently or not. To provide an additional level of distinction, a MM apron could also be folded with one corner attached to the apron top.

#### The Past Master Degree and Apron – Past Master

In England, and in most of Europe, the PM Degree is given only to those Master Masons who have completed their service as Master of their Lodge, and they have successfully installed a successor. Many PMs know what educational process this can be! Sure... “It’s easy, don’t worry” they said. Right. So you actually learned many things during your time as Master of your Lodge. You learned that things may look simple on the surface, yet to solve a problem, a greater depth of knowledge is needed in order to obtain a perfect solution. That is the task of the Past Master – to learn to move toward being perfect.

This far we have been using a square to construct our Masonic Superstructure. What would be more perfect for this PM Degree? How about use of the simple figure that most mathematicians and physicists agree is the “perfect rectangle”: the “Golden Section,” otherwise known as “The Divine Proportion,” which is the foundation of “Sacred Geometry!” [1]

The “Golden Section” is that length  $x$  whose proportion is defined by:  $(x-1) = 1/x$ . This “Golden Ratio” of  $x:1$  shows up most simply in the pentagram, the perfect five-pointed star – the SECRET EMBLEM of many ancient metaphysical societies. Its value is simply:

$$x = [1 + \text{SQRT}(5)]/2 = 1.618034... = \text{phi}$$

which is given the mathematical name “phi”. So we see that:  $\phi - 1 = 1 / \phi$ ;  $\phi + 1 = \phi^2$ , and so on.

In a previous study, we have already seen that the use of this sacred parameter phi can be used to easily construct all of the symbols in the Masonic Degrees, and as well as all of the symbols in the York Rite. [2]

By creating an apron with this shape (phi by 1), and adding the flap at a downward angle of 36 degrees, we see that we have defined upon our apron an exact pentagram! The horizontal arm of the pentagram is exactly the same as the top edge of the apron, and the flap corresponds exactly to the intersecting arms of the star. What could be the significance of that?

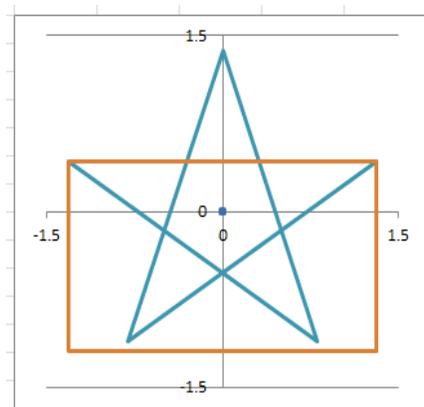


Figure 5. The PM Apron

### Human Dimensions

The internet gives us the dimensions of an average man that are used in most of the clothing industry, normalized to fractions so that the total height is 1. [3] I will not list all of the dimensions here. Instead, I will multiply all these dimensions by 72, to get the front view figure of a man 6 feet tall, thus having a waist of 13.752 inches across at a height of 38.160 inches above the floor.

### Wearing the Master Mason’s Apron

A good picture in relative dimensions of a man wearing the Master Mason apron above is shown below, where the width of the apron is set equal to this waist size. This appears differently than what most of us are used to seeing today.

