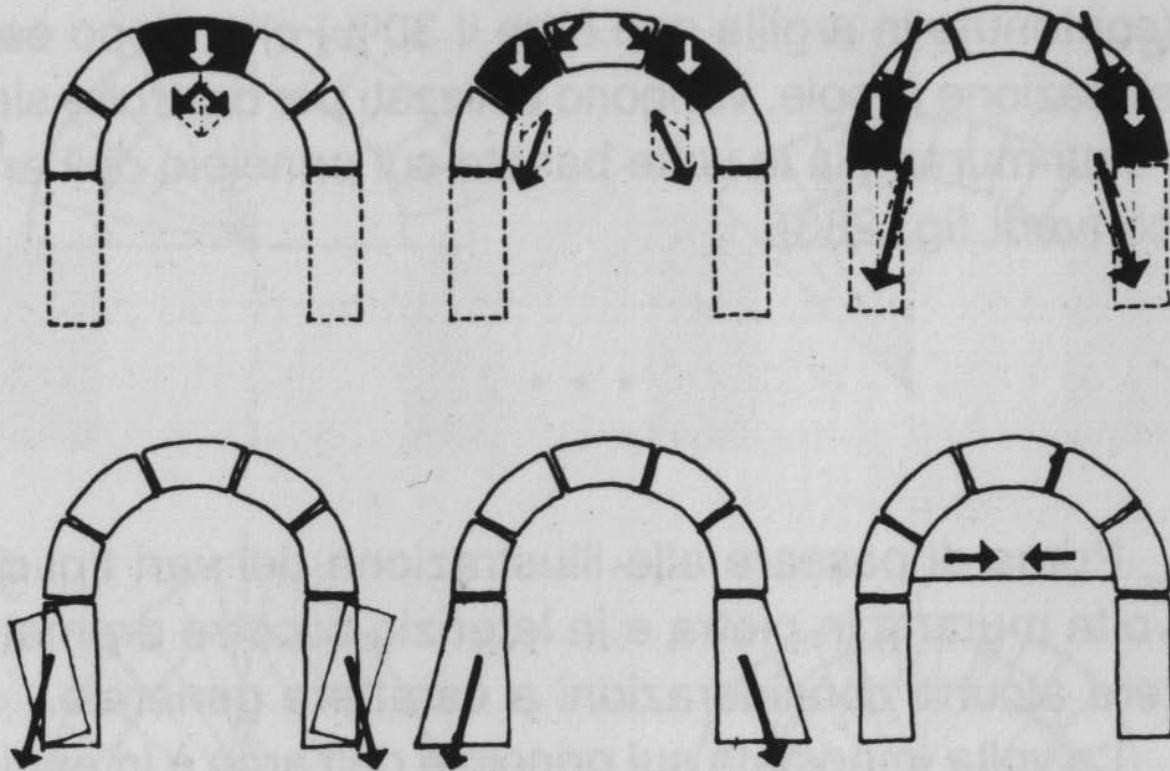
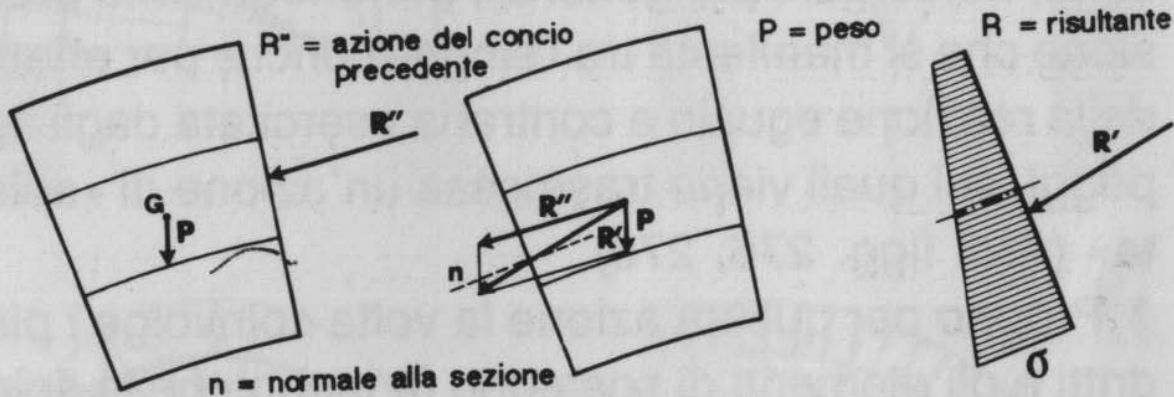


