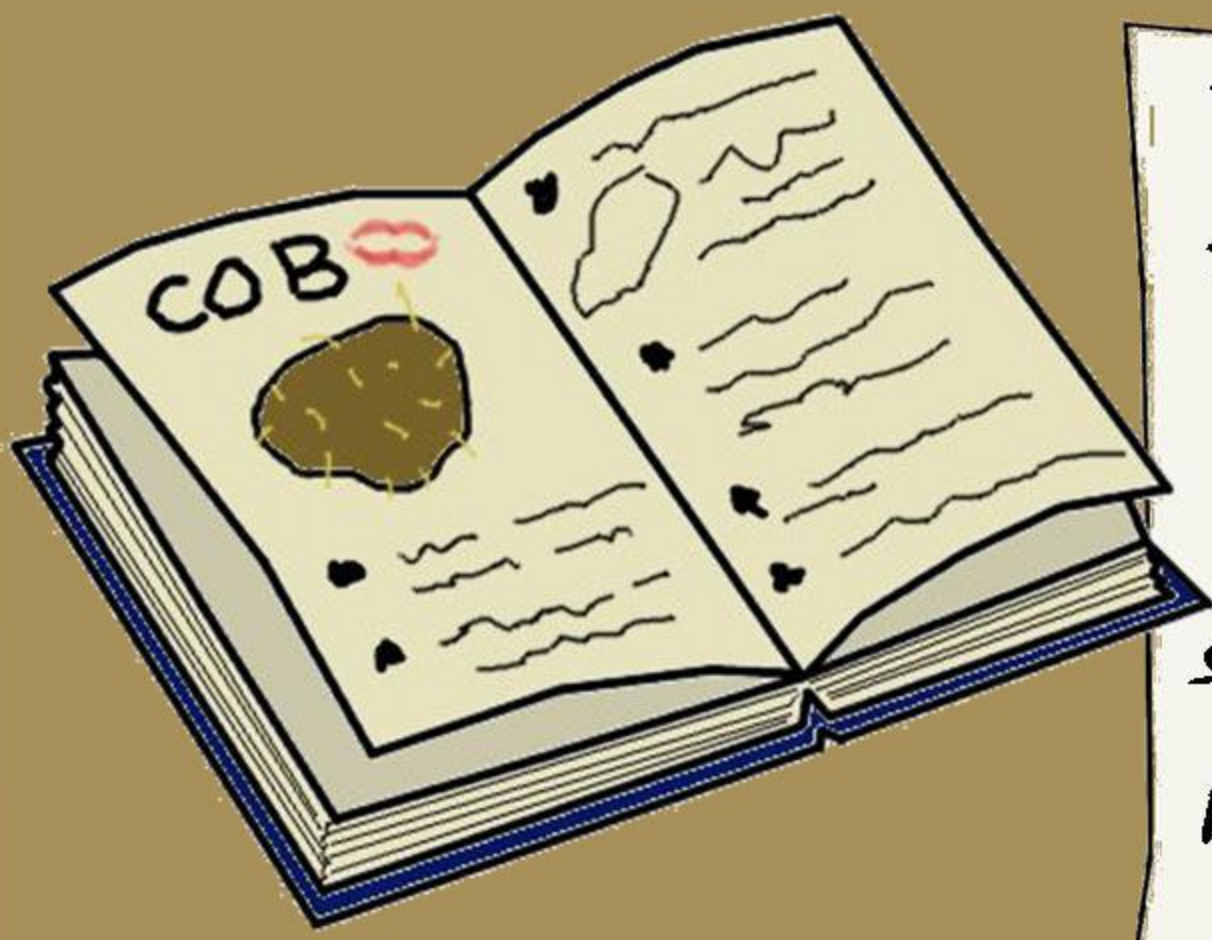
The Marvelously Muddy

MicroManual

The Muddy Micromanuals are an invitation to the world of building with earth by four of the most ancient techniques known to (wo)man!

This is part 3/5 of the
Muddy Micromanuals!
By Sourabh Phadke.
An Aman Setu Publication.

Cob is one of the most delicious construction techniques around. Yumm - eh!



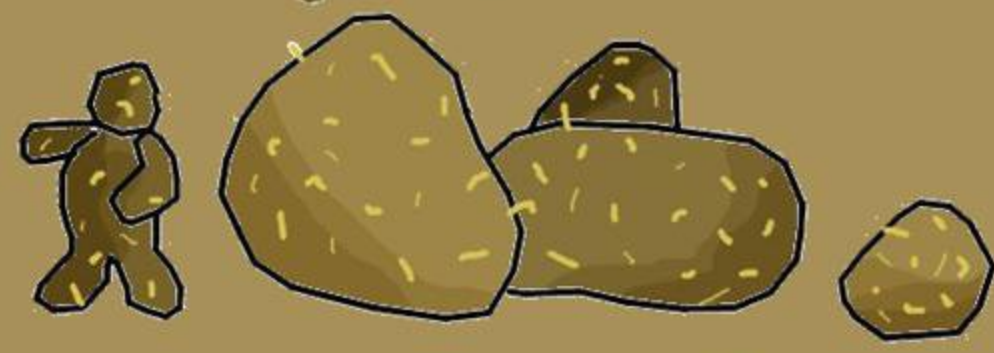
The recipe for this delectable dish involves earth, water, straw, husk and plenty of love! Awww...

So the way to cook it up is:

