

x P R E F A C E.

would be requisite to construct a Machine to raise Forty Tons.

With Regard to Arches, I have only endeavoured to fix their several Thicknesses or vertical Length of the Key or Arch Stones, in Proportion to their different Widths between their Springers,

At the End of this Book I have a written a few Pages upon a Question which has been much controverted (*i. e.*) Whether a large Receiver, such as Jarrow's Lake in the River Tyne, up a River a Mile or two, more or less, from the Sea, doth or doth not (cause the Water to come into that River with so much a greater Force than if the River was near of a Breadth all the Way to the End of the Flux as to) cause the Water to raise higher ten or twelve Miles, more or less, up the River, than it would do if there was no such Receiver as above; and by this Receiver not only holding a great Quantity of the Flux itself; but being also the Means of more Water being deposited ten or twelve Miles up the River; I say if it is demonstrable, a large Receiver near the Mouths of Rivers, has these Effects, the Receivers are in Fact the Cause of keeping the River's Mouths more open for Ships to sail into and out of such Rivers; and are also the Cause of the River's being navigable further up into the Country; and consequently to lessen such Receivers must be injurious to the Navigation of Rivers.

T H E