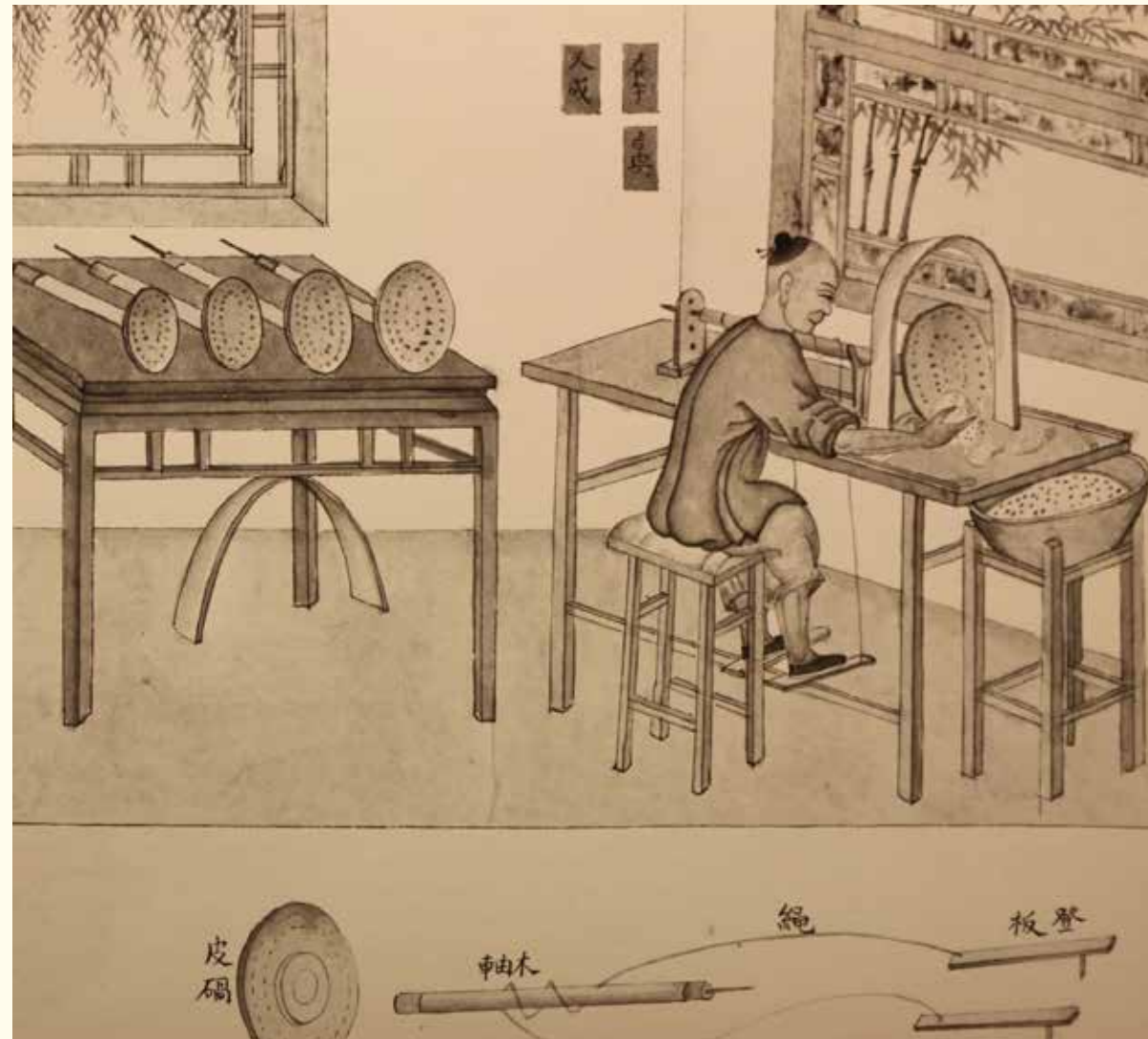
