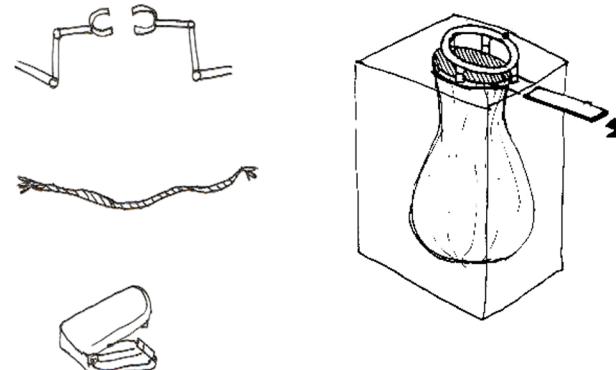


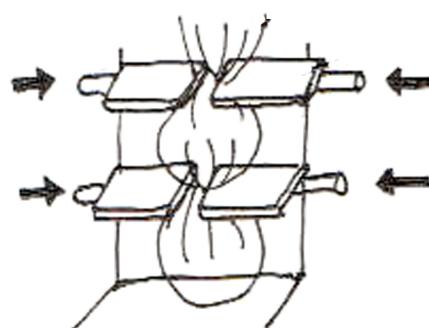
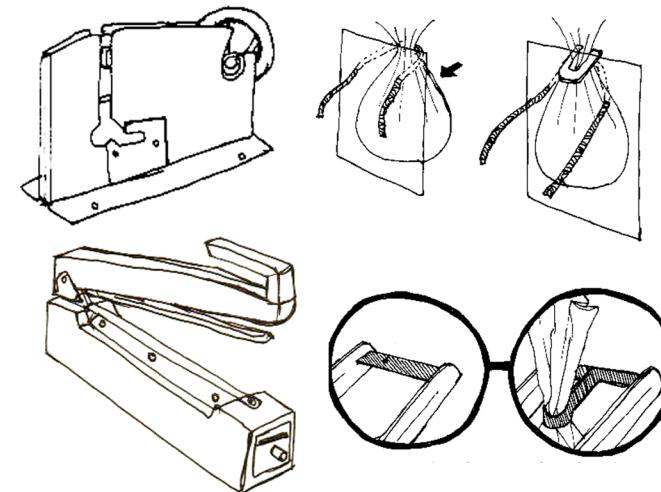
## CONCEPT

### SEALING MECHANISM

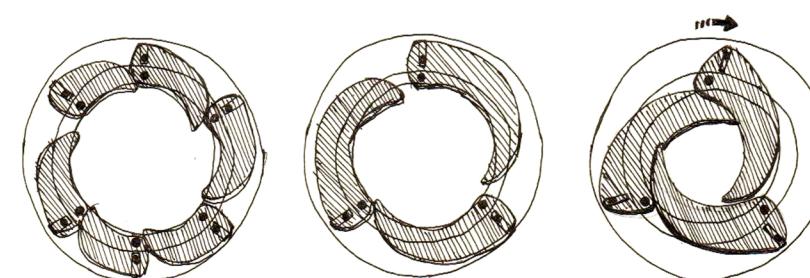


our initial idea came from a plethora of existing solutions but none of which were a suitable means for handling human waste. we thought of making a trap door that would open and shut by pulling out a handle that held the door with it.

we wanted to make an airtight seal to lock in bad odour and harmful bacteria. existing solutions for this included a heat sealer and plastic bag neck sealer, both utilized in food packaging. however, this would make the cost of each toilet unit more expensive and would entail fire and safety hazards



other primitive but effective solutions included having plates to act as trapdoors to keep portions of human waste sealed within a long draping plastic bag. but this proved to be too space consumptive, and would also waste space in the plastic bag.

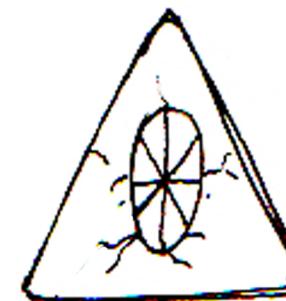


taking inspiration from the shutter of a camera, we found a viable way to close the bag in the mechanism of an [aperture](#).

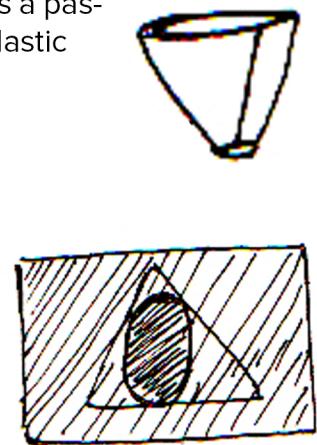
after much thought about the number of blades we should use, we chose to go with 3 blades instead of 6 to minimise the risk of the moving parts jamming.

### SEAT / CONDUIT

we initially wanted to build a funnel out of plastic, to act as a passage for the waste to enter the plastic bag, however, a plastic conduit would be too flimsy to be an effective channel

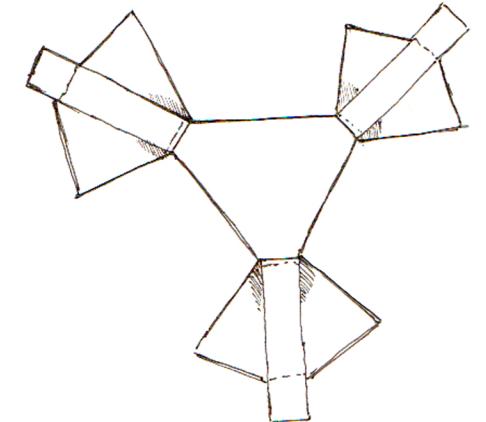


by amalgamating our conduit into the toilet seat, we would have lesser parts, minimising the risk of failure. our initial idea was a hole with flaps, to guide the waste into the plastic bag.



intended to be made of acrylic, we changed the material of our seat to be made of chipboard instead as it would be able to withstand a higher pressure.

in accordance with our finalized structural design, we wanted to incorporate the seat together with the tripod-like supporting legs.



this would mean that the seat user's weight would be solely on the support legs, risking instability as one's weight would not be uniformly distributed throughout all three supports.

we finally decided on a seat made from [polystyrene foam](#), a dense and rigid material capable of withstanding pressure.

by forming our conduit using a [parabolic hole](#) cut through 2 layers of foam, the user's weight would be uniformly distributed throughout the seat.

