

from the remote end of the church, heard the voice in a direction the reverse of that from which it really proceeded.

The superior distinctness of sounds proceeding from the focus is accounted for by their all arriving at the same moment of time at a plane perpendicular to the axis, after reflexion from the surface of the paraboloid; which is a consequence of the equality of the paths they have described.

*On the mutual Action of Sulphuric Acid and Alcohol, and on the Nature of the Process by which Ether is formed.* By Henry Hennell, Esq. Communicated by William Thomas Brande, Esq. F.R.S. Read June 19, 1828. [*Phil. Trans.* 1828, p. 365.]

The most abundant product resulting from the mutual action of sulphuric acid and alcohol, without the application of heat, is the sulphovinic acid; but on distillation this peculiar product disappears, and ether is formed; and it becomes a question what part the sulphovinic acid plays in this process. In opposition to the assertion of Messrs. Dumas and Boullay, that this acid is not concerned in the production of ether, the author contends that whenever ether is formed, it is in consequence of the decomposition of the sulphovinic acid. He obtained ether from this latter fluid by distillation, when neither sulphuric acid nor alcohol were present; but if a certain quantity of water has been previously added, the sulphovinic acid is resolved into alcohol and sulphuric acid, and no ether is obtained; whereas during the distillation of ether in the ordinary way, the sulphovinic acid is re-converted, more or less, entirely into sulphuric acid. Hence he infers that the formation of the sulphovinic acid is a necessary and intermediate step to the production of ether from alcohol and sulphuric acid. As ether may be formed from alcohol, by the intermedium of sulphuric acid, so by the same intermedium may alcohol be obtained from ether,—the sulphovinic acid being in either case formed according to the mode of combination of the hydrocarbonous base. This theory is also illustrated by the employment of olefiant gas as the hydrocarbonous base, for by combining this gas with sulphuric acid, we may form sulphovinic acid, from which we may obtain at pleasure, by varying the circumstances of the decomposition, either alcohol or ether.

*Experiments and Observations on Electric Conduction.* By William Ritchie, A.M. F.R.S. Rector of Tain Academy. Read June 19, 1828. [*Phil. Trans.* 1828, p. 373.]

According to the modern theory of electricity, metallic bodies, far from attracting the electric fluid, as is commonly believed, are of all bodies those which have the least attraction for that fluid, and being the best conductors for it, are entirely passive during its transit through them. In confirmation of these views, the author describes