V. *Account of a Muſical Inſtrument, which was brought by Captain* Fourneaux *from the Iſle of* Amſterdam *in the* South Seas *to* London *in the Year* 1774, *and given to the Royal Society.* By Joſhua Steele, *Eſquire, in a Letter to Sir* John Pringle, *Bart. P. R. S.*

TO SIR JOHN PRINGLE, BART. P. R. S.

SIR,

Margaret-Street, Cavendiſh-ſquare, December 6, 1774.

Redde, Jan. 22, 1775.

AGREEABLE to your requeſt, I have examined the curious ſyſtem of pipes, brought by Captain Fourneaux from the South Seas. The reſult of my experiments are herewith incloſed. The inſtrument was ſo new to me, that I ſhould be ſorry its reputation ſhould reſt intirely on my report, as I think an expert blower of the German flute might make further diſcoveries; towards which, my obſervations, whether perfectly accurate or not, may in ſome meaſure ſerve as a guide. The accident of a flat third, coming in the ſtead of a ſharp one, from the pipes 6. 7. 8. and 9. is ſo extraordinary, that I ſuſpected, for ſome time, the loweſt (or fundamental) tones of thoſe pipes were a quarter tone (or *dieſis)* lower than I have marked them; but, after repeated trials, and by the beſt judgement I could form by my ear, and by compariſon with another inſtrument, I gave

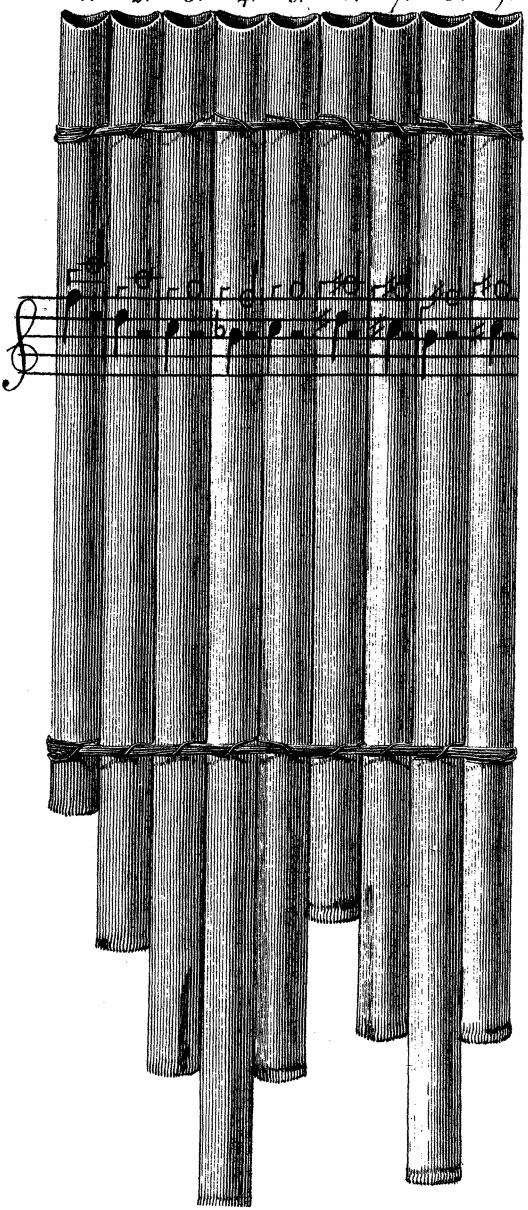
up that ſuſpicion; and being confirmed in the opinion, that the moſt acute tones I could obtain from thoſe four pipes, were *minor thirds* to the moſt grave, I have ventured to mark them ſo. The reaſon why there was room for my doubt above mentioned is, becauſe the difference of hotter or colder, moiſter or dryer, has a ſenſible effect on the acuteneſs or gravity of the tones.

I am, SIR, with great regard,
Your moſt humble ſervant,

JOSHUA STEELE.