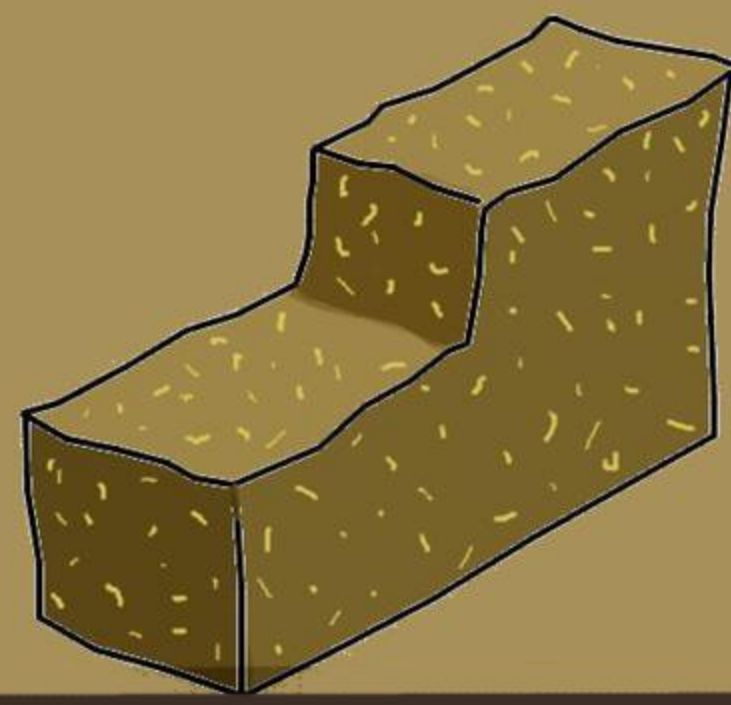
Mix the aforementioned items

Dance and stomp in the mix

Make cob balls and pass them towards the wall

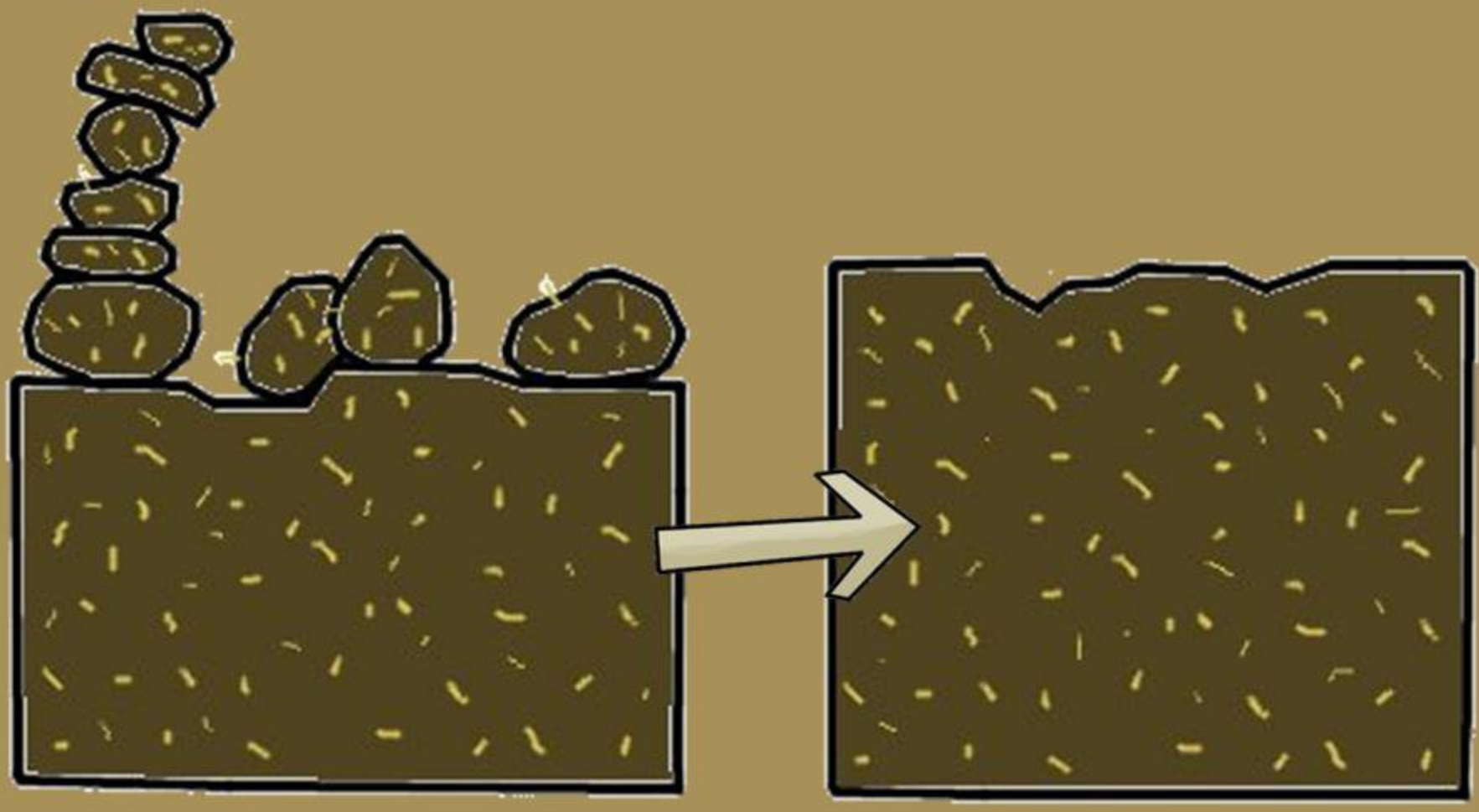


Mash and massage the balls into a wall



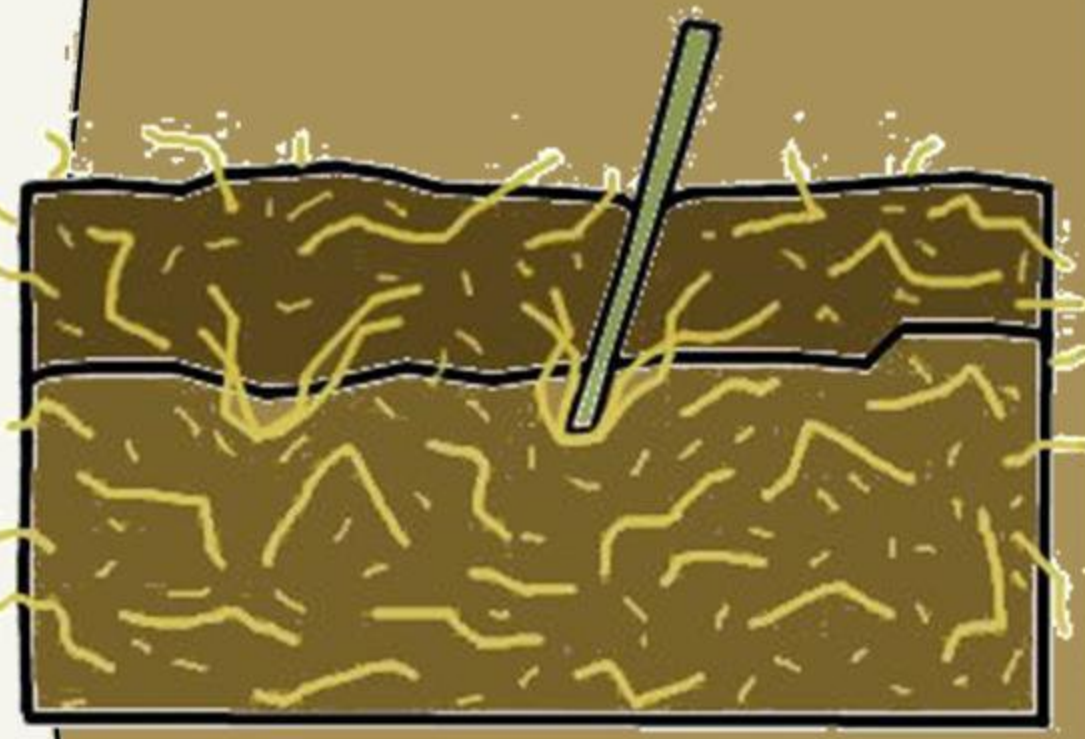
* And Remember:

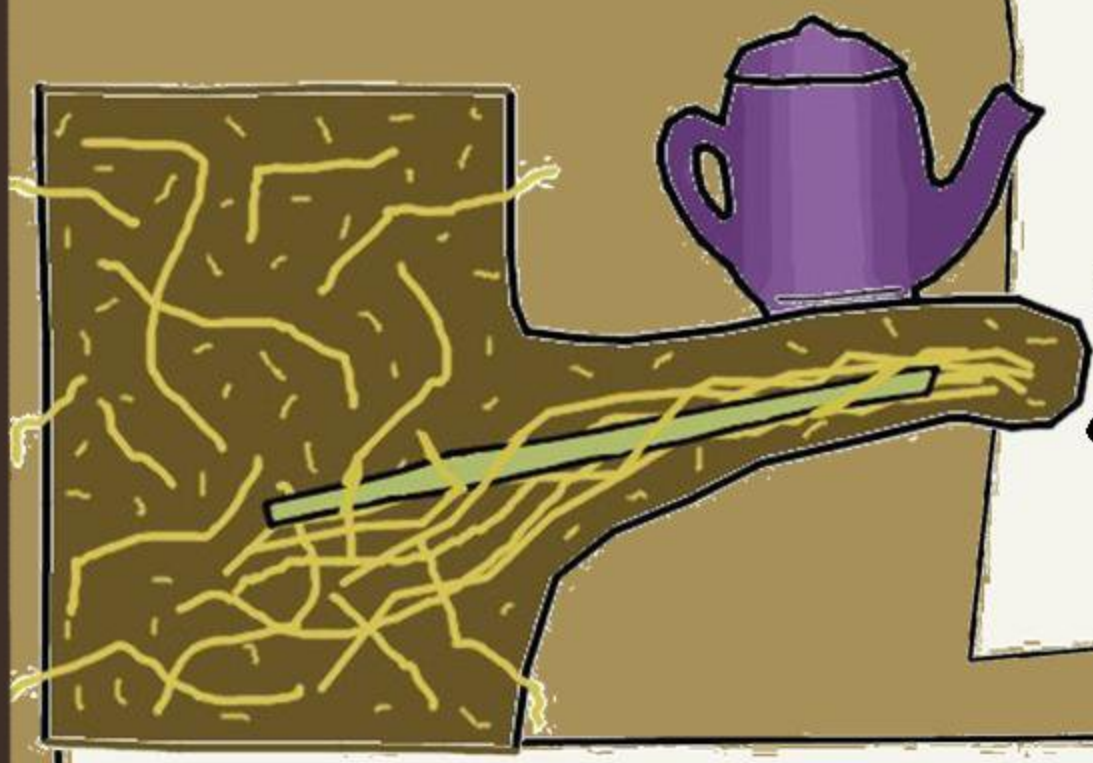
The straw should be distributed evenly.
The mix consistency should be regulated.
Too dry and it will be tough to work on the wall. Too wet and it shall bulge out!



