

VITRUVIUS

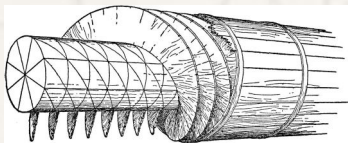
the ten books on architecture

by Marcus Vitruvius Pollio

CHAPTER VI THE WATER SCREW

1. There is also the method of the screw, which raises a great quantity of water, but does not carry it as high as does the wheel. The method of constructing it is as follows. A beam is selected, the thickness of which in digits is equivalent to its length in feet. This is made perfectly round. The ends are to be divided off on their circumference with the compass into eight parts, by quadrants and octants, and let the lines be so placed that, if the beam is laid

in a horizontal position, the lines on the two ends may perfectly correspond with each other, and intervals of the size of one eighth part of the circumference of the beam may be laid off on the length of it. Then, placing the beam in a horizontal position, let perfectly straight lines be drawn from one end to the other. So the intervals will be equal in the directions both of the periphery and of the length. Where the lines are drawn along the length, the cutting circles will make intersections, and definite points at the intersections.



*CONSTRUCTION OF THE WATER SCREW
(FROM THE EDITION OF VITRUVIUS BY FRA GIOCONDO,
VENICE, 1511)*

2. When these lines have been correctly drawn, a slender withe of willow, or a straight piece cut from the agnus castus tree, is taken, smeared with liquid pitch, and fastened at the first point of intersection.

Then it is carried across obliquely to the succeeding intersections of longitudinal lines and circles, and as it advances, passing each of the points in due order and winding round, it is fastened at each

*THE WATER SCREW
(FROM THE EDITION OF VITRUVIUS BY FRA GIOCONDO,
VENICE, 1511)*