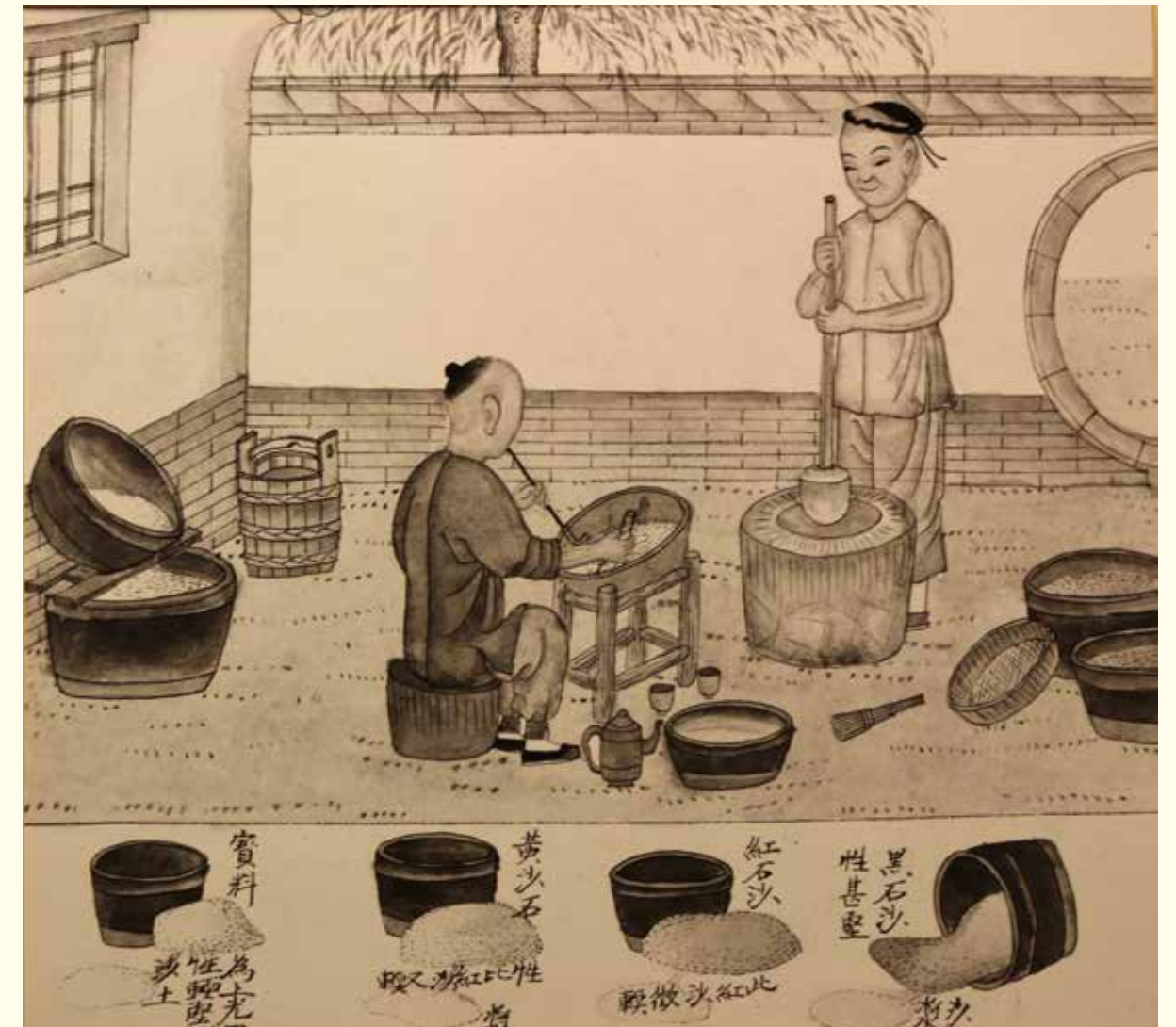


