

# Vitruvius.

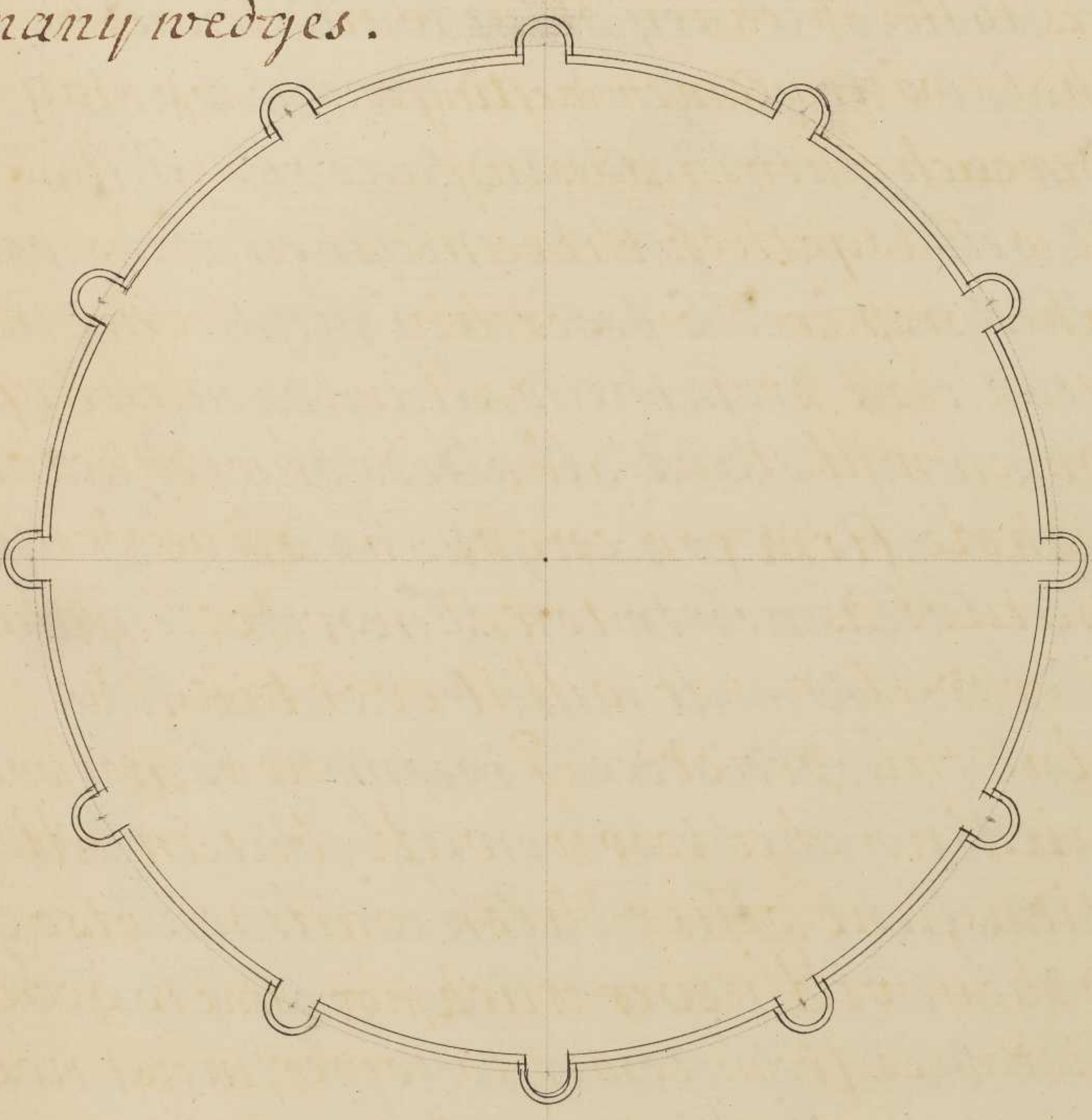
Book, 1. Chap. 5.

30.

without nails, or any iron-work whatsoever: (a) that they may be suddainly cut away upon occasion. For, if the enemy should happen to possess himself of any part of the wall; then, by nimbly cutting away these wooden bridges, he may be stopped from getting down, unless at the peril of tumbling headlong.

The towers must be made round, or with many sides. The <sup>dra</sup>quadrangular are soon destroyed by the machines. The battering-ram breaks the angles very readily. But in the round, it can not: here the stones are rather driven closer together, like so many wedges.

If



(a) The bigness of the towers, as also of the town it self, he leaves to the judgement of the architect. The distance of the towers he determines to a bow-shot, which I have here made sixty four fathoms from the middle of one tower to the middle of another. The thickness of the walls he determines so as to be sufficient for two armed men to pass by each other easily on the top. This I have made nine feet. Namely, two feet for the battlement, and seven for the walk, or passage.

What is observable upon the whole, is, that the towers rise higher than the walls, a full story; or it may be two, to cut off the communication; which communication was made good by wooden bridges without nails, for the purposes he mentions.

I have made the towers twelve fathoms diameter from out to out, and nine fathoms in the clear, which makes their walls nine feet thick, the same with the town-wall.

Then: as the walls are directed to be tied with wood; we may conclude that the masonry was not that true masonry laid in courses, as described in the eighth chapter of his second book.

We must suppose a platform upon the top of every tower, with proper stairs to get up: and to get upon the walls, by communicating with these wooden bridges. And that the towers also have battlements like the walls.