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03/22/04: Pot-in-Pot

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**juju**

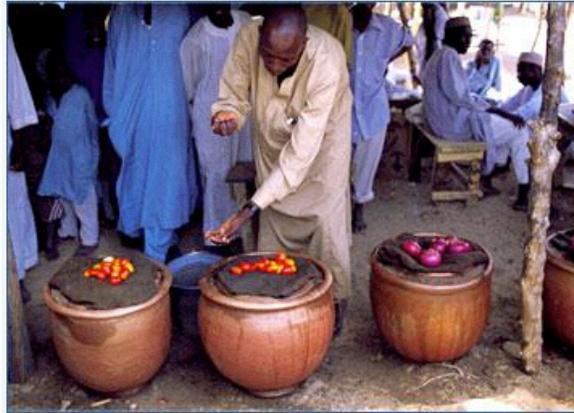
**Posted:** Mar 22 2004, 12:25 AM

[Quote](#)

no one of consequence



Group: Admin  
Posts: 148  
Member No.: 1  
Joined: 6-March 04



This is Mohammed Bah Abba's Pot-in-pot invention. In northern Nigeria, where Mohammed is from, over 90% of the villages have no electricity. His invention, which he won a Rolex Award for (and \$100,000), is a refrigerator that runs without electricity.

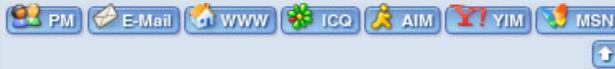
Here's how it works. You take a smaller pot and put it inside a larger pot. Fill the space in between them with wet sand, and cover the top with a wet cloth. When the water evaporates, it pulls the heat out with it, making the inside cold. It's a natural, cheap, easy-to-make refrigerator.

So, instead of perishable foods rotting after only three days, they can last up to three weeks. Obviously, this has the potential to change their lives. And it already has -- there are more girls attending school, for example, as their families no longer need them to sell food in the market.





(via [Rolex Awards](#) and [Spirits in Berlin](#))



**Whit**

Too inexperienced to be a newbie.

Group: Members  
Posts: 45  
Member No.: 5  
Joined: 7-March 04

**Posted:** Mar 22 2004, 12:40 AM [Quote](#)

How ironic is it that he can now afford a real fridge and a house to put it in?

Well, that was a slap and a tickle.



**wolf**

Mistress of All She Surveys

Group: Members  
Posts: 51  
Member No.: 7  
Joined: 7-March 04

**Posted:** Mar 22 2004, 10:43 AM [Quote](#)

QVC sells something similar to this to keep butter in.

Neat idea.



**juju**

no\_one of consequence

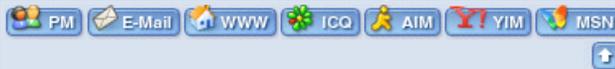
Group: Admin  
Posts: 148  
Member No.: 1  
Joined: 6-March 04

**Posted:** Mar 22 2004, 06:57 PM [Quote](#)

Arnold Williams from [hathaby.net](#) commented on this in his weblog. He said:

**QUOTE**

Brilliant ideas don't need to be difficult to execute: here's a case in point. The technology has been known for centuries, but WASN'T APPLIED TO THE PROBLEM. Notice that applying technology also has the effect of educating young people.



**Mustin**

Member

Group: Members  
Posts: 13  
Member No.: 13  
Joined: 13-March 04

**Posted:** Mar 23 2004, 09:59 PM [Quote](#)

Very fascinating.

It's so stupid how many things we don't know how to do yet.

More power to the Third World, baby!

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**hekrsa**

**Posted:** Mar 24 2004, 02:37 AM [Quote](#)

**Newbie**  
 Group: Members  
 Posts: 1  
 Member No.: 25  
 Joined: 24-March 04

Can anyone tell me please whether the pots used are  
 \*glazed or  
 \*biscuit?  
 Does anyone know whether this factor makes a difference?  
 Cheers - the krsa

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**juju** **Posted:** Mar 24 2004, 02:56 AM [Quote](#)

no one of consequence  
 Group: Admin  
 Posts: 148  
 Member No.: 1  
 Joined: 6-March 04

Alas, I don't know much about pottery. I just know they use clay pots. Perhaps someone else knows?

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**bento** **Posted:** Mar 24 2004, 10:52 AM [Quote](#)

Newbie  
 Group: Members  
 Posts: 1  
 Member No.: 27  
 Joined: 24-March 04

The primary consideration for the pot is that it is an insulator. Therefore, the external characteristics are unimportant.

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**geopolitical** **Posted:** Apr 5 2004, 05:04 AM [Quote](#)

Newbie  
 Group: Members  
 Posts: 1  
 Member No.: 39  
 Joined: 5-April 04

Actually the outer pot IS unglazed and that sort of surface is important in this sort of application as it readily transports moisture (and thus allows for more rapid evaporation).

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**KowShak** **Posted:** Apr 5 2004, 05:06 AM [Quote](#)

Newbie  
 Group: Members  
 Posts: 1  
 Member No.: 40  
 Joined: 5-April 04

If the outer pot is unglazed, the moisture from the sand will pass through it, evaporating from its surface and cooling the pot. If the outer pot is glazed the water can not pass through it and it will not work very effectively as a refrigerator.

This is nothing new, some time ago I saw a documentry which explained why unglazed pottery was used to store water since the evaporation kept the water cool, the technology has been understood and used for millenia.

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**yayabingbot** **Posted:** Apr 5 2004, 07:52 AM [Quote](#)

Newbie  
 Group: Members  
 Posts: 1  
 Member No.: 43

I would galze and fire the intereior pot untilit is vitrified (the clay has slightly melted, thereby making the

Joined: 5-April 04

to a higher temp than bisuit, but lower than its vitrification temp. This would allow water to pass through the pot. Then again the sand on top is exposed to the air and maybe this is enough evaporative cooling to keep things going.



**FredThompson**

Newbie  
Group: Members  
Posts: 1  
Member No.: 41  
Joined: 5-April 04

**Posted:** Apr 5 2004, 09:49 AM [Quote](#)

**QUOTE** (wolf @ Mar 22 2004, 10:43 AM)  
QVC sells something similar to this to keep butter in.  
Neat idea.

Are you thinkig of a butter bell?  
That's entirely different.

The butter is held in an inverted bowl whose lip is below a waterline. This isn't to cool the butter, it's to keep it isolated from contaminants while remaining soft.



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