# L' Arco – schema statico

# Principio di funzionamento



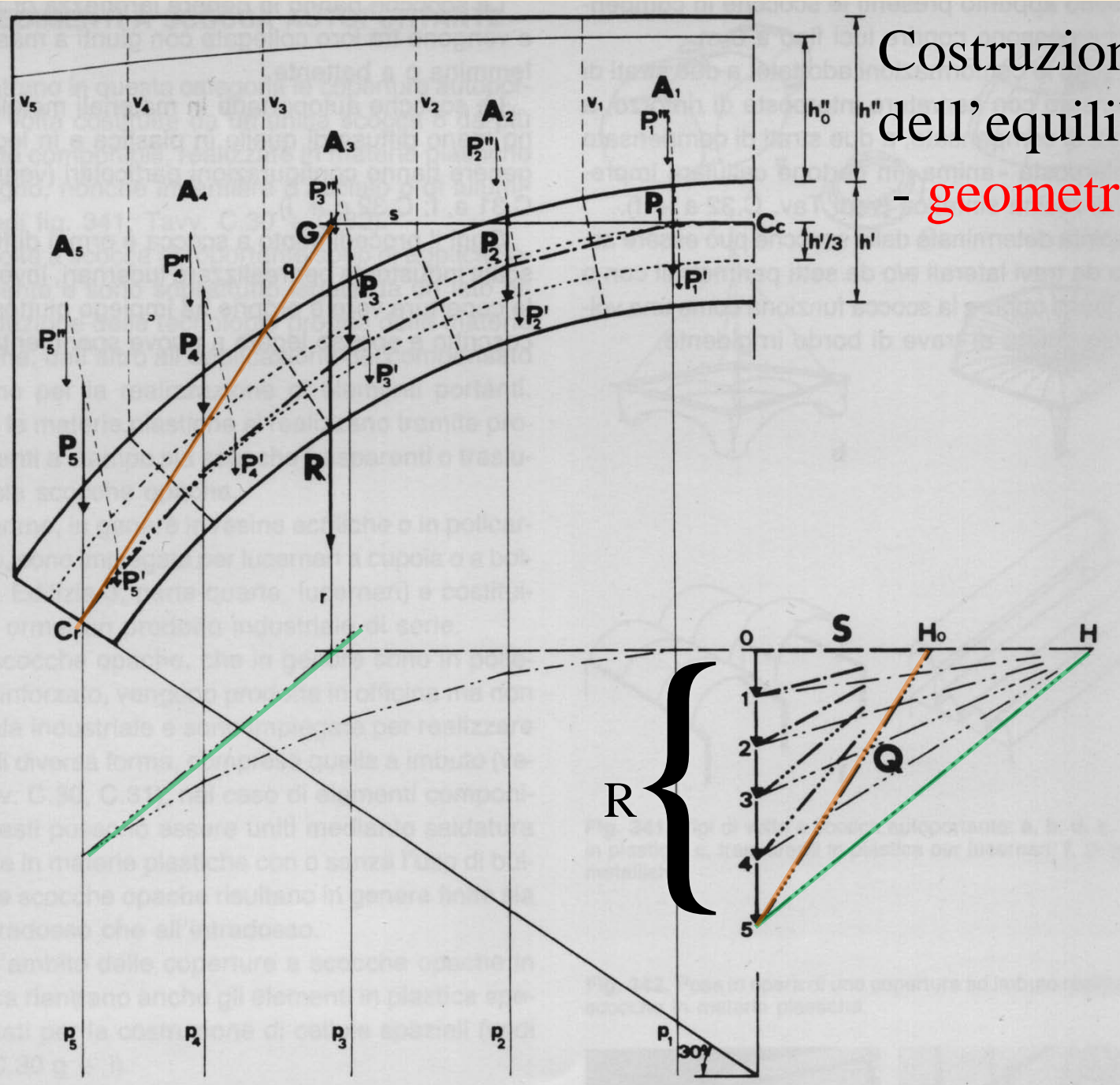
Si parte dal concio in chiave ...  
si scompone la forza peso del concio in 2 direzioni ortogonali alle facce di contatto con i conci adiacenti (o, almeno in direzioni all'interno del cono d'attrito).  
Per iterazione si applica lo stesso principio ai conci successivi.



Importante: i conci sono sollecitati a pressione e flessione, a meno che...

L'arco funziona se i conci hanno tale capacità di resistenza

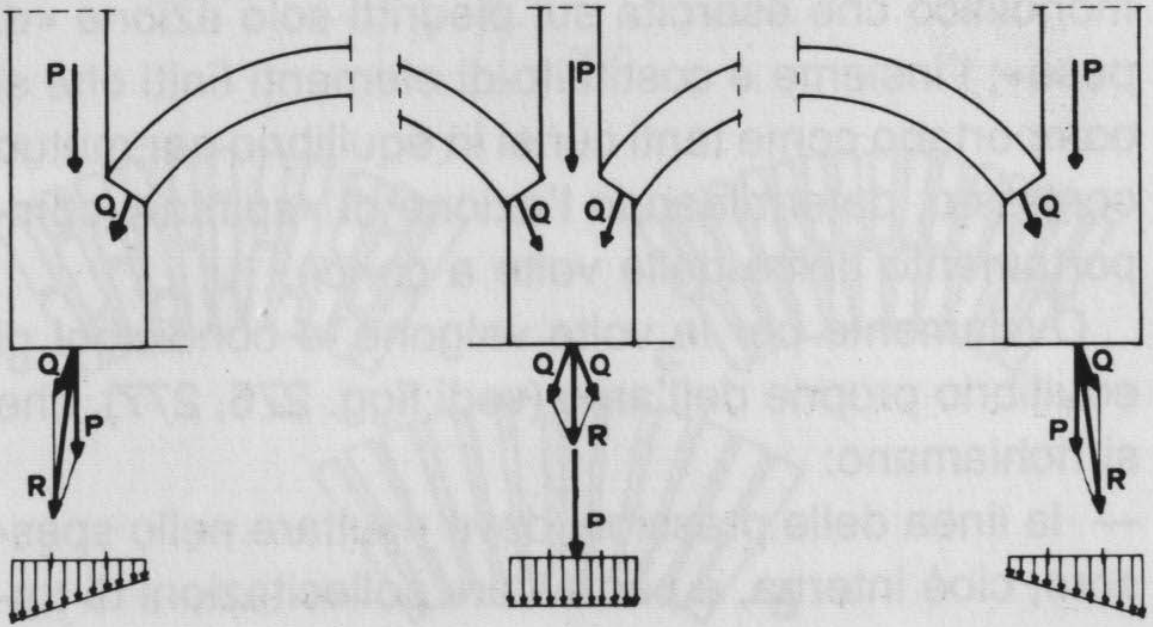
# Costruzione geometrica dell'equilibrio dell'arco - geometria delle masse



