



## THE CONSTRUCTION TECHNIQUE OF RAMMED EARTH

RAMMED EARTH IS A METHOD FOR BUILDING WALLS THIS TECHNIQUE CONSISTS OF TAMPING DAMP EARTH IN A FORM.

BUILDING MATERIALS FOR CONSTRUCTING WITH RAMMED EARTH

- .- Earth
- .- Lime
- .- Sand or gravel
- .- Water (AGUA).
- .- Stones

AUXILIARY MEANS AND TOOLS

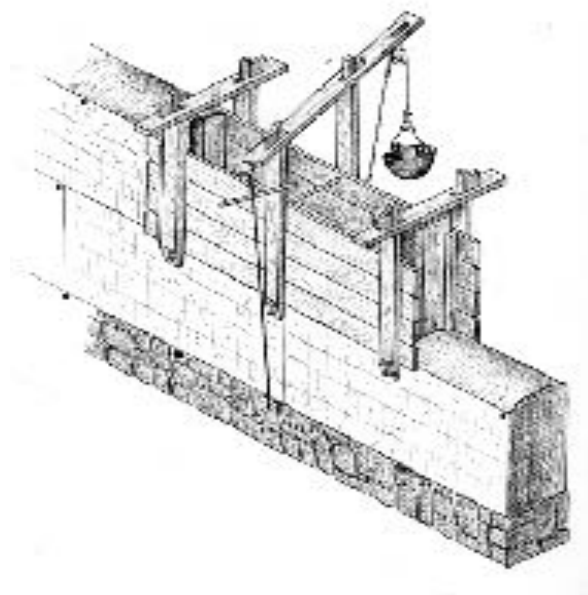
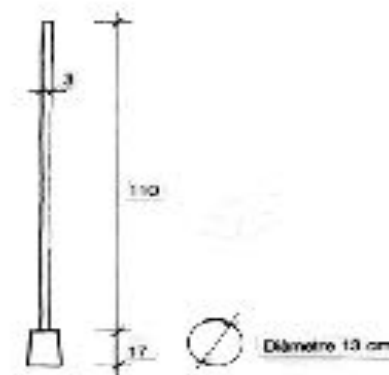
- .- A form (formwork)
- .- One or two rammers





AUXILIARY MEANS AND TOOLS

- A form (formwork)
- One or two rammers



En: FORMWORK

Fr.....

Es.....TAPIAL

Rom.....

Gal.....

Cat.....

En.....

Fr.....

Sp.....PISÓN

Rom.....

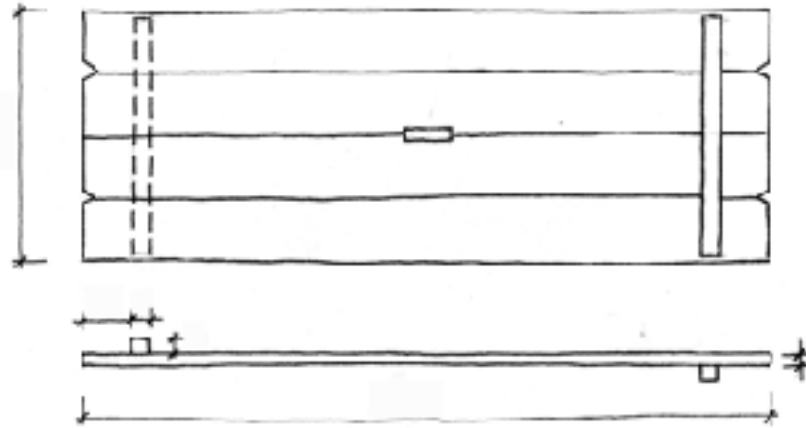
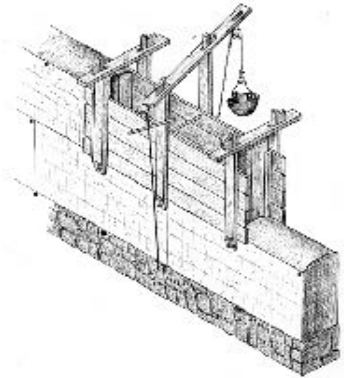
Gal.....