And though we build up in courses,
we mix and merge them into the wall!
Eventually, no courses and no balls (of cob).

You can use a bamboo strip to poke the fresh cob and 'sew' the straw into the wall below





With the help of extra straw and bamboo strips, we can create shelves and counters!

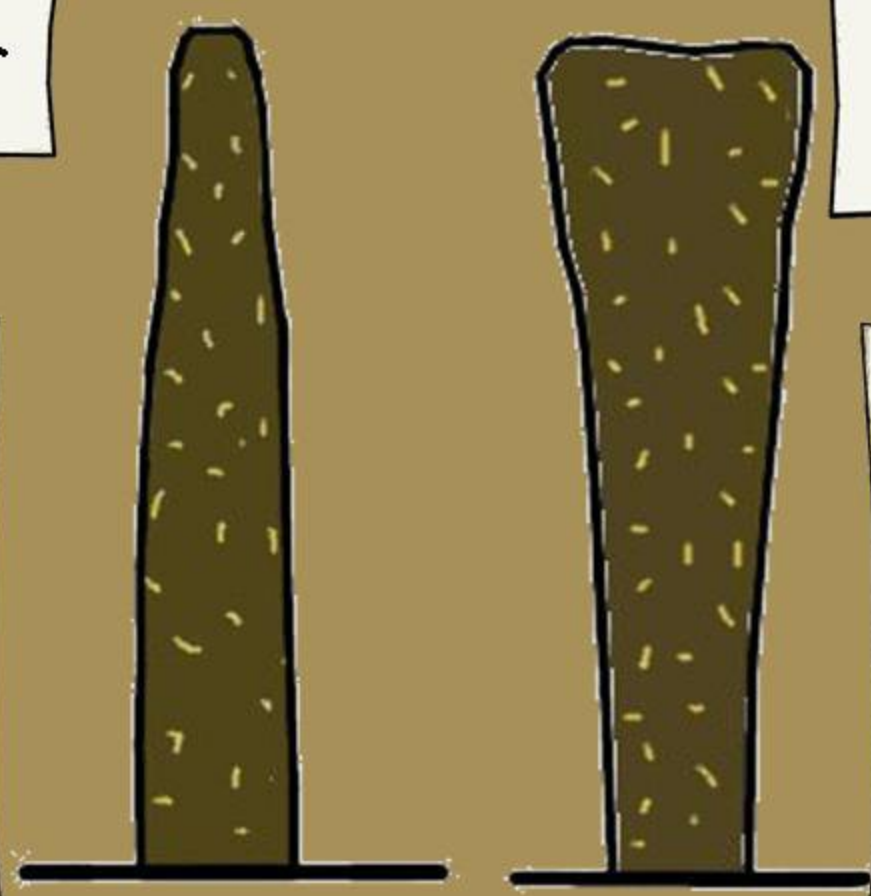
*A reinforcing word:

It is good to have several grades of reinforcement in the mix. The straw acts as macro, the husk as micro. The reinforcement gets 'mummified' inside and shall not rot!

Cobbers have to look out for corners and the verticality of the wall at all times. Sweat not, it's really simple to rectify errors!

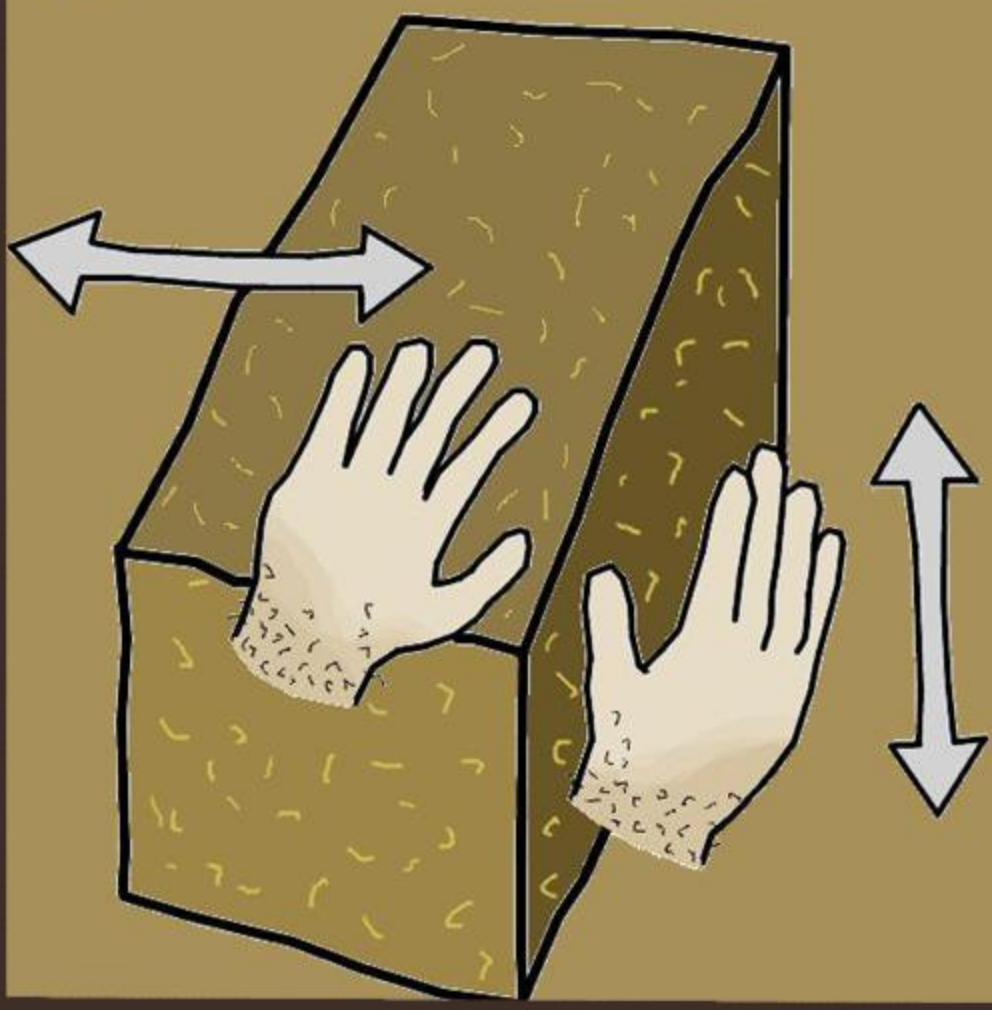
The taper

Just add more cob where it's slim...



The mushroom

Simply chop off the extra fat!

