Design rules for box makers.

I'm not a great believer in strict design rules. They're obviously relevant if you're attempting a classical piece, or using a traditional style. When you're working in a freer way, the rules really only apply to simple shapes. What matters is how the piece looks. Do you like it? If other people agree with you, that's reassuring, but not essential. An original vision often takes time to become acceptable.

If you're planning to break the rules, you need to know what they are. This is my version:

A design should look good from all viewpoints. If you know how it will be displayed, you'll concentrate on getting it right, seen from that angle. Generally, it's safest to assume that someone will display it in an unsympathetic position, and try to make it attractive from any angle. It's sometimes possible to make a piece look very different, seen from different angles.

Overall proportions. You can work with any proportions, but they're likely to be somewhere between 1:1 and 2:1. Many people like 1:√ 2 or 1:√ 3 (1:1.414 or 1:1.732) , 2:3 or 3:5 are also worth trying. Fibonacci numbers are very close to the golden mean, which is the basis of most classical design (1:1.618). Unless you're attempting a classical piece, I really don't think you should worry about numbers. I suggest you find some scrap wood and try turning shapes with different proportions to see what you like. I often find with Rose Turned shapes, that one section can have more visual weight than it's size suggests, and a drawing of the shape can give a really misleading impression of the 3D piece. I still draw lots of sketches. I just don't expect them to work as I'd like. The important thing is what the work looks like. Do you find the proportions satisfying?

Rule of thirds. In any rectangle, the point of greatest visual interest is 1/3 down from the top .This is often a convenient place for the join between body and lid, so that the body of the box is 2/3 of the height, the lid 1/3. If you're making simple cylindrical shapes, you can define the joint between lid and body with a V cut. You can fine-tune the visual balance by adding another V cut, above or below the joint. Adding more lines above or below the join can dramatically change the visual effect. The important thing is to divide the shape into 2 uneven parts, with the smaller one at the top.

Lift at base? If the sides of the box come straight down to the bottom, the shape looks very "grounded". Rounding-off the bottom edges, or undercutting a bead at the foot, will lift the shape from the surface.

Spigot usually on base. It's generally best for the spigot to be on the body of the box. This gives maximum usable space,and avoids the contents being squashed when you put the lid on. Obviously, there are often cases where you have to have the spigot on the lid for practical reasons.

Lid fitting. There are many ways of fitting the lid. Whatever you choose, it must be appropriate for the purpose of the box. A suction fit is no good for a box containing small, easily scattered items. Your basic choices are:

Simple push fit. Anything from suction fit to loose fit, to suit the purpose of the box.

Threaded spigot. If I could cut a triple-start 8tpi thread, I'd do threaded lids, but I hate boxes where you have to turn the lid for ages to get it off.

Bayonet fitting. Various ideas have been tried. The big problem is that people expect lids to twist off, and the small pins which locate the lid are easily distorted or broken.

Rose-shaped spigot. You have to cut this with a milling cutter. This produces the shape followed by the centre of the cutter, modified by the width of cut. If you attempt to cut the spigot and recess with a thick cutter, the 2 shapes will be very different. The thinner the cutter, the better the fit. Of course, smaller diameter cutters are only available in short lengths, which limits the length of the spigot. I tend to use 1.5 or 2mm extra-long cutters.

Pumped surfaces without spigot. If you can produce two pumped surfaces which fit together reasonably well, you'll find they locate the lid in a surprisingly stable way. Getting the surfaces to match accurately can be challenging, but it's only only essential if the join is very visible.

What shape to hollow? As a general rule, turners tend to think that thin-turned work is better than thick. A hollow form which weighs much less than we expect can be very appealing. I don't think

this really applies to small boxes, which must feel right in the hand. Most boxes need a little weight. You might achieve this by turning the walls thin, and leaving a bit of weight at the bottom, but it can be difficult to securely rechuck a piece like this to turn or decorate the bottom. If the inside is turned parallel, you can easily mount the body on a long spigot for finishing. If it's intended for practical purposes, that may determine the shape you need. For example, it's much easier to get small items out of a box that's not too deep, big enough to get your finger in, with a nicely rounded shape so things don't get caught at the edge of the bottom.

Tactile qualities. A small box must feel right in the hand. The weight, shape and surface texture should feel good as well as look good.

How much decoration? It's up to you. The Victorians used to overdo it. Current tasteful work follows the rule “less is best”. Some people prefer “no surface undecorated”. It is important that the design elements should go together. A random scattering of different patterns generally just looks a mess. On a simple cylindrical box, I tend to decorate the top, bottom, and inside of the lid. I like to put a really nice pattern, hidden on the bottom.

Fitness for purpose. A box may be practical, or it may be purely decorative. You have to decide what's important, and make it fit for the purpose you've chosen. If it's to be practical, a bit of thought about how it will be used should help you decide details like how tightly the lid should fit, and what shape you should make the inside. The material, and the internal finish should suit the contents. If it's essentially a decorative piece, to be classifiable as a box, it should have an inside and a lid. Describing it as a lidded container might sound better, but that implies the ability to contain something, which really isn't necessary. One might say Rose Turned “boxes” produced as sculptural pieces are purely vessels for the imagination.

Whether it's practical or decorative, you need to think about how and where the box will be used or displayed.