AN EXPLANATION OF THE PILLARS
(Based on the figures in Emulation workings)
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When the temple at Jerusalem was completed by King Solomon, its costliness and splendor became objects of admiration to the surrounding nations, and it's fame spread to the remotest parts of the then known world.

There was nothing however, in connection with this magnificent structure more remarkable, or more particularly struck the attention, than the two great pillars that were placed at the porchway or entrance. The height of those pillars were 17 ½ cubits each, their circumference 12 and the diameter 4, they were formed hollow, the better to serve as archives to Masonry for therin were deposited the constitutional rolls. Being formed hollow their outer rim or shell was 4 inches or a handsbreadth in thickness. They were made of molten brass, and cast in the plains of Jordan in the clay ground between Succoth and Zeredatha. These pillars were adorned with two chapiters, each 5 cubits high. They were further adorned with two spherical balls.

Even before I got into the chairs in Lodge, I was intrigued with the explanation of the second degree tracing board. Later on it was my duty to give this explanation on this board. After I had learned it and given it a few times, it still fascinated me.

     As my trade at the time was working with metal, I was quite curious as to the actual size and weight of those pillars in to-days standards. I started to do some research into the facts and figures, starting with the cubit.
The dictionary definition of a cubit, and ancient measure of length, originally represented by the distance from the tips of the fingers to the point of the elbow. From 18 to 20 inches. Encyclopedia Britannica's definition of a cubit is a lineal measure, the units derived from 20.62 inches.

This standard of the cubit was used in Egypt from the time of the predynastic royal tombs onward. The first accurate example yet publicized is in the size of the pyramid of Snefru at 20.66 inches, but still more exactly 20.62 inches in the pyramid of Khufu. This was termed the royal cubit throughout history. The Babylonian cubit of 20.89 inches of Gruder may be another form and probably the origin of the former. It appears in Asia Minor as 20.55 inches to 20.94 inches. In tombs at Jerusalem as 20.57 inches. In six English stone circles as 20.55 inches The same cubit of 20.68 inches appears in stone buildings of New Mexico on this continent. So using the figure of 20.62 inches to the cubit, the height of those pillars were l7½ cubits, which is 360.85 inches or 30.07 feet. The circumference of 12 cubits or 247.44 inches or 20.62 feet. The diameter of 4 cubits or 82.48 inches or 6.87 feet. The shell was 4 inches or a handsbreadth in thickness.

So you have a cylinder or pipe 30.07 feet long by 6.87 feet or close to 7 feet in diameter with a 4 inch wall thickness. If we cut that pipe or pillar open from end to end and flattened it out, we would have a plate of brass 30.07 by 20.5 feet by 4 inches thick. In steel this plate would weight 100,000 lbs. Brass being heavier than steel, it would weight 110,000 lbs or 55 tons.

Now we come to the chapiters, the definition of a chapiter is referred to the word capitol. The
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upper member of a column or pillar and in any pictures depicting pillars the chapiter or capitol is usually larger than the column in diameter. However, even if we take the chapiter at the same diameter as the pillars, they would be the same 5 cubits or 8.7 feet high by 20.5 feet by 4 inches thick

In steel this would weigh 28,000 lbs, In brass 30,000 lbs. or 15 tons. If these chapiters were cast and raised separately that means raising 15 tons to a height of 30 feet and mounting them on the pillars. If they were cast with the pillars and raised, that would mean a length of 39 feet, and a combined weight of 70 tons, to erect into a perpendicular position. there seems to be no mention of what kind of base these pillars were to sit on. However, 70 tons in this day and age would require quite a sizable base to support them. There does not seem to be any mention of the size or of the material of which the two spherical balls were made, but I would presume that they would either be of brass or stone, in either case they would weigh a considerable amount.

All this weight was raised without modern equipment such as hydraulic cranes. How did these people erect these two magnificent pillars into a perpendicular position?. This would be quite a task even today, yet they were able to erect them long before the use of modern equipment as we know it.
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