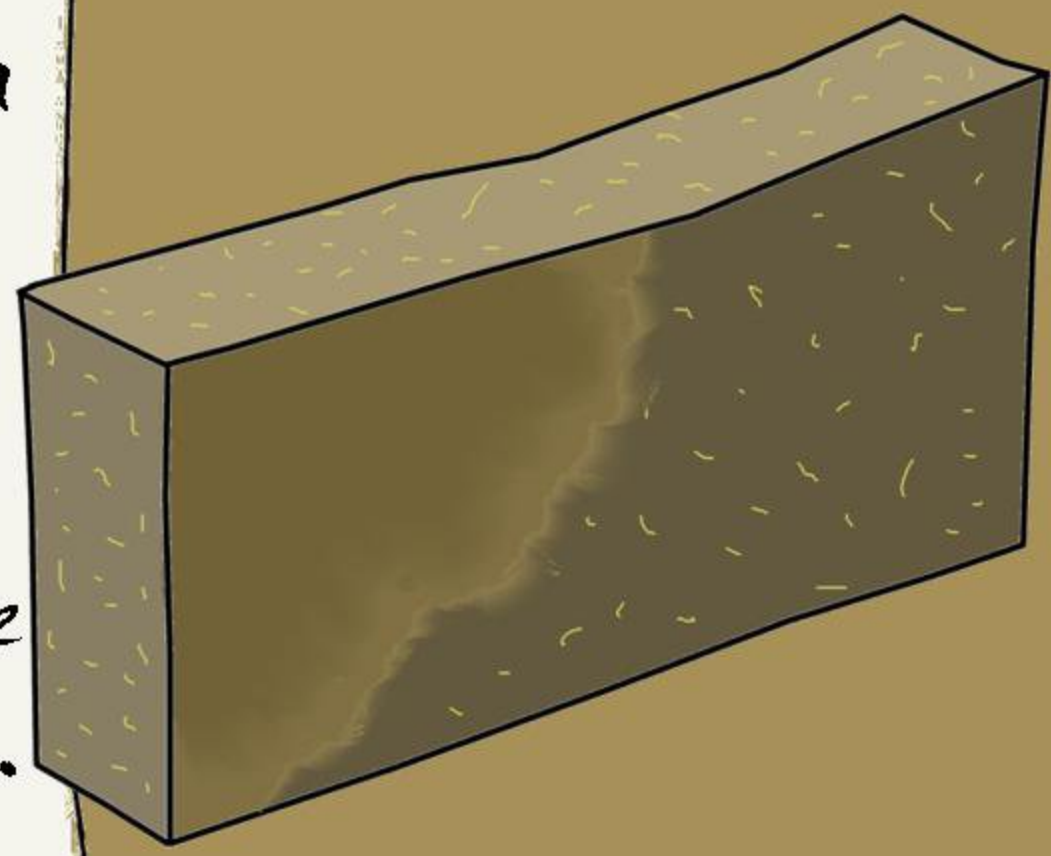


We must use our hands wisely. One checks the corner and the other maintains verticality

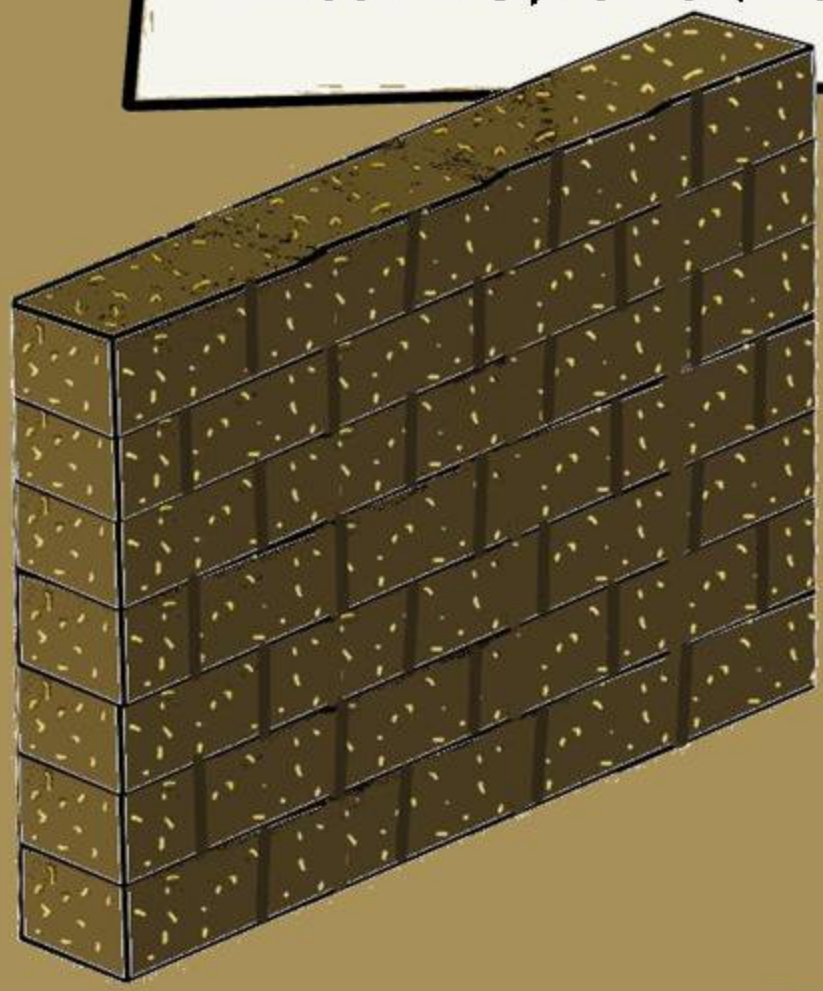
Never hit a wet cob wall (or anybody else for that matter) to level a bulge! It simply pouts out someplace else!

The bulge can easily be chopped off with any sharp tool once dry.

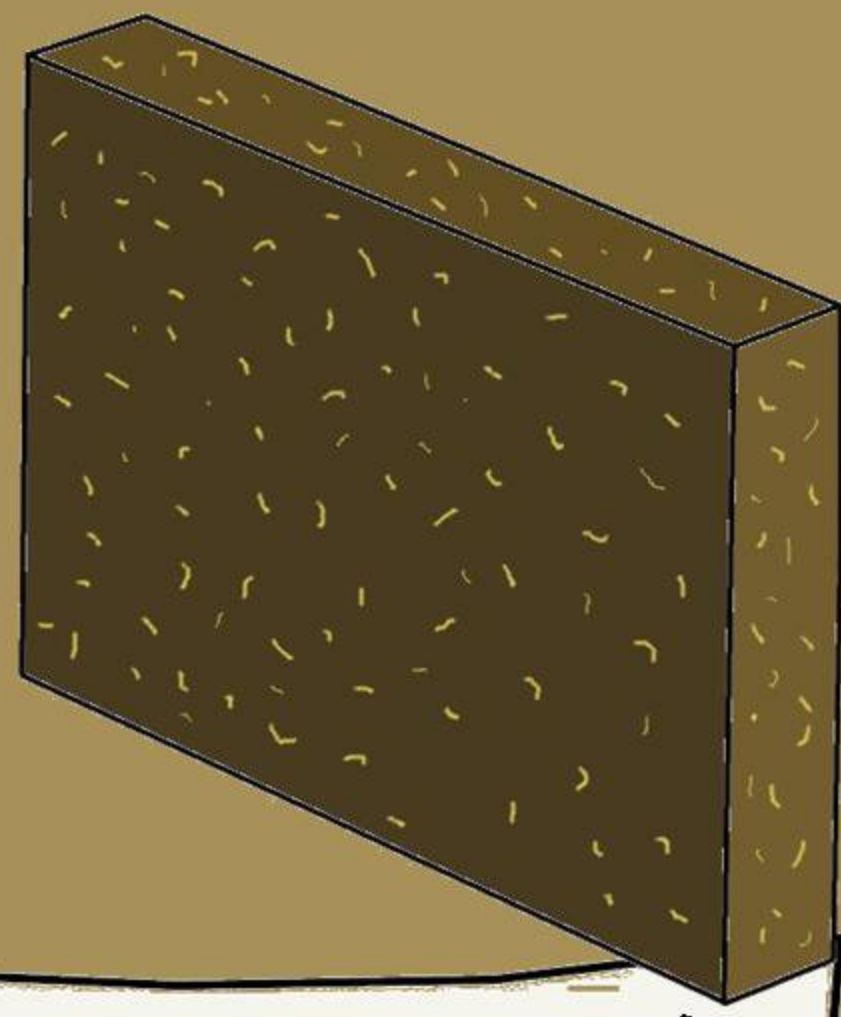
Do not smoothen the face of the wall during construction! This impedes the drying process...



Adobes and cob balls are cousins...
Adobes are precast moulded earth,
while Cob is in situ stacked earth.



