Whitchurch Silk Mill: Resource Sheet 2

GEARS & SHAFTS

The crown wheel that is located at the top of the vertical shaft is an important gear. It is a key part of the system of gears, shafts and pulleys that transmits the power from the waterwheel to the machinery upstairs.

> **Discussion point**... the crown wheel is made of wood, why would this be beneficial to the system as a whole?

If any part of the system becomes jammed, its wooden teeth will break before any of the more expensive cast-iron components. These teeth can be replaced easily.



The crown wheel is connected to a belt drive which turns long line shafts on the top floor of the Mill. The round pulleys on the shafts were attached to the machinery with belts.

WATER-POWERED WINDING

Historically, the machinery on the top floor of the Mill was powered by the waterwheel.

> **Discussion point**... why was the switch to electricity particularly important for silk weaving to be successful?

It is important to maintain tension in silk weaving which was difficult to do with the fluctuations of water power



In this image you can see a line shaft running along the length of the room. Pulleys connect the shaft to the equipment via drive belts.

