

of three of them were Vandy, Mons Le Roy, the Abbe Bosson
and Mons Berde. The last two celebrated mathematicians
I presented as a model for a bridge of a single arch
of four hundred feet over the river Schuylkill at Philadelphia.
The Committee brought in a report which the Academy adopted
that an arch on the principle and construction of the model
might in their opinion be extended four hundred feet, the
extent proposed.

In the month of the same year the model was sent to Sir Joseph
Banks, Park Royal Ave in England.

Prime then had a complete arch rib of 90 feet span
and five feet height from end line to the centre of the arch
cast at the foundry of Messrs Walker, at Rotherham ⁱⁿ ~~the~~
and erected. It was a segment of a circle of 410 ft
diam. It was erected between the walls of a furnace &
the gable end of a brick building, which served as abutments.
The rib weighed three tons & they loaded it with double
its weight in pig iron. A description of the experiment being
sent to Sir Joseph Banks, he wrote in answer
"I look for many other bold improvements from your
countrymen, the Americans, who thrust with vigor and are
not fettered with the trammels of science before they are
capable of exerting their mental faculties to advantage."

On the success of this experiment Prime had the same founders
cast and manufacture a complete bridge of five ribs of 110 ft span
and five feet rise being a segment of a circle of 610 ft diam
and sent it to London as a specimen for establishing a manufactory
of bridges to be sent to any part of the world.