Adobe:
An Agglomeration
of units



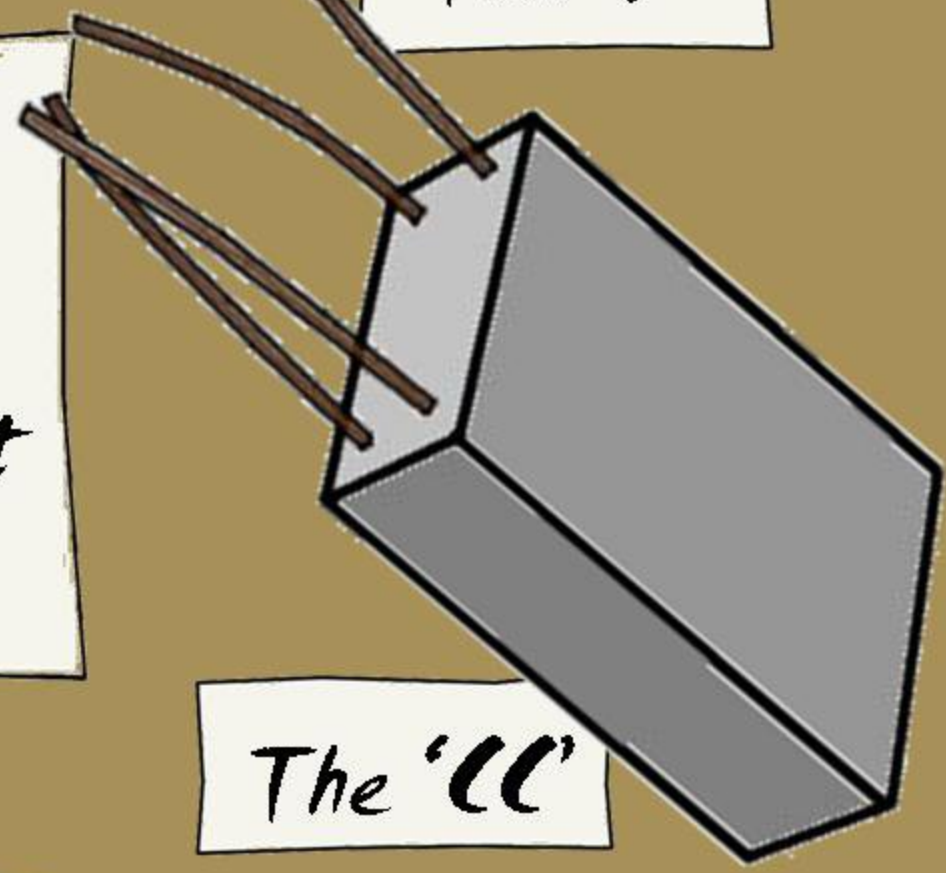
Cob:
A monolithic
entity

So a cob wall would be stronger than an adobe wall due to the lack of joints and distribution of reinforcement throughout.

A Concrete Example..

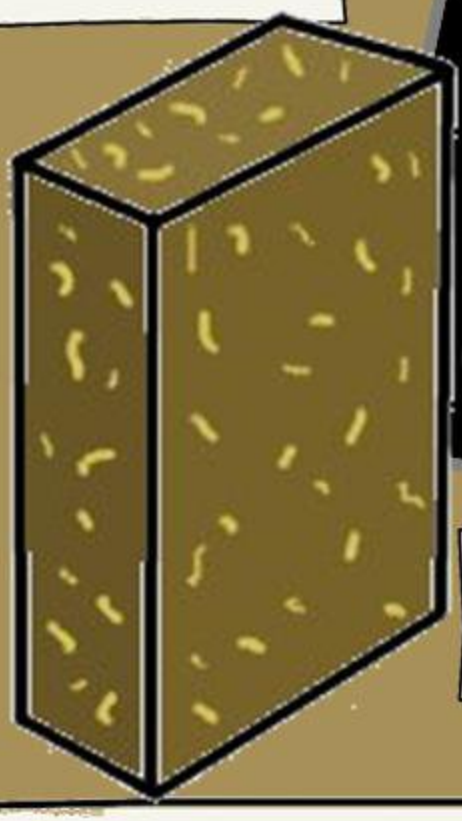
We all have heard of RCC or Reinforced Cement Concrete.

The 'R'



The 'CC'

The 'EC'

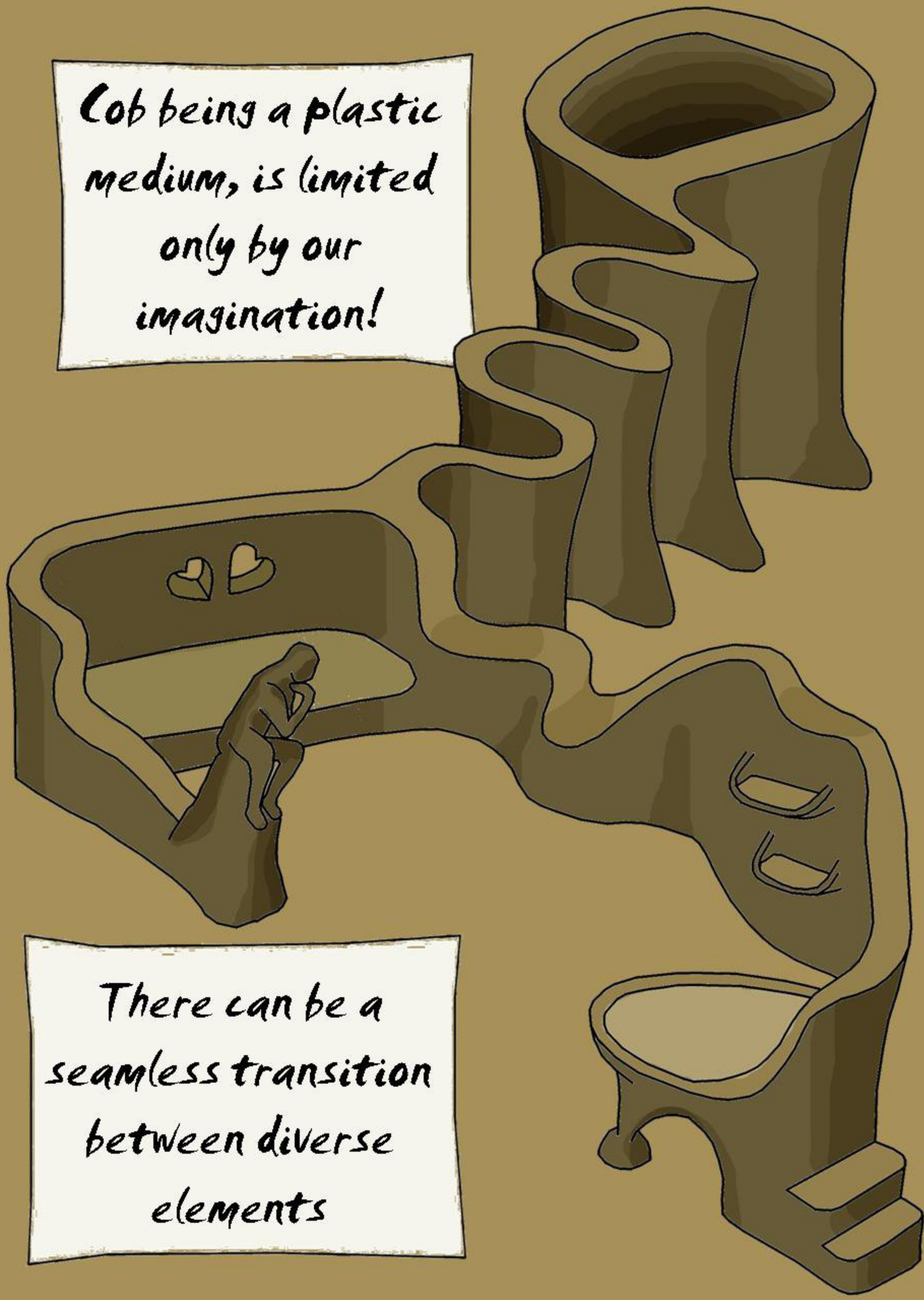


The 'R'?

Cob is REC, Reinforced Earth Concrete.

As can be seen from the hi-tech X ray, the 'R' i.e. straw, is randomly distributed all through!

Cob being a plastic medium, is limited only by our imagination!