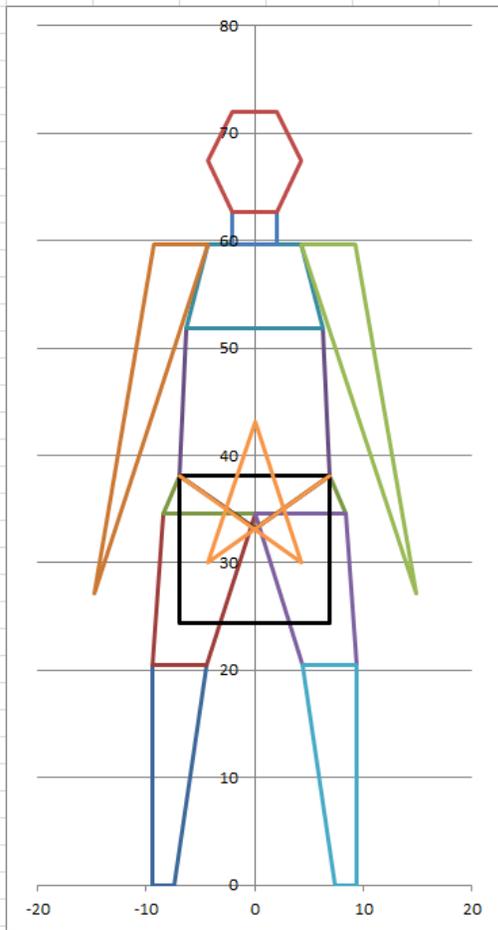


Figure 6. Wearing the MM Apron

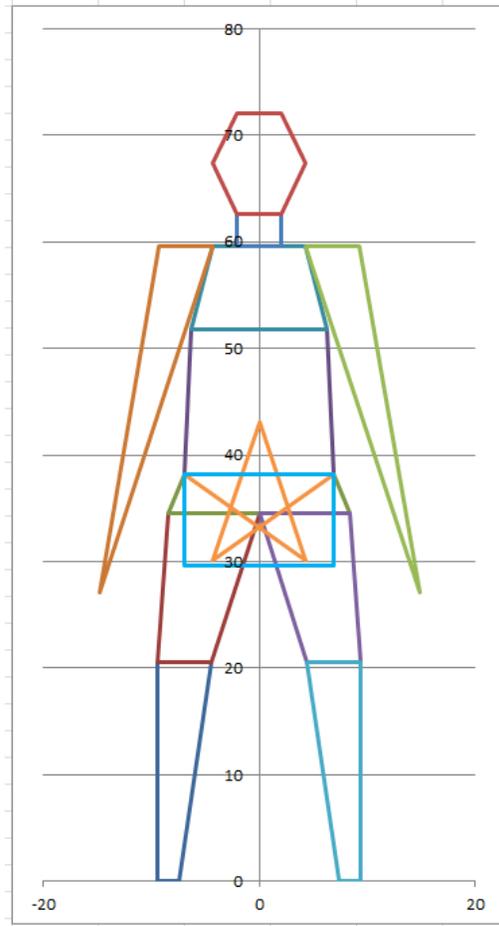


Figure 7. Wearing the PM Apron

### Wearing the Past Master Mason's Apron

A good picture in relative dimensions of a man wearing the Past Master's Mason apron in a similar manner is shown in comparison above. This looks more like what most of us are used to seeing today. It is more "pleasing." This is probably why the Masonic aprons we see today almost always have a width to height ratio of 1.6 or 8:5 (close to phi), or 1.5 or 3:2.

What significance can we apply to that pentagram star? We can see that by expanding the radiance from the star into the next level perfect star, as seen in Figure 8 below. Here I have added the next level star about the apron's inner star. We see that the outer star encompasses all of the vital points of man. The upper star point also exactly intersects the guttural perfect point of entrance. I have also included a "square" that exactly intersects the side points of this outer star. In addition, I have drawn four levels based on the geometry of that star, that divide man into the "five zones."



I can label those zones from the bottom up: Earth, Water, Air, Fire, and Ether (The Five Elements). [4] Note how these zones accurately describe the function of the body in those zones.

I can also include two zone lines to define locations to create the “seven chakras”! [5]

Now, note how the downward arms from the top of the outer star intersect with the square that intersects the outer star points. There lies the “Square and Compass”! Is it any wonder that when I visited the Grand Lodge of Scotland, that all of the compasses on display were all set at the angle of 36 degrees? The bottom of that square might be considered “The ‘Root’ of Freemasonry”!

Note also that the downward length of the apron also doesn’t really matter! What matters is the position of the star, with its horizontal arm lined up across your waist!

Wearing these aprons reminds you that you are seriously “seeking perfection” and that you are yearning for “higher knowledge.”

When you put on your apron you are radiating Light! YOU ARE A STAR! In your personal quest to become more perfect and a better man, you may well remember:  
“In this sign you shall conquer.”

## References

1. “The Divine Proportion – A Study in Mathematical Beauty,” H. E. Huntley, Dover Publications (paperback book, 186 pp.), 1970.
2. “A View of Masonic Sacred Geometry,” Golden State College SRICF Presentation, August 22, 2004, [http://www.padrak.com/paperfiles/bailey\\_082204\\_rev\\_1.pdf](http://www.padrak.com/paperfiles/bailey_082204_rev_1.pdf). Also published in Published in the SRICF Annual Review Ad Lucem 2007, pages 53-74.
3. Human Dimensions (Normalized to height 1), <https://search.yahoo.com/yhs/search?p=human+man+dimensions&ei=UTF-8&hspart=mozilla&hsimp=yhs-001>.
4. Five Elements, [https://en.wikipedia.org/wiki/Five\\_elements](https://en.wikipedia.org/wiki/Five_elements).
5. Introduction to the Chakras, <http://www.eclecticenergies.com/chakras/introduction.php>.

\* Patrick Bailey is the Secretary of Golden State College in northern California. He became a Mason in Los Altos Lodge in 1993, and has been very active in Masonry and York Rite Masonry. He was Master of that Lodge in 1999. In the York Rite bodies, he received the Knight York Cross of Honor in 2006, and the Knight Templar Cross of Honor in 2013. He can be reached at [pgbmason@sbcglobal.net](mailto:pgbmason@sbcglobal.net).