Grinding Agents

Grinding agents — abrasive sands — have been used since prehistoric times to work jade. Sands are diluted in water to create an abrasive mixture that is then dripped over a work area. Coarser grades of sand are used for roughening, forming, or initiating designs in the jade, while finer sands are used for polishing details.



Making abrasive sands.



A container of sands mixed with water sits by a tuo wheel. Illustrations from The Bishop Collection: Investigations and Studies in Jade (1906).

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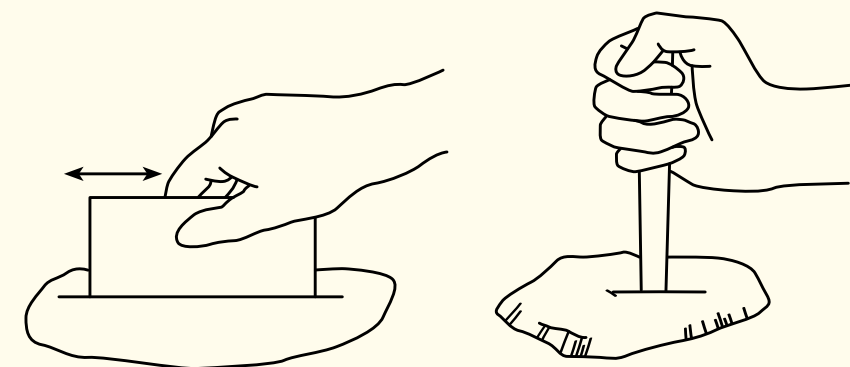
Tools for Working Jade

Ancient tools for working jade are believed to have been fashioned from sharpened rocks, animal bones, bamboo tubes, or hard plant fabrics. These materials were formed into flat saws, cylindrical bores, and string saws. Later, metal tools were made of bronze (beginning in 2000 BCE), iron (beginning in 200 BCE), other alloys, and eventually, steel. By the early twentieth century electronic equipment came into use in jade working.

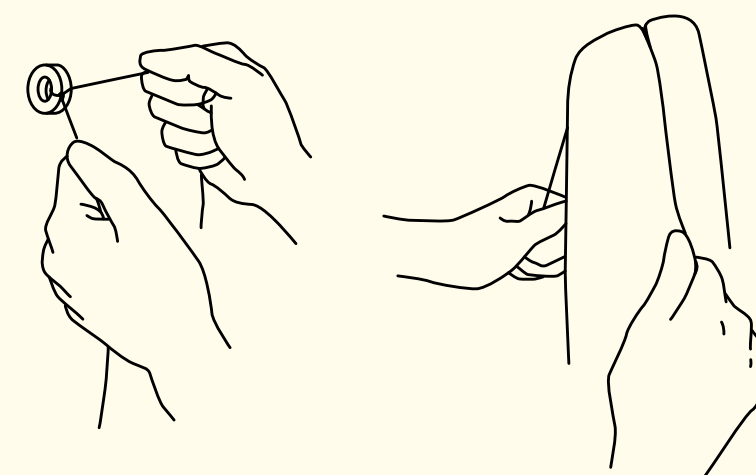


Two-handed steel saw; a pot of sands mixed with water was hung from a tree.
Illustration from The Bishop Collection: Investigations and Studies in Jade (1906).

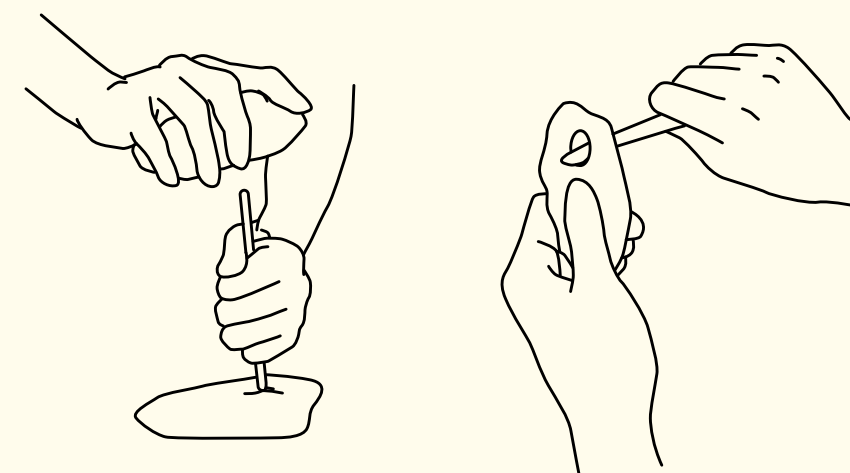
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Left: slice cutting; right: borer cutting.