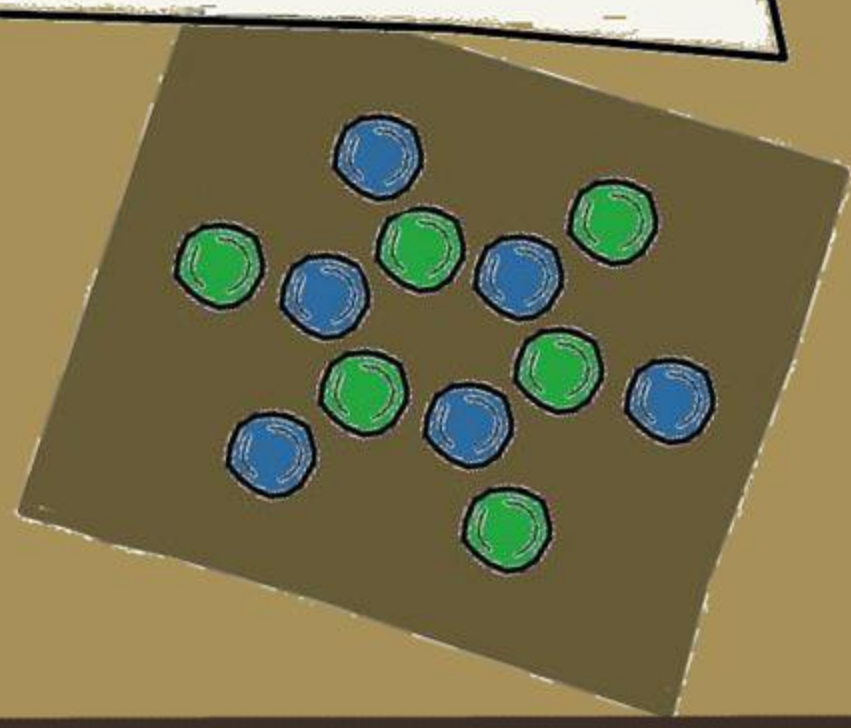


There can be a seamless transition between diverse elements

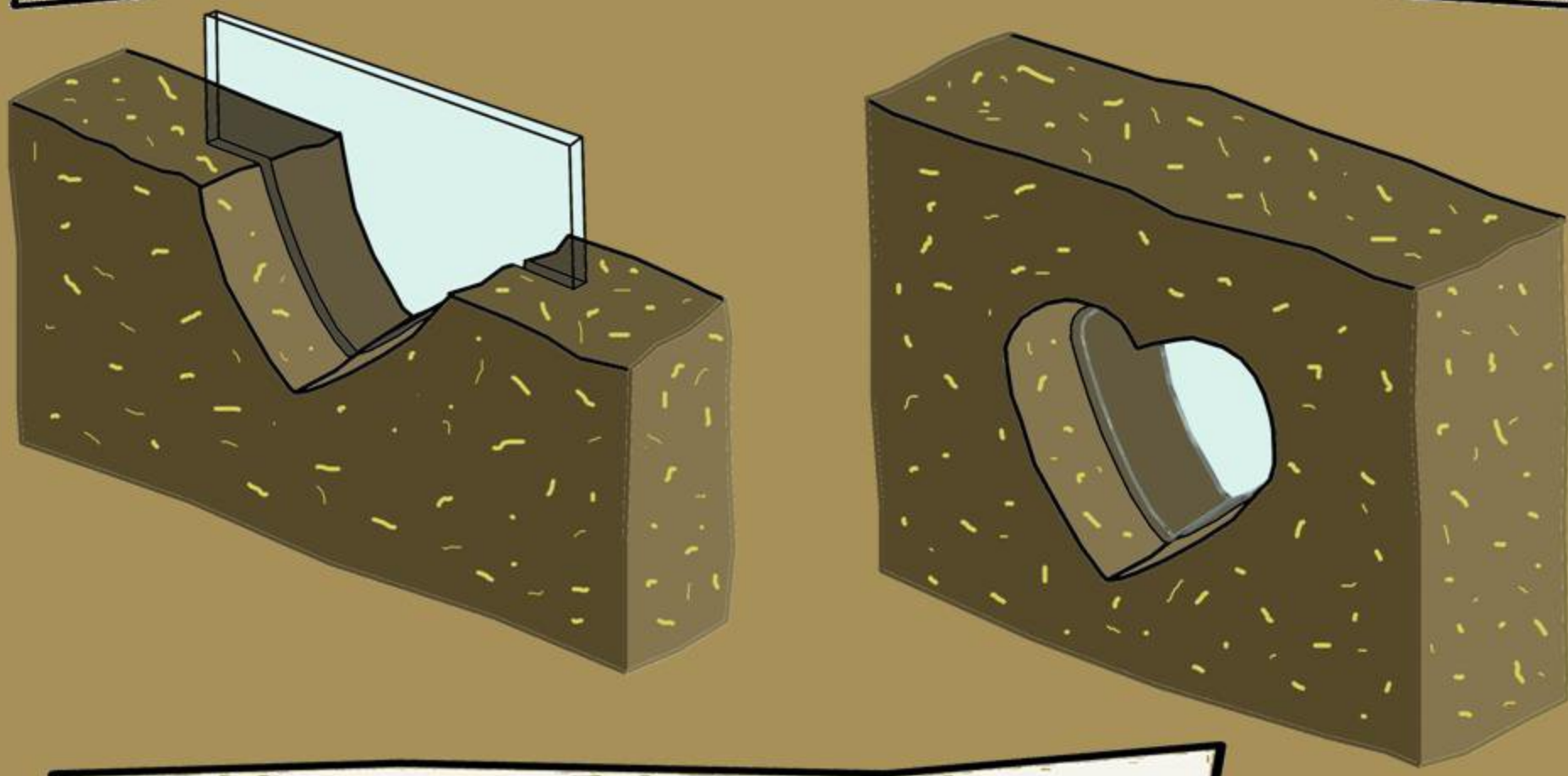
We can take responsibility for our dry waste and not dump it in landfills. Just Cob it in!

And also try not creating it in the first place!

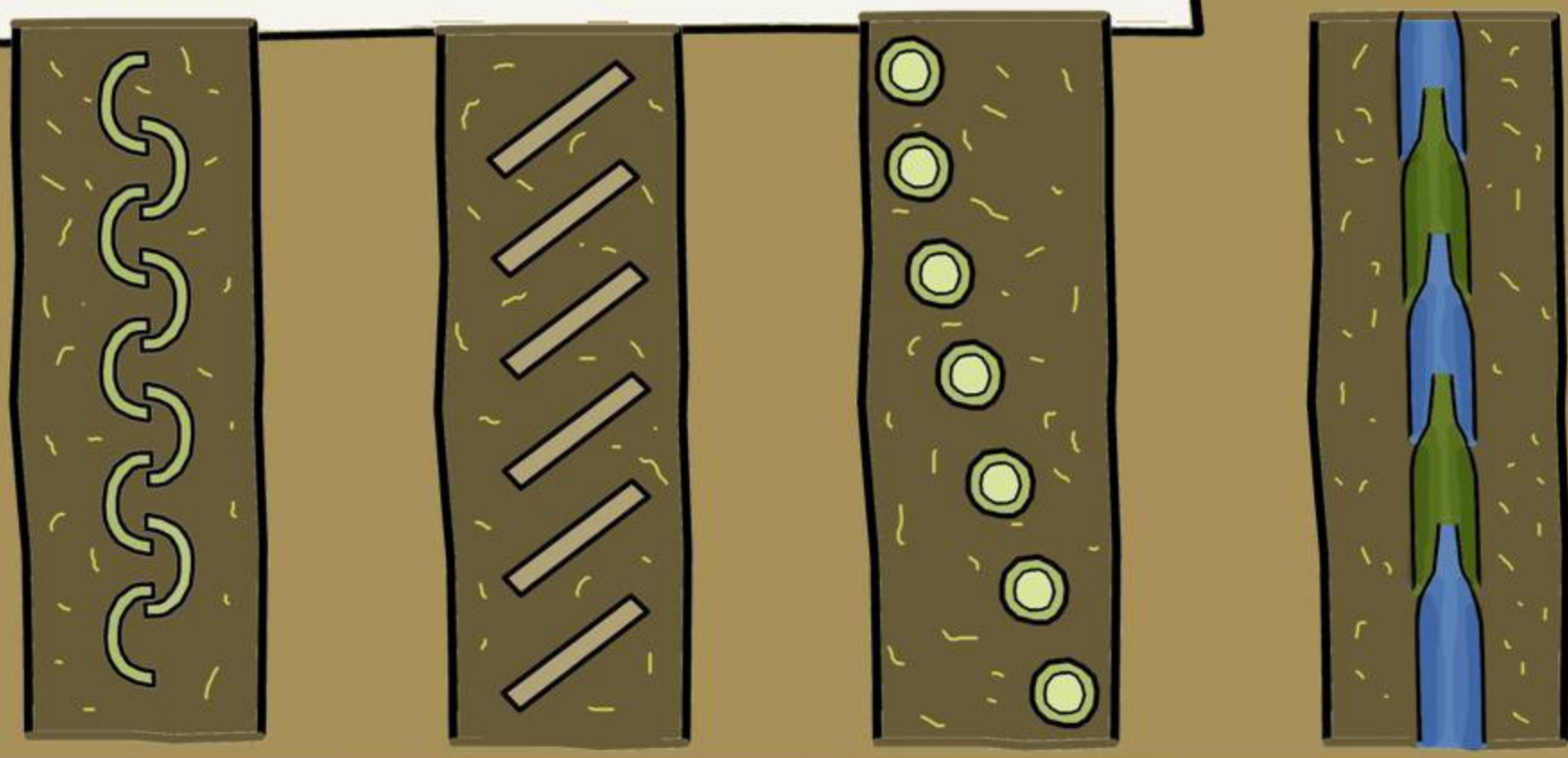
We could also expose some objects to create beautiful and interesting patterns and textures!

