

Richard Blackwell's pumping engine

To the Society for the Encouragement of Arts, Manufactures, and Commerce, the following Proposal is with great Deference submitted, by their most obedient humble servant.

RICHARD BLACKWELL.

Mr URBAN,

HAVING read your Magazine for *July* last, wherein you have obliged the public with a print of that curious engine for raising water in *Kew Gardens*, erected by the ingenious Mr *Smeaton*, it put me in mind of what I have often thought of, *viz.* that (upon the principle of *Archimedes's* water-screw) a machine might be contrived to raise water perpetually, by means of an over-shot wheel applied to the said screw, agreeable to the annexed drawing. On this principle I once undertook to construct a model of such a machine, but other employments not permitting me to finish it, I cannot ascertain the success; yet I conceive the water which may be raised by the revolution of the screw, when applied to the over-shot wheel, will be more than sufficient to keep it in constant motion; and the surplus water may be applied to many useful purposes in life.

The great utility of such a machine is very obvious, especially among the seats of our nobility and gentry, many of whom are so unhappily situated that they have no convenience of water but at a continual expence of bringing it from some distant place; whereas, could they raise it to a sufficient height, they might constantly be supplied without any trouble: Add to this the great advantage this machine may yield in pleasure gardens, and the infinite service the reservoir of water would be in cases of fire.

If by experiment it should appear, that the water raised by the screw is more than sufficient to supply the overshot wheel, the whole may be employed to add more power to that wheel, which may then be applied to many useful purposes where millwork is applicable.

The whole is submitted to those gentlemen whose knowledge in hydrostaticks renders them proper judges of such matters.

(From *The Gentlemen's Magazine*, England, 1770.)

REFERENCES *to the* PLATE

- A The reservoir.
- B The Archimedian screw, by the revolution of which the reservoir is supplied with water.
- C The over-shut wheel, by the force of which the skrew is kept in a constant rotation.
- D A small rivulet, or spring, which supplies the well with water.
- E The bolt to regulate the flux of the water into the over-shot wheel.