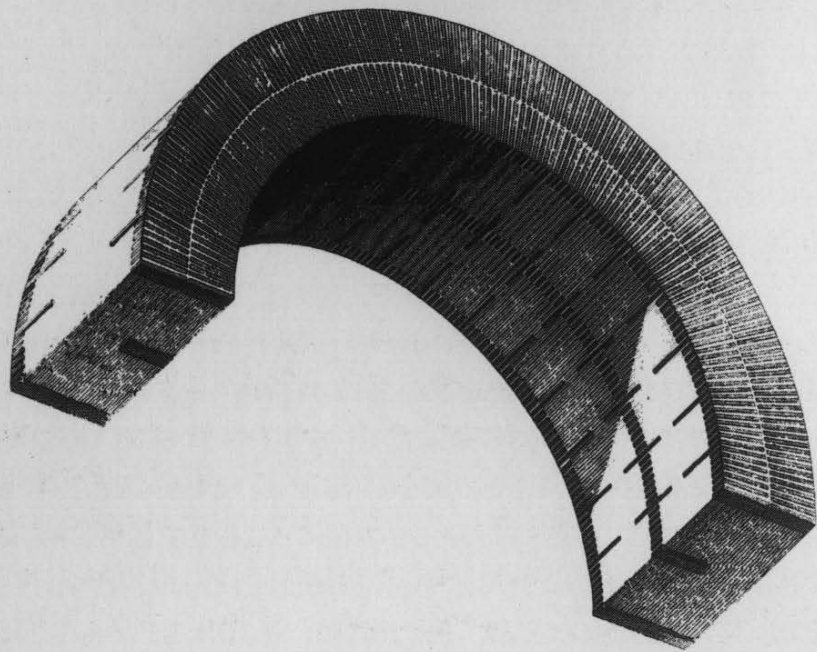
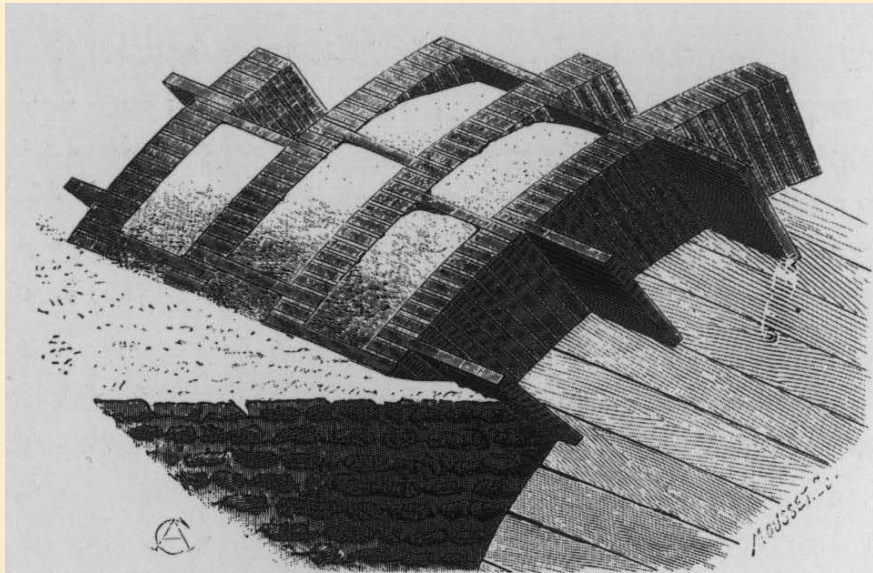
SE il materiale sopra l'arco è costituito da materiale diverso (es. laterizio  $\delta''$ ) da quello dell'arco (es. pietra  $\delta'$ ) Allora  $h_0'' = h'' \delta'' / \delta'$

$$R \times \overline{C_0 G} = \sum_{i=1}^{i=5} P_i S_i$$

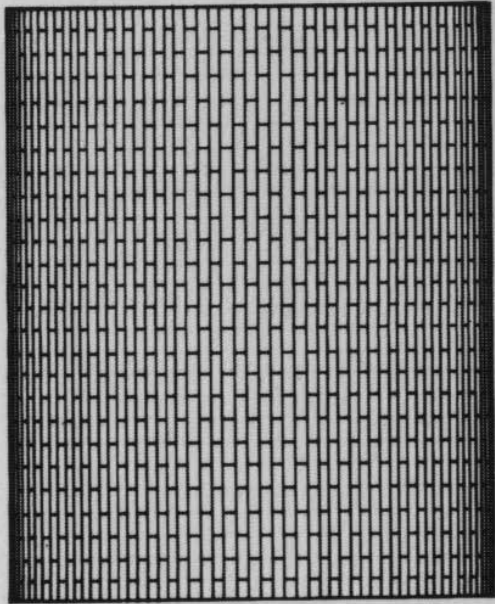
e



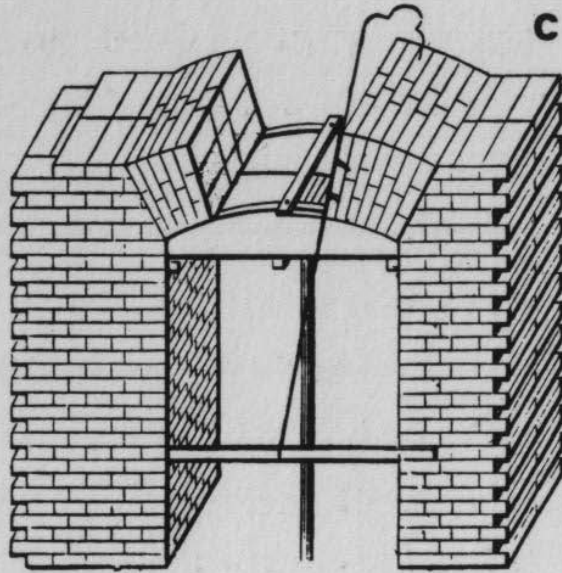




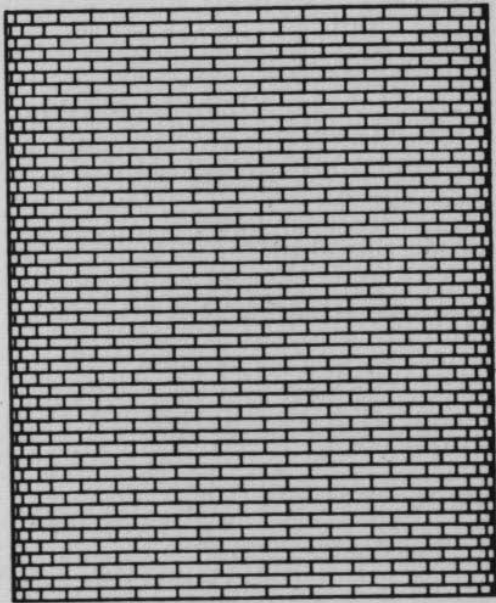
**Fig. 333.** Apparecchi di epoca romana per volte a botte ad archi in laterizio e getti di calcestruzzo ordinario (secondo lo Choisy).