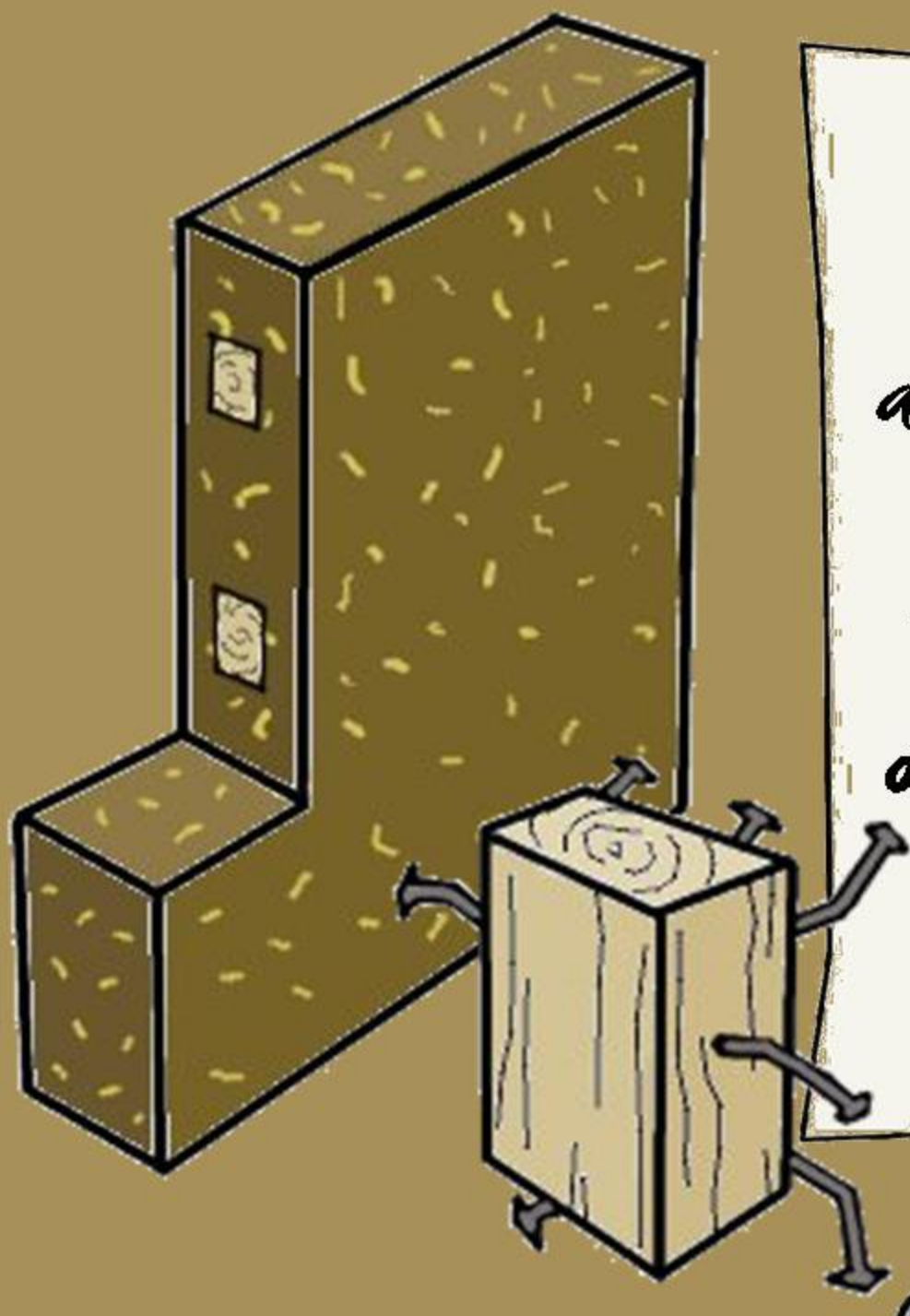


We also can embed glass panes directly into the cob to have fixed windows of any shape

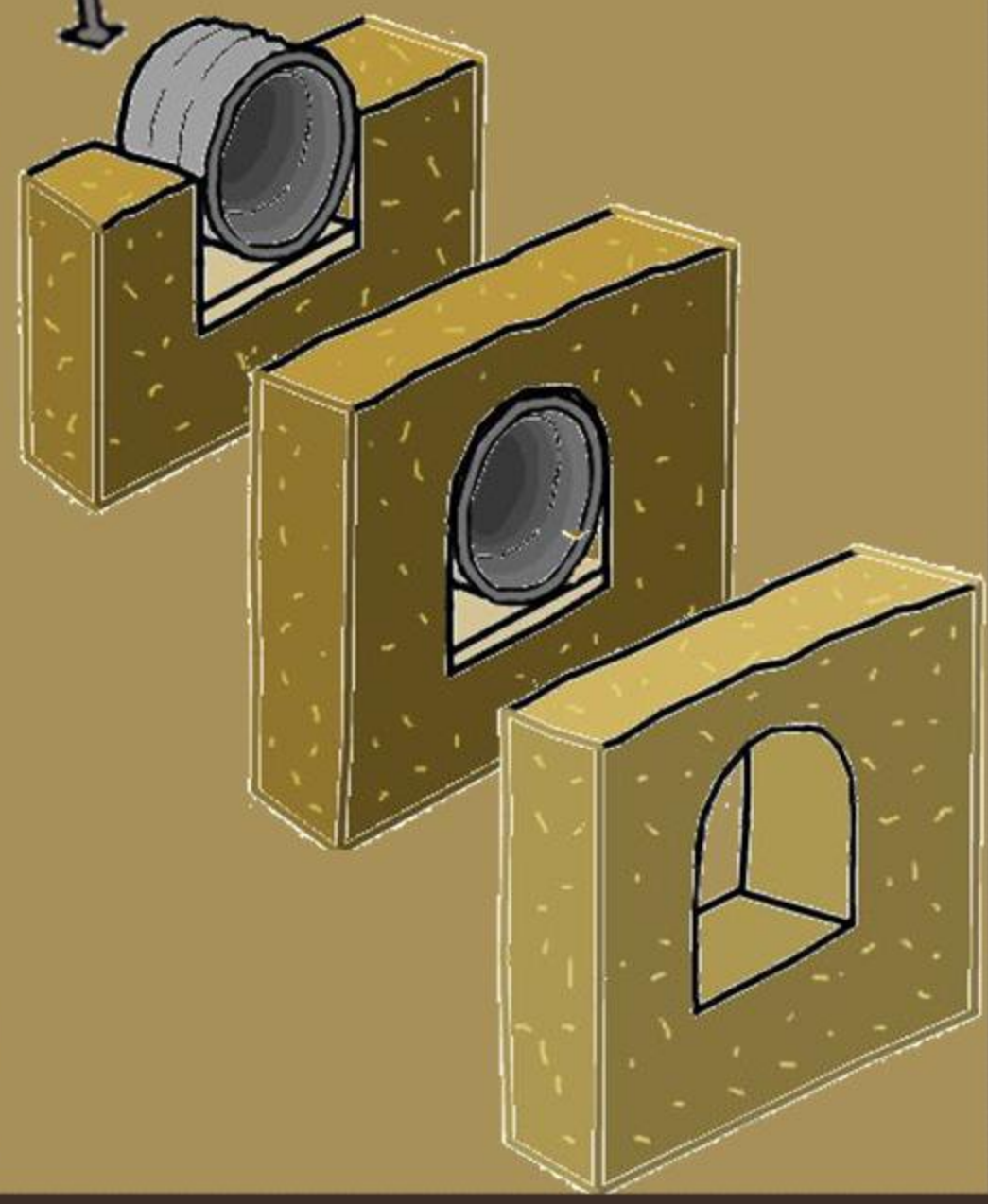


And the same is true for fixed louvres and grills of all kinds!

