

Demo 10-21

Egg Crusher

A raw egg is squeezed between two hard foam rubber pads in an “egg crusher.” Because the force is distributed over a large area of the end of the egg, as shown in *Figure 1*, and because the shape of the egg is a type of arch, and has enormous strength, a force of over 150 pounds can be placed on the egg.

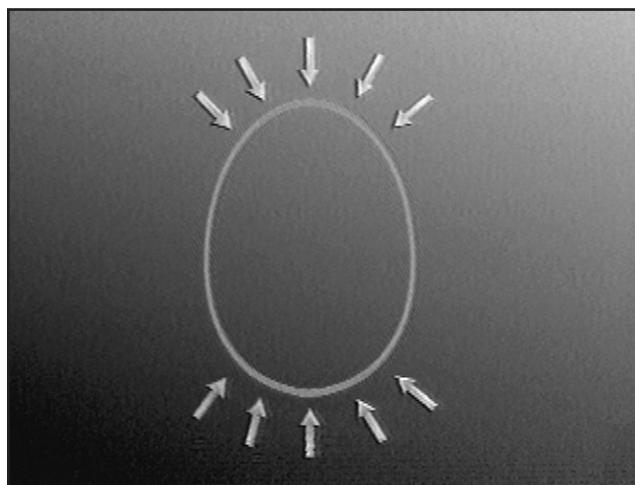


Figure 1

Everyone knows that an egg is fragile.

We will now use this egg crusher to apply a large force to an egg.

The egg crusher consists of an aluminum tube and plunger, each having a layer of hard but flexible foam rubber. Placing the egg between the two layers of hard foam rubber, it will be squeezed by placing the same 25-pound lead brick onto the platform and then adding additional lead bricks one at a time.

75 pounds.

100 pounds.

125 pounds.

150 pounds.

The egg does not break because the hard but flexible foam rubber distributes the weight over a larger area of the shell.

Equipment

1. Egg crusher.*
2. Supply of raw eggs.
3. Supply of lead bricks.
4. Skillet.

* Built from two concentric cylinders: a hollow one having "windows" in its lower half and welded to a substantial base with its lowest portion equipped with a piece of thick hard foam rubber, the second cylinder, which slides inside the first, is equipped with another hard rubber pad on one end and an end plate to support the bricks on the other.