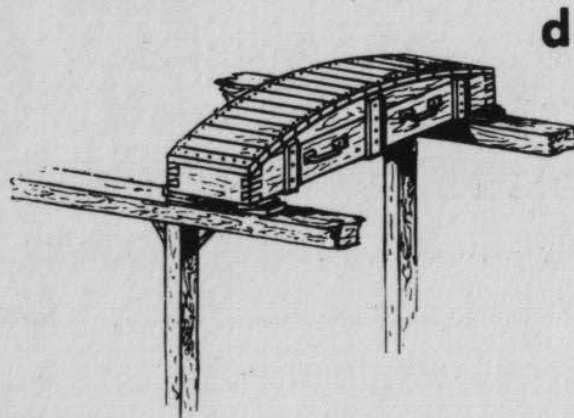
**a**



**c**



**b**



**d**



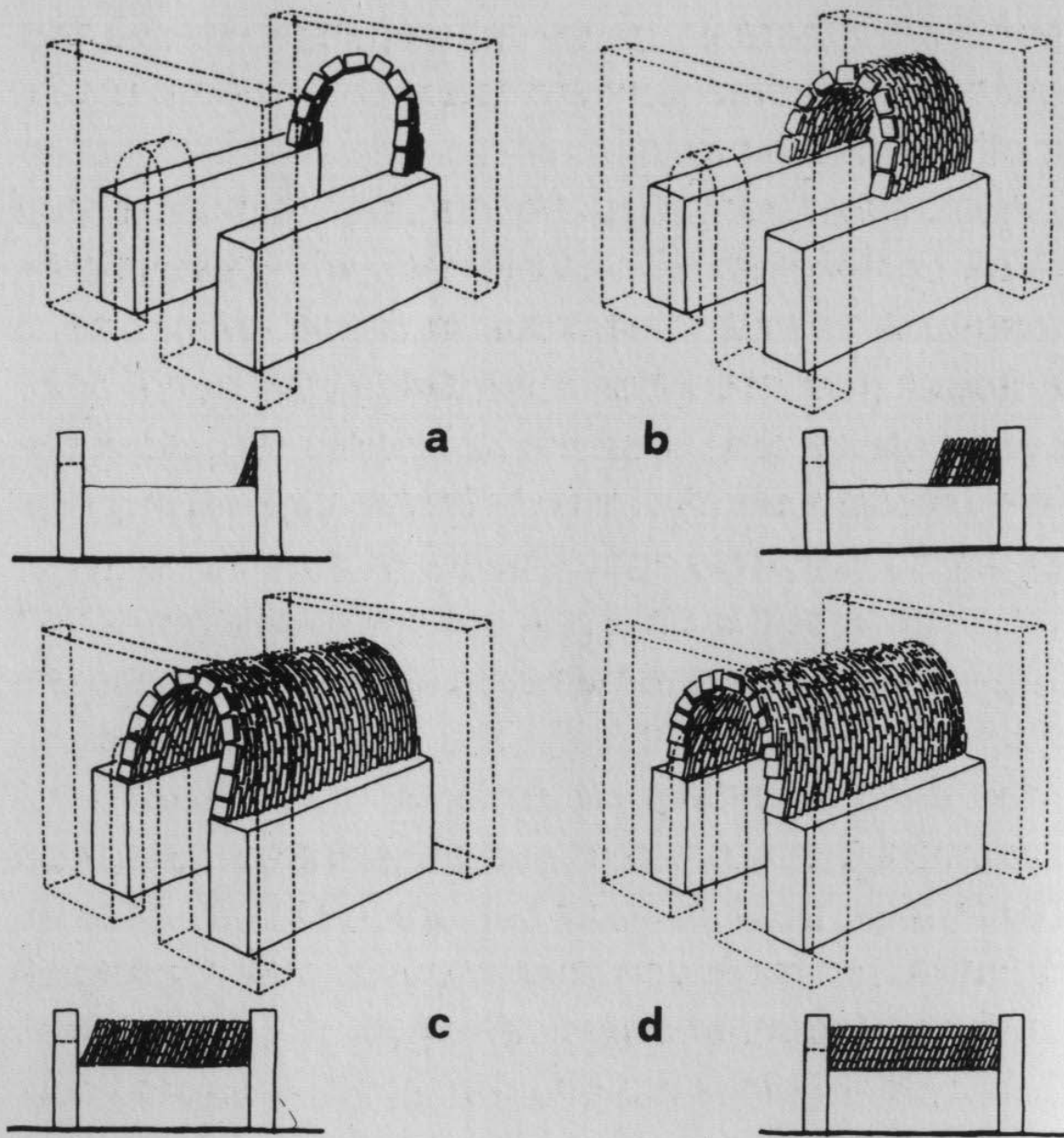
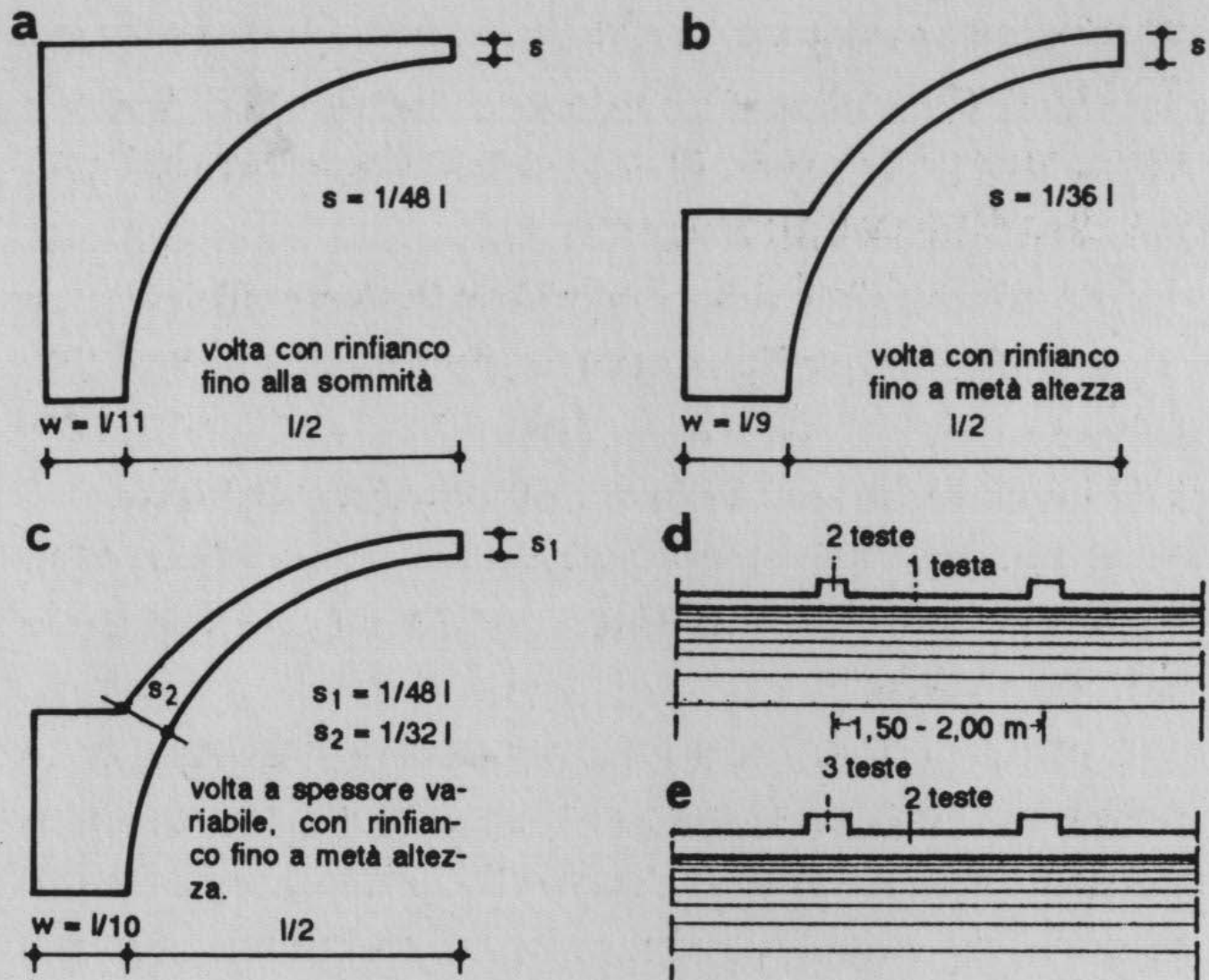
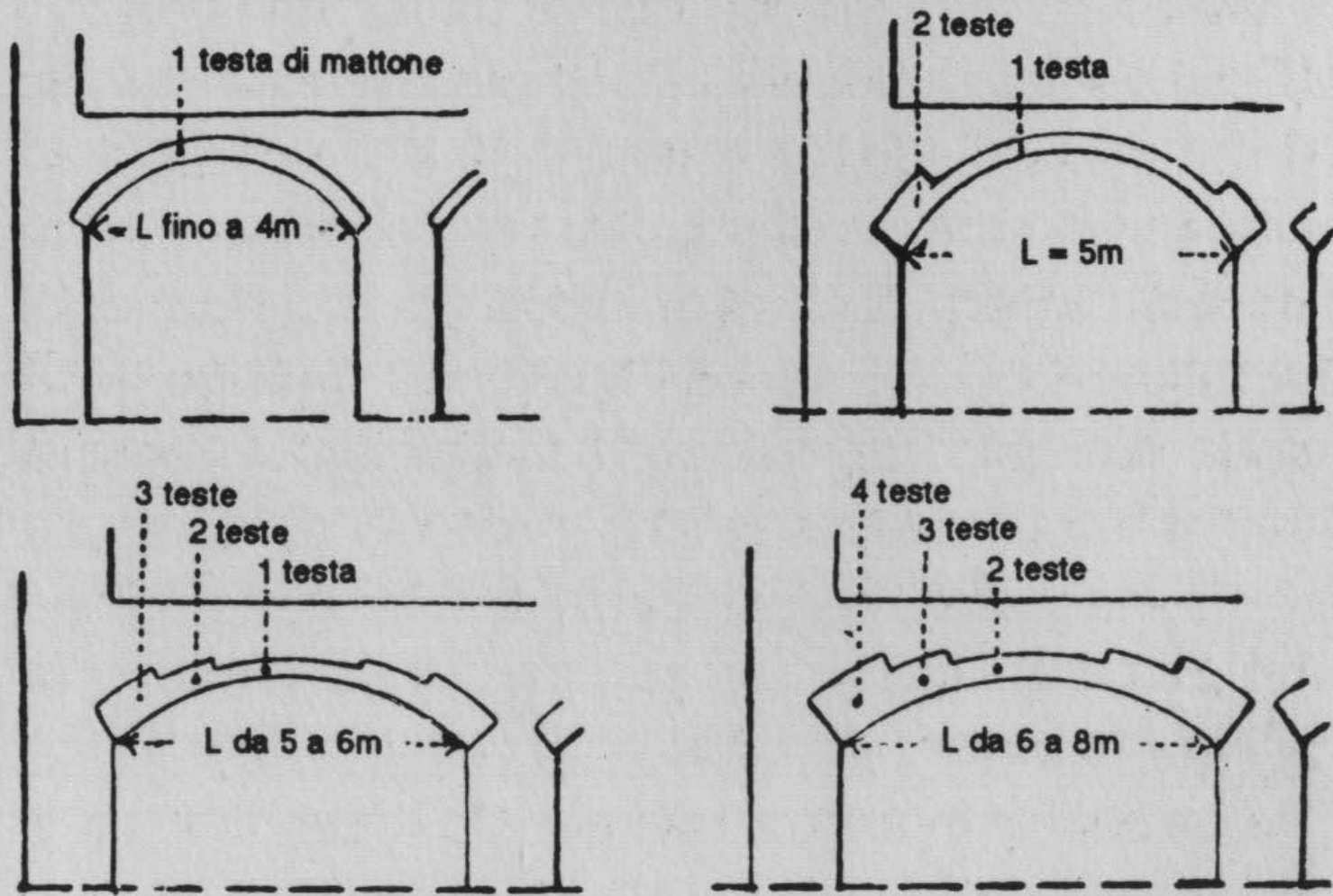