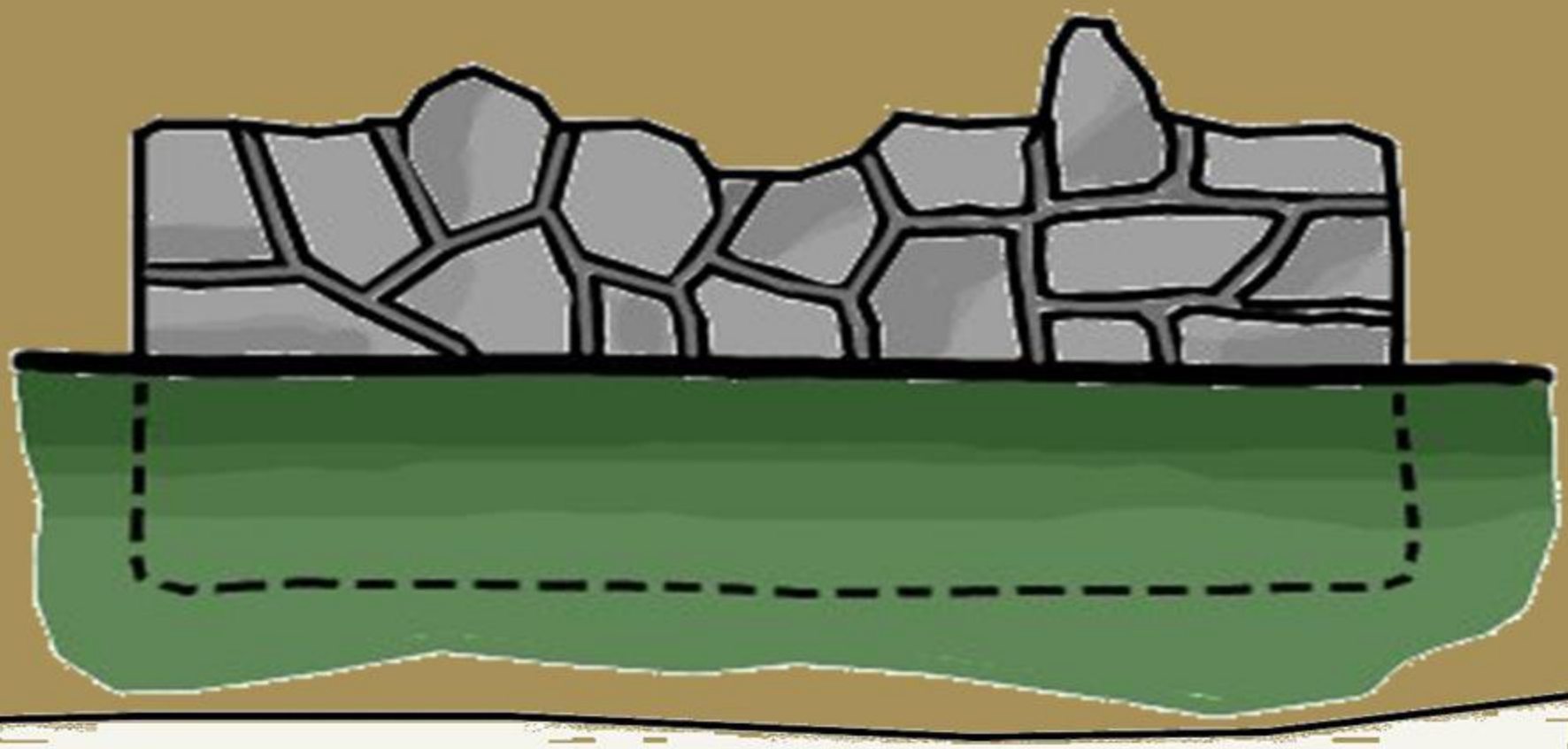




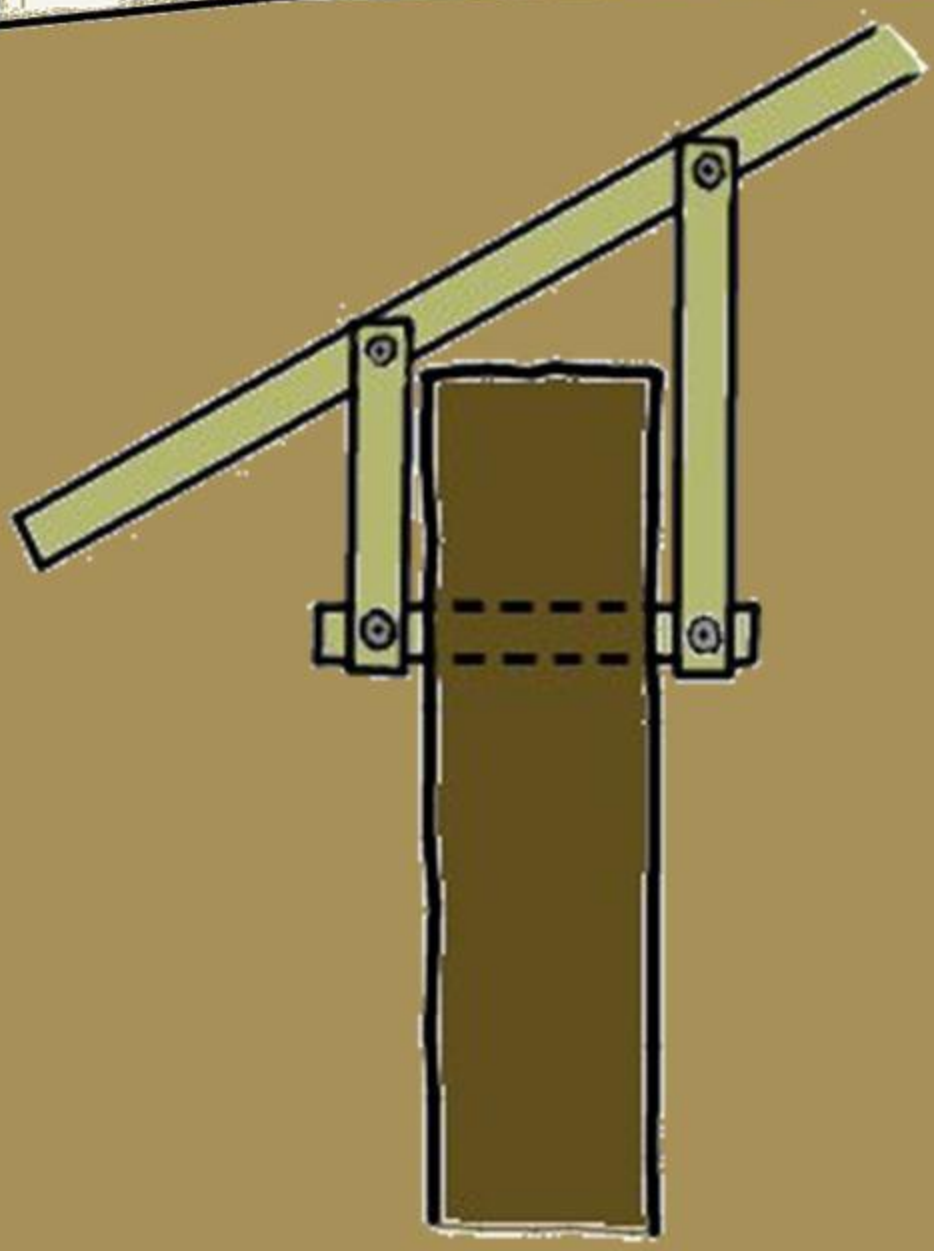
Door and window frames can be attached to the wall by embedding 'Porcupine Blocks' during construction. These act like holdfasts.



We can span these openings by corbelling cob balls or even by casting a monolithic cob arch!



The plinth on which the cob wall is built can be kept 'jagged'. This helps the wall to get a grip and sit down nice and tight.



The roof can rest on the wall via a beam, or can be anchored by members embedded in the cob during construction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