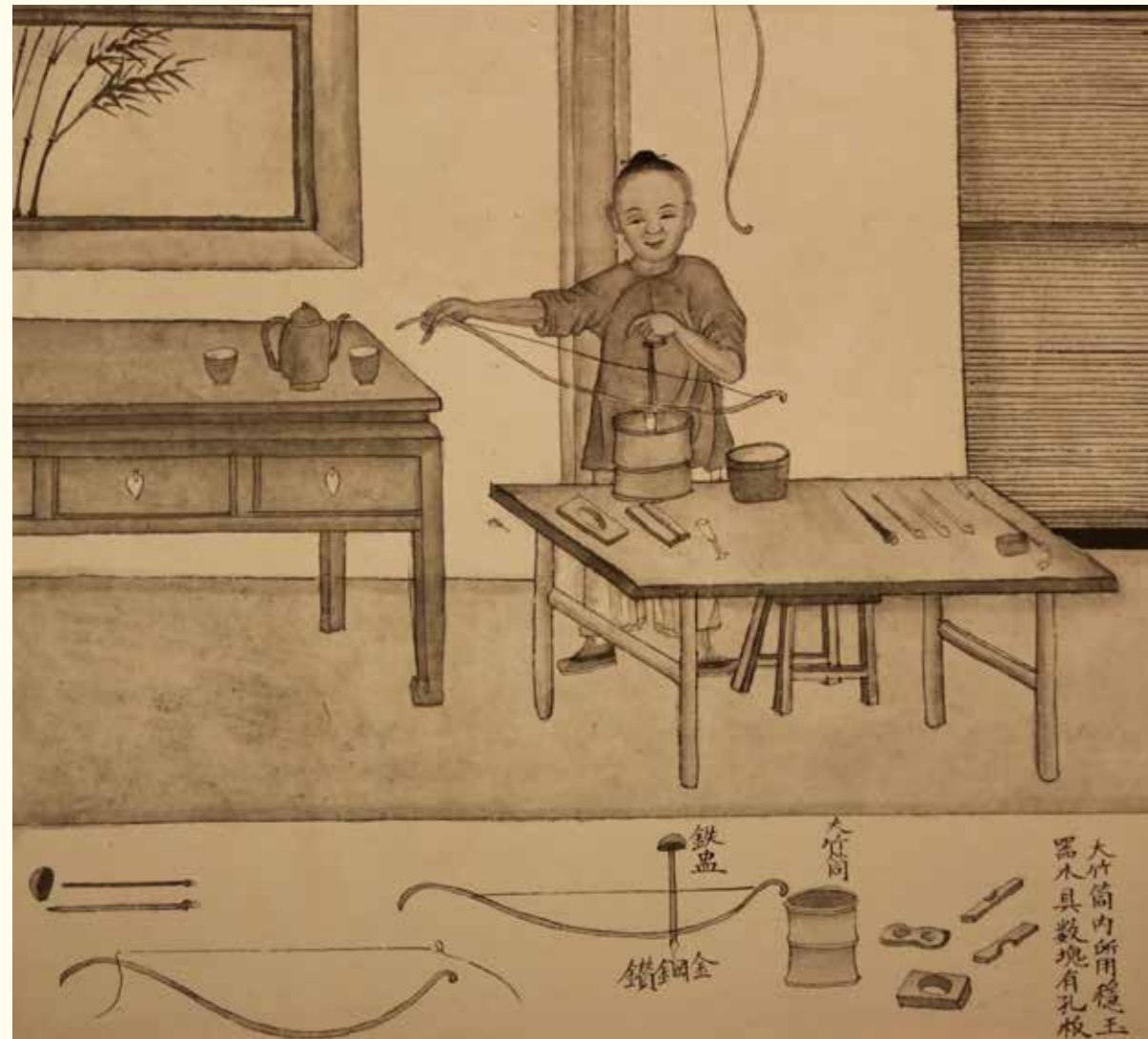
String cutting.



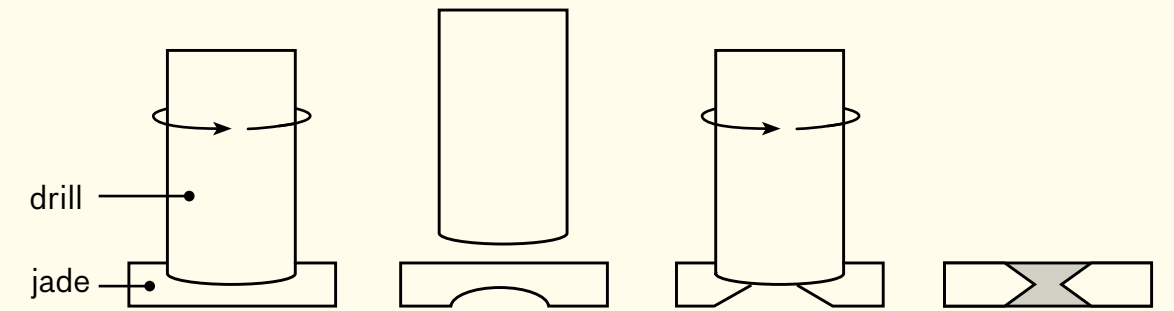
Left: hammer method; right: chisel method.