Fig. 289. Schematizzazione dell'antico sistema realizzativo ad or



**Fig. 291.** a ÷ c, spessori in chiave di volte in mattoni e dei piedritti secondo il Donghi; d, e, volte con costoloni estradossati.

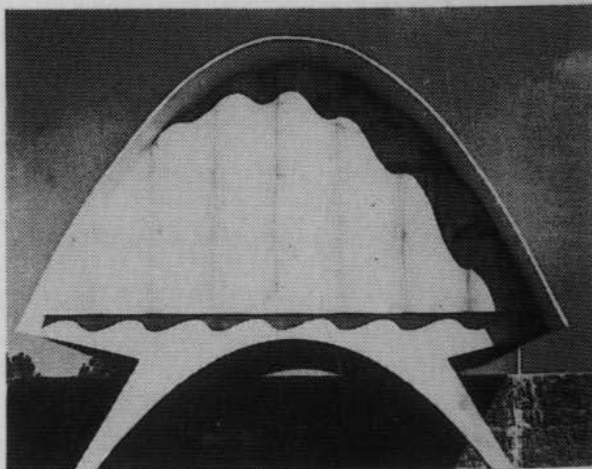
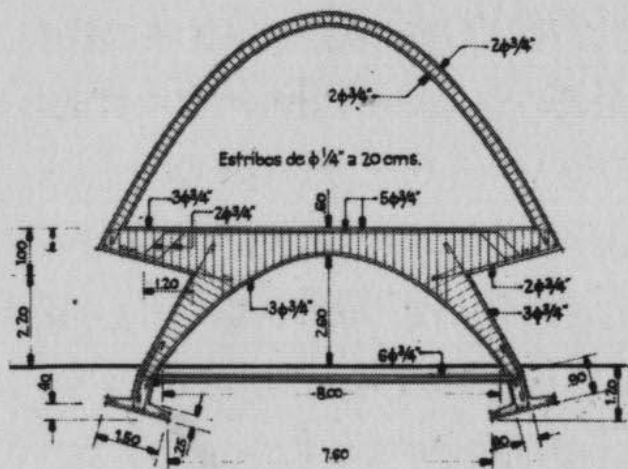