Cat.....



# AUXILIARY MEANS AND TOOLS

.- A form (formwork)



En.....

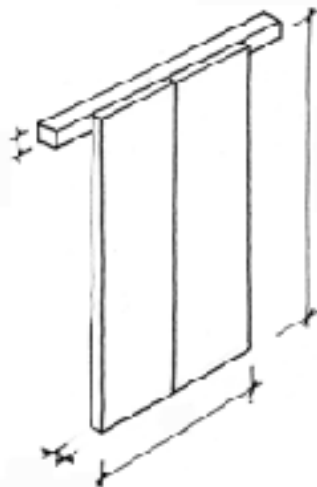
Fr.....

Sp.....TAPIAL

Rom.....

Gal.....

Cat.....



En.....

Fr.....

Sp.....FRONTERA

Rom.....

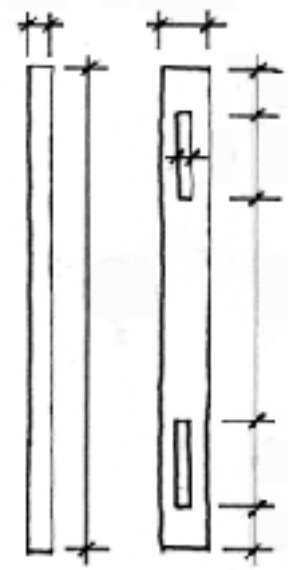
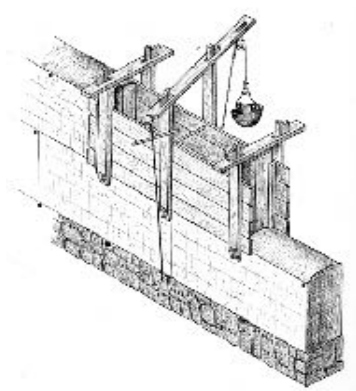
Gal.....

Cat.....

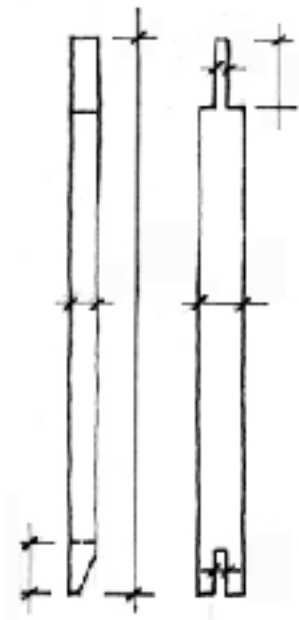


# AUXILIARY MEANS AND TOOLS

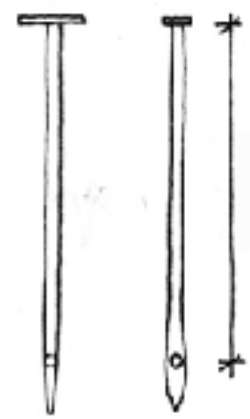
.- A form (formwork)



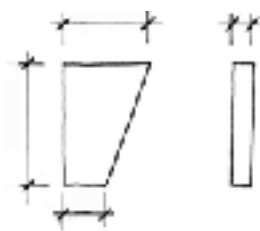
En.....  
 Fr.....  
 So.....AGUJA SUPERIOR  
 Rom.....  
 Gal.....  
 Cat.....



En.....  
 Fr.....  
 So.....COSTERO  
 Rom.....  
 Gal.....  
 Cat.....