Making Openwork

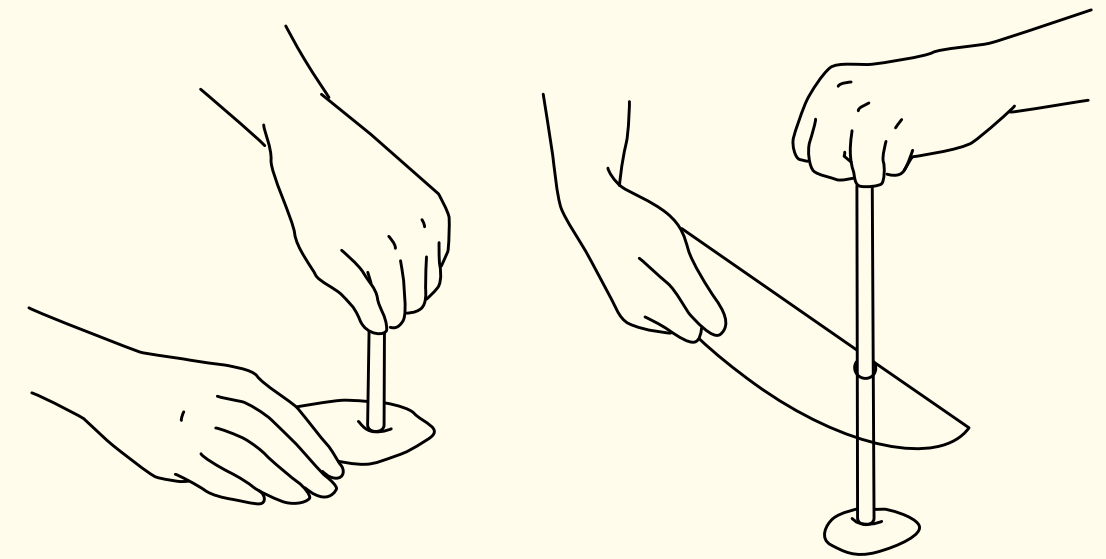
Making intaglio (sunken or engraved) holes in jade began in the Neolithic period. The process involves revolving a cylinder core-bore (tube-shaped tool) against jade. If a material is too thick or large, it will be worked from opposite ends until the two holes meet each other. A hole can be enlarged, re-formed, or mended by sawing with a hard borer or passing a metal wire through the hole back and forth as needed.



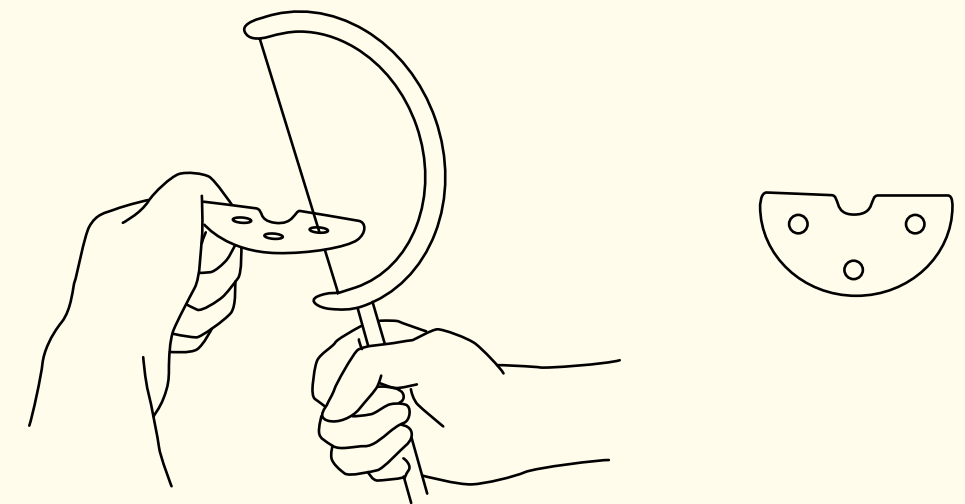
To drill holes in a small piece, the jade is placed in a wooden brace in a bucket. While the left hand holds the diamond borer, the right hand moves a bow string looped around the borer back and forth. *Illustration from The Bishop Collection: Investigations and Studies in Jade (1906).*



1. Cylindrical drill rotates to make a hole on one side of the jade piece.
2. The piece is turned over.
3. The drill creates a hole on the other side.
4. The finished look of both sides drilled.



Left: bare-handed method; right: bow method.



Left: sawing through with a string; right: the finished piece.

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