## Isabella Retter KOEBEL





## Bio:

Isabella Retter is fascinated by combining the beauty of math with modern design. She holds a Diploma in mathematics and is pursuing a PhD in geometry at TU Berlin. Isabella enjoys problem solving, both in pure mathematics and real life applications.

## **Project description:**

KOEBEL is a mathematically inspired and constructed piece of furniture. It has an approximate height of 45cm and can serve as a coffee table or sitting device. KOEBEL's outer shape consists of spherical regions connecting circular disks. Their boundary circles are either pairwise tangent or do not intersect at all. All circles lie on the same sphere, creating a harmonious appearance. KOEBEL is made of glued basswood and CNC milled. KOEBEL takes you on a journey to a hidden treasure in Math.

## Mathematical inspiration:

A Koebe polyhedron is a polyhedron with the additional property that all its edges are tangent to a common sphere. We reveal the beauty of this property by intersecting this sphere and its interior with the Koebe polyhedron, named after the German mathematician Koebe.

KOEBEL is using this concept to create a piece of furniture that looks excellent in your living room as well as in your office.





Deutsches Patent- und Markenamt