Figure of the System of Musical pipes, accord.g to their exact size

1. 2. 3. 4. 5. 6. 7. 8. 9.



Explanation of the ſyſtem of muſical pipes, brought from the Iſle of Amſterdam in the South Sea, by Captain Fourneaux, to London, *anno* 1774, from experiments made by Mr. STEELE.

The manner of blowing theſe pipes, in making theſe experiments, was the ſame as people uſe to whiſtle in the pipe hole of a drawer key. Of the tones, marked on the drawing, the upper ſeries, which are exact fifths to the lower, are eaſieſt produced by an unexperienced perſon; and the lower ſeries, which we will call fundamentals, with ſomewhat more addreſs and a weaker blaſt. Beſide the above mentioned tones, if the velocity of the breath be increaſed a little, the five firſt pipes will give octaves to the fundamentals; and if farther increaſed, ſharp thirds, or tierces, above theſe octaves. In the pipes 6. 7. 8. and 9. I could neither make the octaves to the fundamentals, nor the ſharp tierces; but in their ſtead, the minor, or flat-third, above the octave came, when the breath was urged beyond the degree requiſite to produce the fifth. This minor third is an accident out of the natural order of tones produced from ſimple tubes, which I do not pretend to account for. Here following, are ſet down the notes of the ſeveral tones which I produced from each pipe; but, in order to bring them more within compaſs of the ſcale of five lines, they are written an octave lower than they

really are on the pipes. And alſo thoſe tones which come with moſt eaſe are wrote in minims, as 𝅗𝅥 or 𝅗𝅥
thoſe in the next degree, in crotchets, as ♩ or ♩
thoſe ſtill more difficult, in quavers, as ♪ or ♪
and the moſt difficult in ſemiquavers, as 𝅘𝅥𝅯 or 𝅘𝅥𝅯

1ſt pipe 

2d pipe 

3d and 5th pipes uniſons 

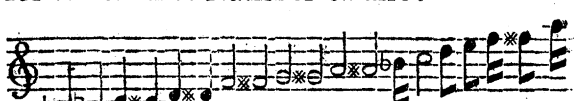
4th pipe 

6th pipe 

7th and 9th pipes uniſons 

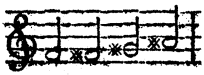
8th pipe 

Theſe tones are adapted to Engliſh *conſort pitch*, by the above notes. From whence it is evident, that an expert performer may exhibit the following ſeries, and perhaps alſo the octave to the fundamental  ; *videlicet*,  , though I could not, which ſeries is ſufficient for an infinite number of airs:



In this ſeries the notes marked in minims, being thoſe which are eaſieſt to be ſounded, furniſh two ſyſtems which correſpond with the definitions of the diatonic

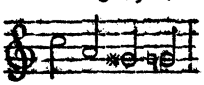
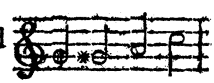
and chromatic *genera*, according to Euclid, who deſcribes the diatonic in deſcending, καλὰ τόνον, ἢ τόνον, ἢ ἡμιτόνιον; and in aſcending, καθ' ἡμιτόνιον, ἢ τόνον ἢ τόνον.

as  deſcending, and  aſcending.

Interval of a tone, and a tone, and a ſemitone.

Interval of a ſemitone, and a tone, and a tone.

And the chromatic thus, καλὰ τριημιτόνιον, ἢ ἡμιτόνιον, ἢ ἡμιτόνιον, in deſcending; and aſcending, καθ' ἡμιτόνιον, ἢ ἡμιτόνιον, ἢ τριημιτόνιον.

as  deſcending, and  aſcending.

Interval of 3 ſemitones, and 1 ſemitone, and 1 ſemitone.

Interval of 1 ſemitone, and 1 ſemitone, and 3 ſemitones.

But as the enharmonic *genus* requires intervals of the *dieſis*, or quarter tone, and as it did not appear by theſe experiments, that the pipes could exhibit any ſounds by ſuch intervals, I conclude they are not capable of performing according to the enharmonic diviſion of the tetrachord.