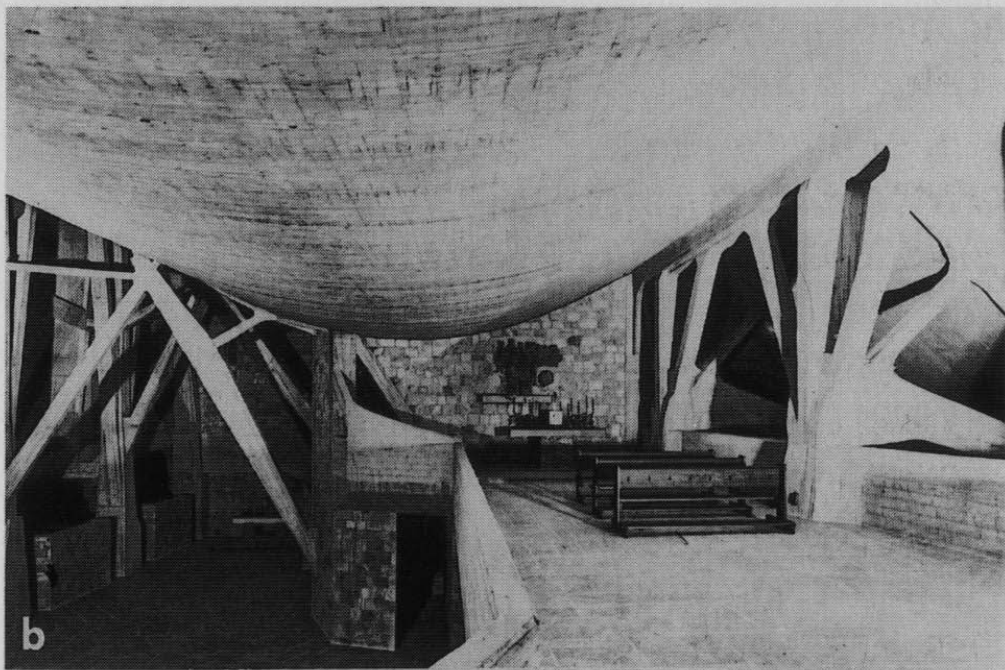
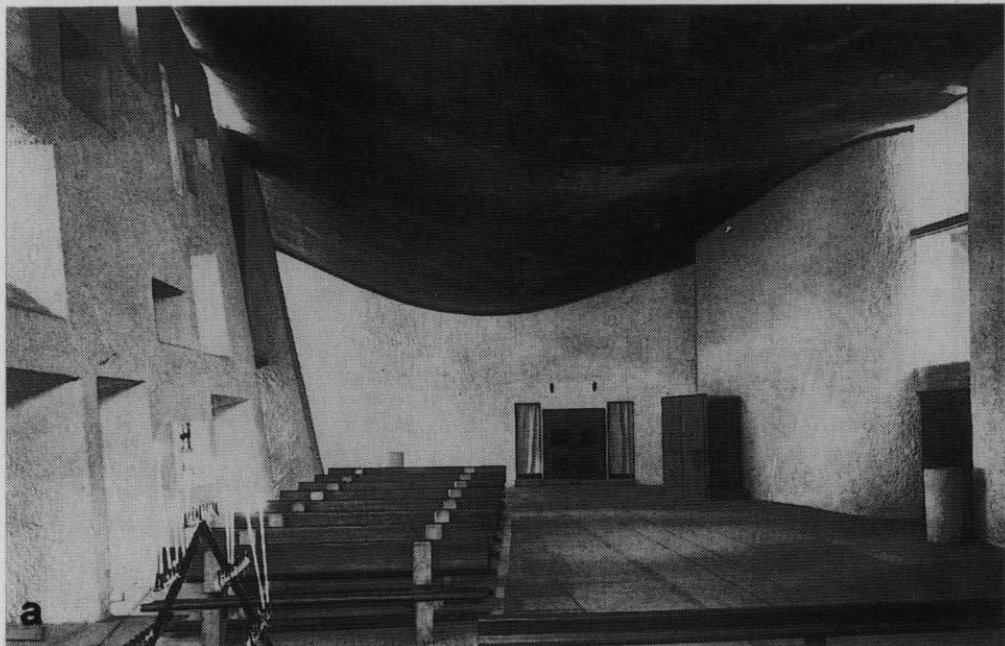
**Fig. 292.** Volte a botte con spessore costante o con riseghe in base alla luce secondo il Marruiller.

