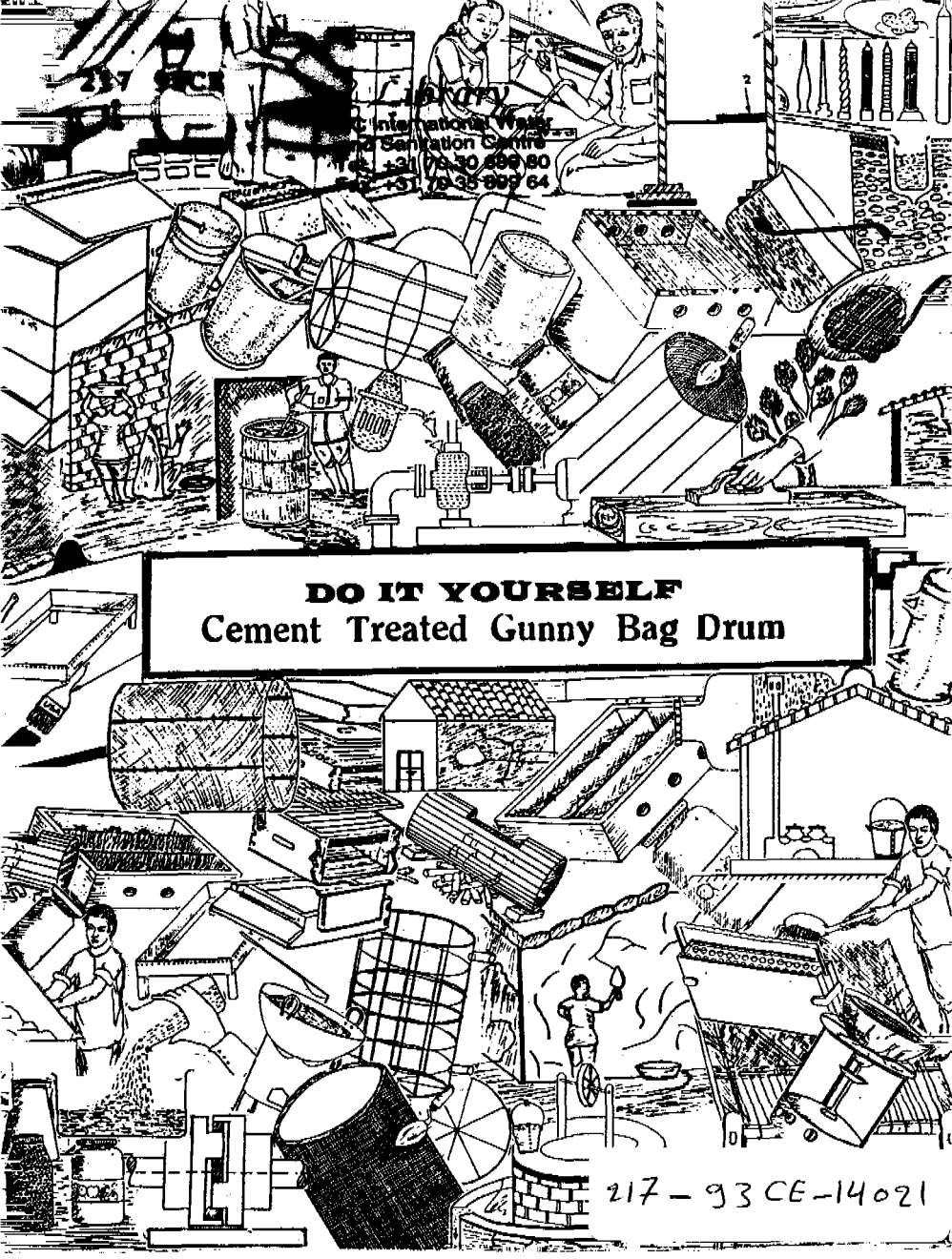

DO IT YOURSELF
Cement Treated Gunny Bag Drum

DO-IT-YOURSELF

Cement Treated Gunny Bag Drum

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Empty cement bags can be utilised for construction of drums for storage of water, grains, cattle feed trough etc. These drums are cheap and durable and can be constructed with locally available material. The method of construction is given below :

(1) Make three rings of equal diameter from 8 SWG wire. These rings will be used for top, bottom and middle of drum. Number of rings may be increased or decreased according to the height of the drum (See fig.-1). In any case the number of rings should not be less than three.

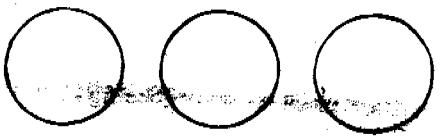
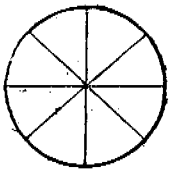


Fig.—.

(Rings of equal diamate of 8 SWG wire)

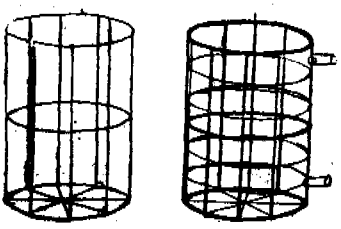
(2) Weld spokes of 8 SWG in one ring to be used for bottom. Number of spokes will depend upon diameter. Number of spokes will be more if the diameter of the drum is more. In any case the number of spokes should not be less than six.



