

N° XXI.

*Extract of a Letter from the Rev. JEREMY BELKNAP,
containing Observations on the Aurora Borealis.*

Dover, New-Hampshire, March 31st, 1783.

Read May 2, 1783.

D ID you ever, in observing the Aurora Borealis, perceive a *sound*? I own I once looked on the idea as frivolous and chimerical, having heard it at first from persons whose credulity, I supposed, exceeded their judgment; but, upon hearing it repeatedly, and from some others whom I thought judicious and curious, I began to entertain an opinion in favour of it. I was strengthened in this opinion about two years ago, by listening with attention to the flashing of a luminous arch which appeared in a calm frosty night, when I thought I heard a faint rustling noise like the brushing of silk. Last Saturday evening I had full auricular demonstration of the reality of this phenomenon. About ten o'clock the hemisphere was all in a glow; the vapours ascended from all points, and met in a central one in the zenith: All the difference between the south and north part of the heavens was, that the vapour did not begin to ascend so near the horizon in the south as in the north. There had been a small shower with a few thunder claps, and a bright rainbow in the afternoon; and there was a gentle western breeze in the evening which came in flaws, with intervals of two or three minutes; in these intervals I could plainly perceive the rustling noise, which was easily distinguishable from the sound of the wind, and could not be heard till the flaw had subsided. The flashing of the vapour was extremely quick; whether accelerated by the wind I cannot

cannot say; but from that quarter where the greatest quantity of the vapour seemed to be in motion, the sound was plainest; and this, during my observation, was the eastern. The scene lasted about half an hour, though the whole night was as light as when the moon is in the quarters."

N° XXII.

A Letter from J. MADISON, Esq. to D. RITTENHOUSE, Esq. containing Experiments and Observations upon what are commonly called the Sweet Springs.

THESE waters rise on the north side of a large mountain at the foot of it, called the Sweet Spring Mountain, in the county of Botetourt. The south side is covered with stones of an ocreous appearance. In many places iron ore may be found; but on the north the mountain is fertile, covered with a rich mould, at least near the spring. The remarkable efficacy of these waters in many disorders, especially, it is said, in consumptive complaints, first induced me to attempt their analysis. Such experiments as I had time and opportunity to make, I shall faithfully relate, and leave it to others, better qualified than myself, to judge of their merits.

Experiment 1. Having plunged a very sensible mercurial thermometer in the spring, it stood at 73°. The temperature of air was about 69.

2. A good hydrometer sunk one-twentieth of an inch deeper in common mountain water, than in the spring.

3. Nut-galls mixed with the water in a wine glass struck a palish brown, which shewed that there was little or no iron in it.

4. Violets mixed with the water in a wine glass, turned