Brief
Cleanseathal Statement
At present my bench press weights are sitting in a pile on the floor of my dad's shed. They are constantly being buried by me and my family dumping things on top. While on the floor they collect moisture and are starting to rust. It's also a pain having to constantly move or lift them.

I need some way of storing my weights in a safe, secure, and stable way.

My Specifications:
- Must be able to store at least 4 1kg weights, 2.25kg weights, 2kg weights, 4.10kg weights, 2.20kg weights, and the bench press bar
- Mustn't have any sharp edges that might hurt people or damage other things stored in the shed
- Must be rust proof
- Must not cost more than $57
- Each weight that is placed on and off the product must be able to do so in at least 15 seconds
- Must not take up too much room: 1m x 1m max
- Must be the right height so I can reach all the weights

What I am Storing?
(Bench Press Weights)
Size Range:
The size of the weights that I am storing are a range of circular objects, with diameters of 30mm down to 100mm. Also, the thickness of the objects range from 10mm to 60mm.

Shape:
The weights that I am storing are large circular disks.

Weight:
The weight of the product that I am storing are many different sizes. The heaviest is 100kg and the lightest is 20kg.

Material:
The weights are made from two different materials. The first type are metal coated in either enamel paint or else primer to prevent rust.

Special Considerations:
- I will need to consider making my storage product very strong and have everything to ensure that it will be able to handle the weight that will be placed on it (100kg)
- I will need to make the bars that the weights will sit on are close enough together to ensure the weights are not going to knock on each other.

Starter 5: The bars that the weights sit on are going to be set off on an angle to ensure the weights don’t fall off. Do you see anything wrong with this design?

Notes on discussion: I agree with them being on an angle as it will mean they cannot accidentally fall off at any time.

A third type of modelling that I performed was computer aided drawings of the weights rack on Sketch Up. The purpose of this was to guide the rest of the steps that I would take in the construction of my weights rack and as a reference for me to go back to. It will help me to get the angles, shapes, and sizes correct. From this I learned that because of the materials I was going to use it would be very heavy. To counter this I decided to install heavy duty roller wheels on the bottom of my weights rack to make it moveable. A risk I found was that to brace my product properly it would need to be done well so as not to warp the metal in the process. Also, to check that my product meets my brief and specification I will use these designs as a reference.

Starter 6: Can you suggest any other ways to make my product do its job better?

Notes on discussion: I would suggest that you make the bars a little shorter and make their dimensions less as it would make it stronger and more stable.