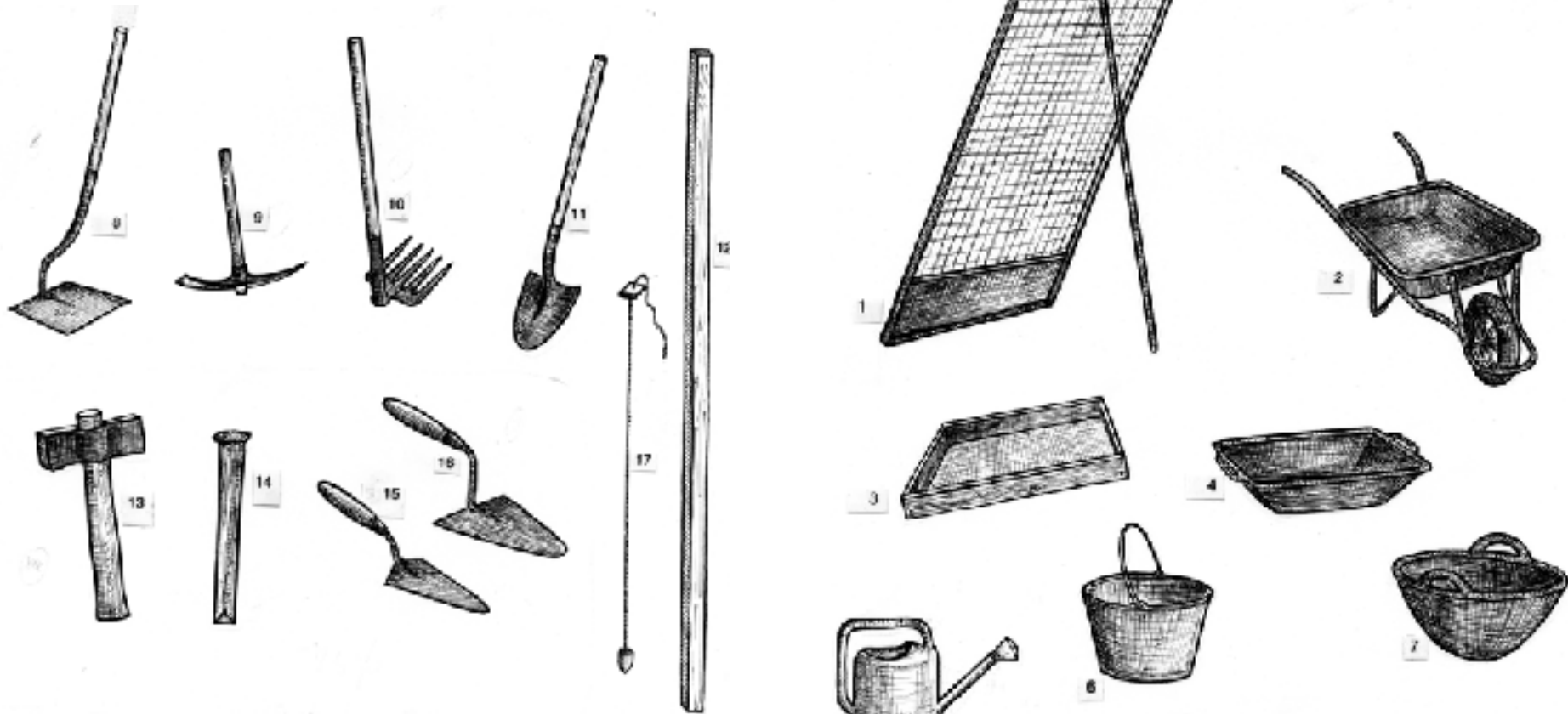
En.....  
 Fr.....  
 So.....AGUJA  
 Rom.....  
 Gal.....  
 Cat.....



En.....  
 Fr.....  
 So.....CUÑA  
 Rom.....  
 Gal.....  
 Cat.....



## AUXILIARY MEANS AND TOOLS



- |                  |                |                        |
|------------------|----------------|------------------------|
| 1). Saranda      | 9). Picoleta.  | 17). Plomada.          |
| 2). Carretó      | 10). Rasclet.  | 18). Cinta mètrica.    |
| 3). Sedàs.       | 11). Pala.     | 19). Nivell.           |
| 4). Gaveta.      | 12). Regle.    | 20). Metre.            |
| 5). Arruixadora. | 13). Maceta.   | 21). Fil.              |
| 6). Poal.        | 14). Escarpe.  | 22). Llapis de paleta. |
| 7). Cabaset.     | 15). Paletina. |                        |
| 8). Lligona.     | 16). Paleta.   |                        |



## FIRST STEPS (OPERATIONS)

You need a skirting board

do we need a socket ?:

1.-.....

.....