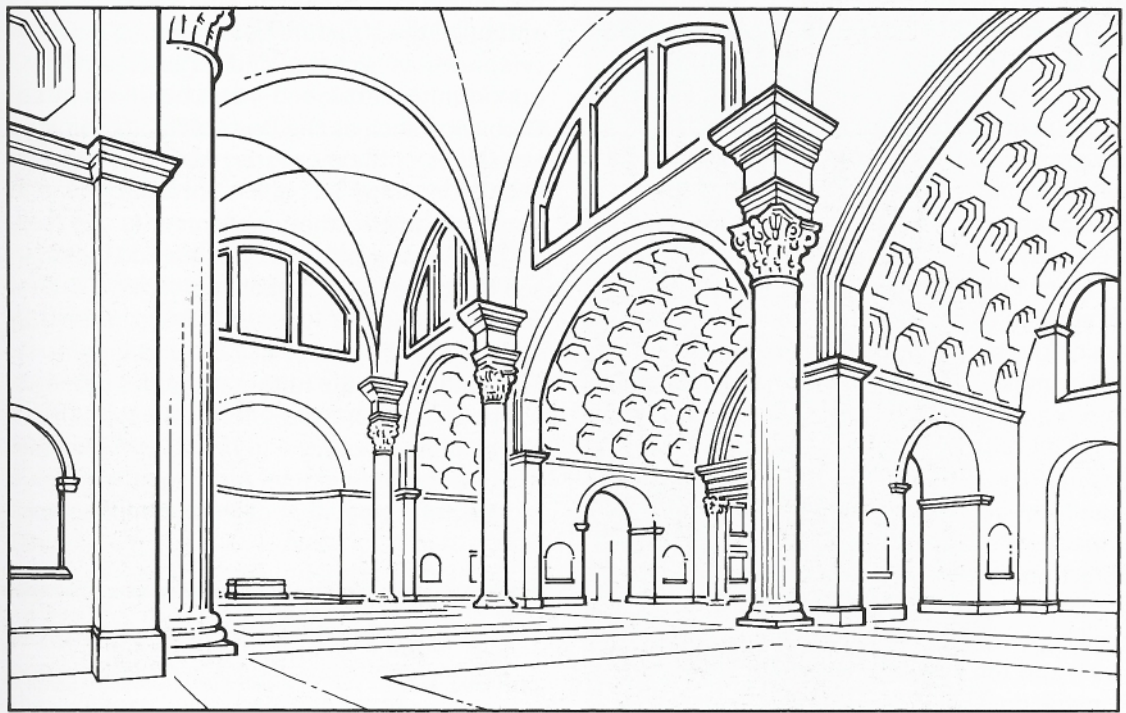




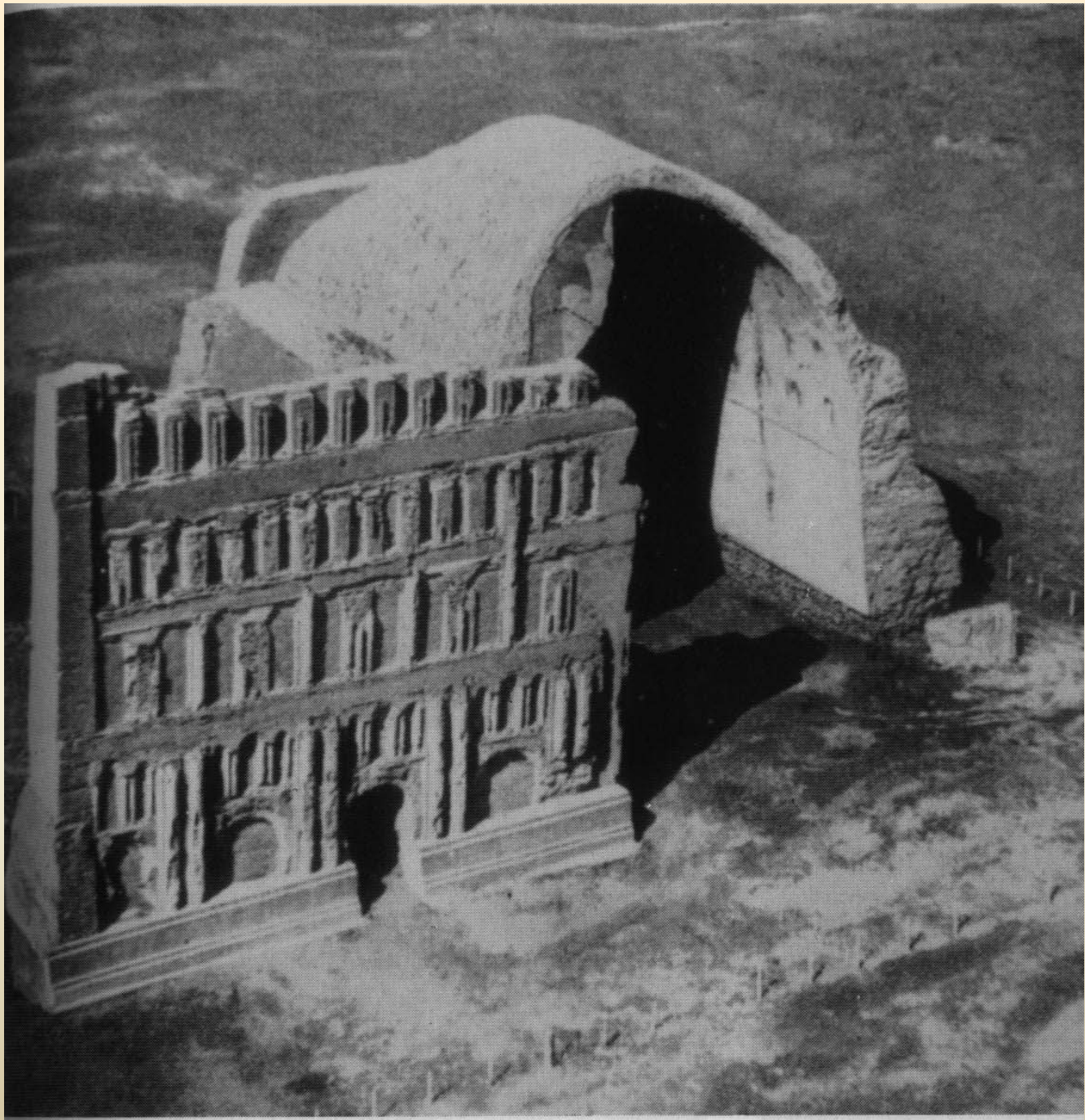




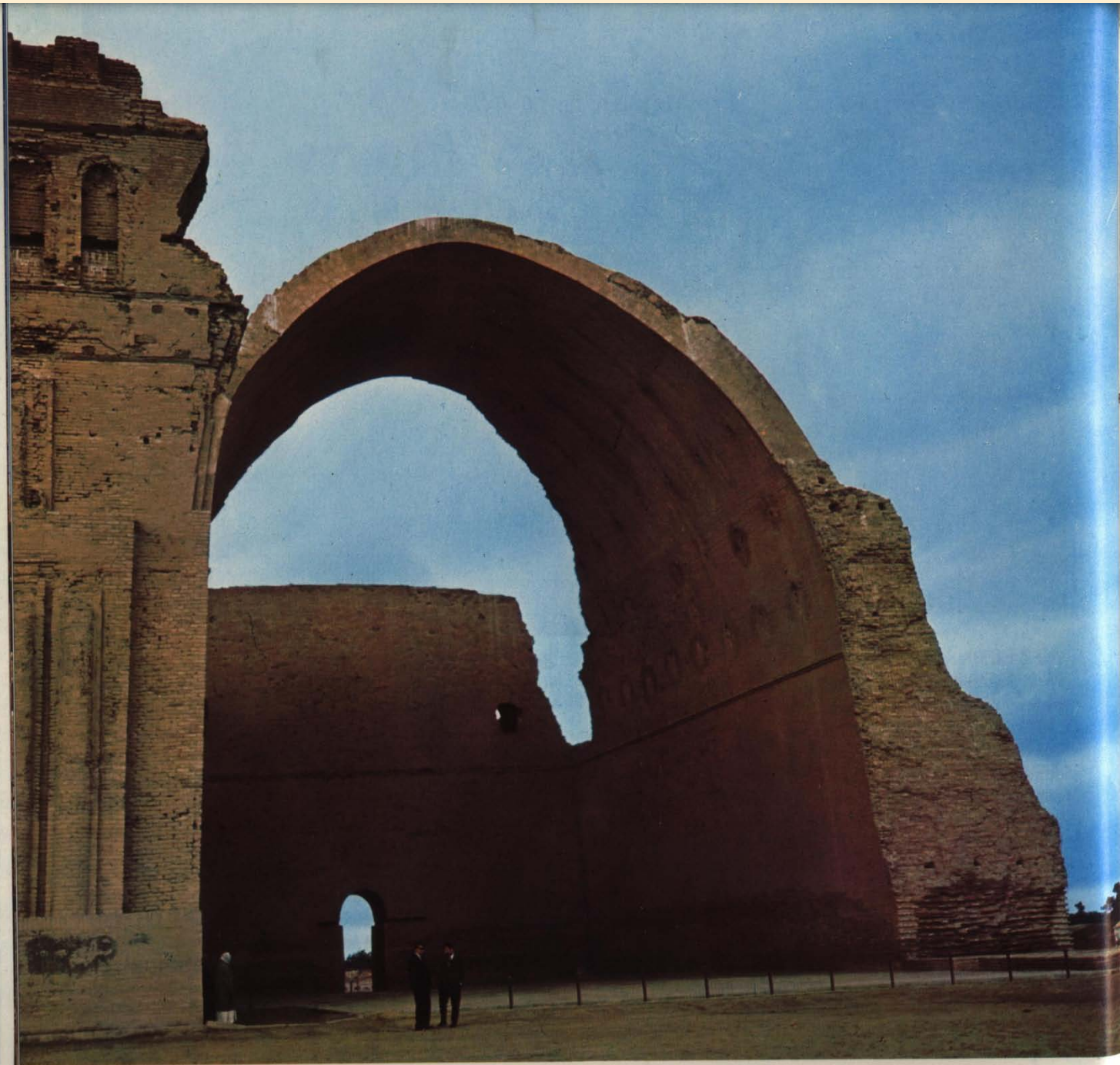












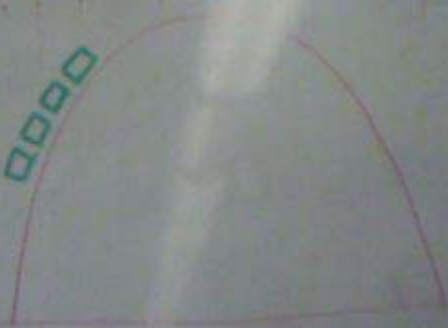
parabola

catenaria

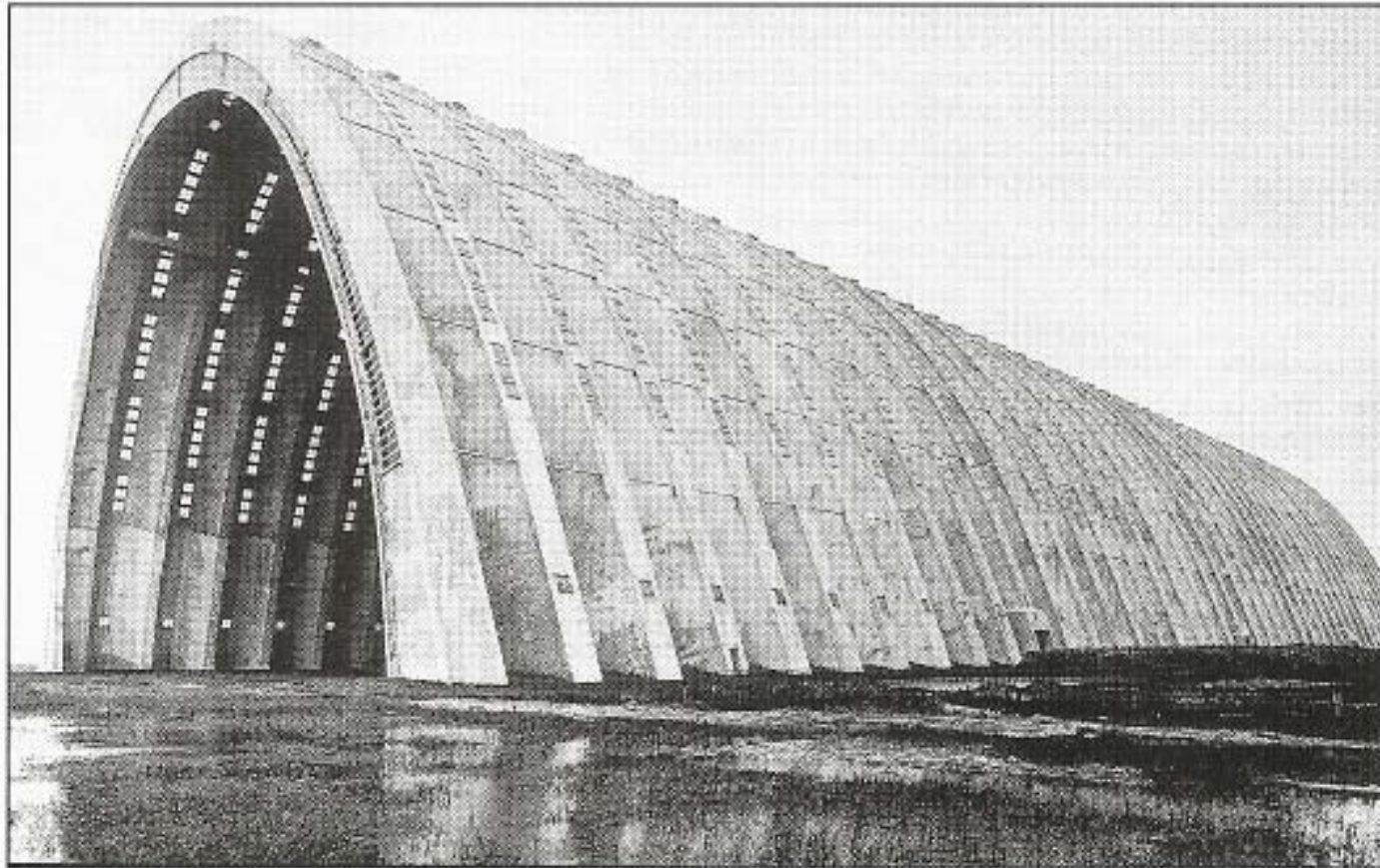
□□□□□□



□□□□







**Fig. 7.14** Airship Hangars, Orly Airport, France, 1921; Eugène Freyssinet, structural engineer. The skin of this compressive form-active vault has a corrugated cross-section which allows efficient resistance to secondary bending moment. The form adopted was fully justified given the span involved and was almost entirely determined from structural considerations.



