s heard, and the lightning precedes the thunder. The report of the meteor of 1783 is said to have been heard at Windsor Castle, ten minutes after the disappearance of the meteor itself. It is therefore evident that sound is not instantaneously conveyed from one place to another.

Many efforts have been made to determine the velocity of sound. The early experimenters upon the subject are generally ackowledged to be inaccurate, chiefly from not considering the influence of the wind. It is evident, that sound must be transmitted with a less velocity when the wind is blowing in a contrary direction to that in which it is heard, than when they are both moving in the same direction. In the experiments that were first made, this was not considered; but in those which have been more recently performed, a time has been chosen when the air was at rest, or the velocity of sound has been measured in a direction at right angles to the wind. It has also been ascertained, that the temperature of the air has an influence upon the velocity of sound, and it is necessary that it should be accurately observed. There is, however, a circumstance more likely to be productive of error than either of those we have mentioned, and that is the difficulty of obtaining an exact measure of the interval of time between the sight of a flash and the hearing of a sound.

The most accurate experiments that have been made are those of Mall and Vanbeck, and those of the French academicians, both of which were made in the year 1822. In the experiments of the Dutch philosophers, a clock was used to measure the interval of time between the occurrence of the flash and the sound. This clock was so constructed, that its index could be at any time stopped without stopping the clock itself; and with it time could be measured to 1-100th of a second. The French used a watch of very ingenious construction. It was furnished with two hands like a common time-piece, but one of these performed a revolution every second, and was furnished with a dotting pen supplied with printers' ink; so that being made to touch the dial-plate, which it could do without stopping, an impression was left which might be read off at leisure. By these experiments it was ascertained, that when air is dry, and at the freezing temperature, it will conduct sound at the rate of 1090 feet in a second.

Some remarkable facts have been recorded by philosophers and travellers, concerning the distance at which sounds may sometimes be heard. It is stated by Lieutenant Foster, that he has held a conversation with a man across the harbour of Port Bowen, in the North Seas, a distance of one mile and a quarter. We are informed that the human voice may often be heard across the Straits of Gibraltar; and Dereham asserts that he has heard, at the distance of one hundred and twenty miles, the report of the guns of Carlscroon. But the most remarkable instance of the conduction of sound over a large space, is that mentioned by Sir Stamford Raffles. It is reported by that lamented philosopher and naturalist, that the eruption of Tombozo, in Sambawa, in 1816, was heard at Sumatra, nine hundred and eventy miles distant, a circumstance probably attributable to a peculiar state of the atmosphere, as well as the extreme violence of the eruption.—Weekly Visitor.

## THE INFINITE DIVISIBILITY OF MATTER.

It is a fact peculiarly calculated to humble the pride of man to show the limited circle of his knowledge, that the most minute atom contains wonders, that are far beyond his comprehension, and defy all his efforts to fathom and explain. We need not look abroad into the field of nature, or contemplate the