2.-.....

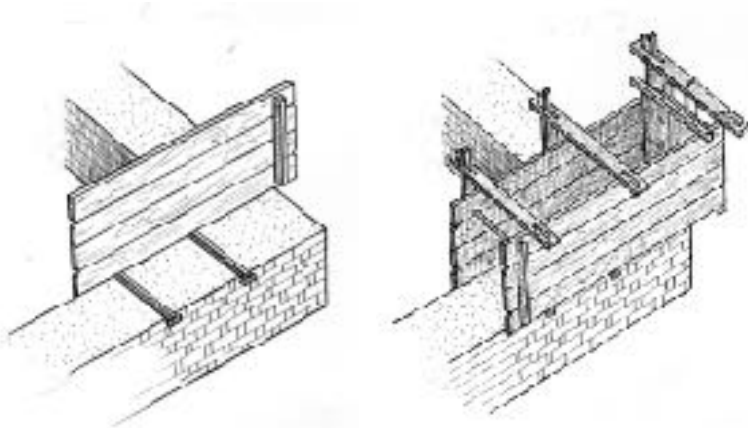
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The formwork assembly

The socket can be done of:

1.- Masonry

2.- Bricks





# FIRST STEPS (OPERATIONS)

## Selection of the ground



Field Tests

WHAT LAND IS GOOD TO BUILD ON WITH RAMMED EARTH?

1.-  
.....

...

2.-  
.....

...

Can the land be improved for better use? How?



Remove large stones

1.-  
.....

...

2.-



Straw



Gravel or sand



## FIRST STEPS (OPERATIONS)

### Prepare the soil (Earth)



The earth needs to be slightly damp.  
The consistency should be dry

Moisten the earth, and stabilize of the earth (If necessary)

Why do we stabilize the ground?

- 1.-.....
- 2.-.....

If the ground is clayish: stabilize with lime

If the ground has little clay: stabilize with cement





## FIRST STEPS (OPERATIONS)

Prepare the mortar (lime with sand or gravel)

Dosage	Lime	1
	Sand or Gravel	2 / 3
Water: for a dry consistency		

### Types of lime



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 ...  
 .....  
 .....



.....  
 .....  
 .....  
 .....



.....  
 .....  
 .....  
 .....  
 .....



- En LIME
- Fr.....
- Sp.....CAL
- Rum.....
- Gal.....
- Cat.....



## STAR FOR WALL WITH CRUST OR BY ESTABILIZE EARTH



WALL WITH CRUST



WALL BY ESTABILIZED EARTH

1. Put the mortar in the meeting point between the form and the socket.
2. Pour the earth in layers until the formwork is full.



If the Wall is with crust you need to place the lime mortar in each layer of earth

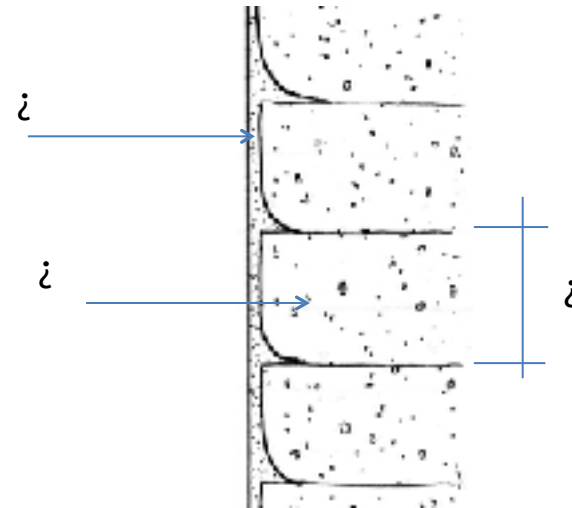


# STAR FOR WALL WITH CRUST OR BY ESTABILIZE EARTH

## THE RAMMER



WITH MANUAL RAMMER



WALL WITH CRUST



## TYPES OF RAMMED EARTH IN POPULAR CONSTRUCTION



WALL BY ESTABILIZED  
EARTH



WALL WITH CRUST



WALL WITH RAMMED EARTH MIXED OR TAPIA VALENCIANA