[Bottom Ring with welded spokes]
Fig. 2

(3) Cut the wire (8 SWG) of the length of which the drum is to be made. These thick wires will provide strength to the side wall of the drum where they will be used. The number of the wires depend upon-the diameter of the drum.

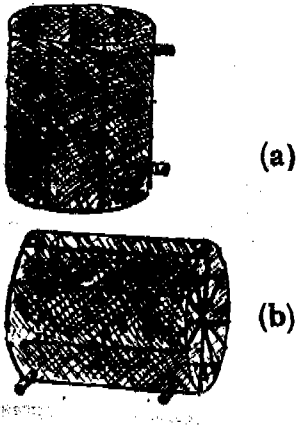
(4) Weld the above wires with the top, middle and bottom rings and fabricate the structure as shown in fig.-3 (a). If the drum is to be used for water storage then weld two sockets, one at top and one at bottom by providing small vertical member of 8 SWG wire at top and bottom adjacent to the member from which the socket is to be welded [See fig.-3 (b)]. After this attach thin wire (about 16 SWG) in between the members vertically and in peripherial direction as shown in fig.-3 (b),



(a) (b)

Fig. 3

(5) Take empty cement bags and open them by removing the stiches. Wrap the opened cement bags in the inner periphery and inside bottom and tide the cement bag with side wall vertical members and bottom with the help of thread as shown in fig.-4 (a) and (b).



(a)

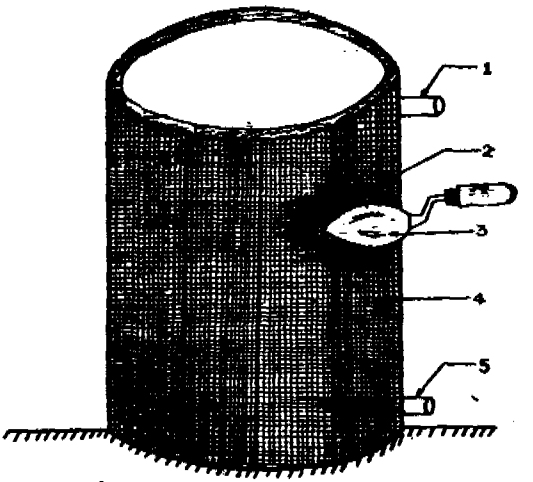
(b)

Fig. 4

(6) Prepare cement sand mortar in the ratio of 1:2 for plaster. The drum cloth (bag) is wetted before the application of cement-sand mortar so that it adheres with the gunny bag surface (side wall and bottom) properly. First the mortar is plastered from inside and then left for setting [See fig. 5 (a)]. Second day the mortar is applied on the out side of the wall and left to set. See fig. 5 (b).

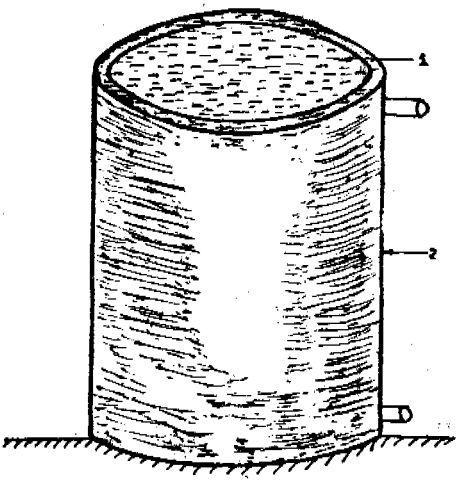
[Plastering inside wall with Kanni]

Fig.—5 (a)



1. Socket
2. Empty Cement Bag
3. Kanni
4. M. S. Bar
5. Socket

Fig. 5 (b)



1. Water 2. Cement
[Water filled Drum]
Fig. No. 5 (c)

Third day the drum is completely filled with water. In case any leakage is found, then water is removed and the mortar is applied at the place where leakage was observed. After filling water for 4-5 days the drum is ready for use.

In similar manner other items like cattle feed trough can also be prepared.

SOME IMPORTANT THINGS TO KNOW

We have constructed cement treated gunny bag drums for water storage up to a capacity of 700 lit. in C. D. R. T., I. E. R. T., Allahabad. After using it for 4 years regularly we have not observed any defect so far. In very few cases the drums were emptyed and kept for few months and it was observed that due to shrinkage in peak summer they developed small cracks at one or two places. With application of little amount of mortar they were again used with no problem.

It was also found that if these drums are not shifted frequently from one place to another then cracks do not developes, These drums can be very well used as small overhead tanks in houses.

MAINTENANCE

In case any leakage is found then the drum can be repaired with the application of cement-sand mortar at that place.

LIST OF MATERIAL FOR A TANK OF 200 LITRE CAPACITY—

Dimensions	dia=60 cm. height=80 cm.	
(i) G. I. wire (8 SWG)		2 kg.
(ii) G. I. wire (18 SWG)		200 gm.
(iii) Cement		12 kg.
(iv) Sand		as per 1:2 ratio
(v) Empty cement bags		6 Nos.
(vi) Jute Thread		100 gm.
(vii) Socket (if tank is for water storage)		2 Nos.
(viii) Water top (if needed)		1 No.

IERT-CDRT-ISD-DIYS—32

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