been met with breaking through these formations, and the relations of the base of the lower silurian group, along the foot of the hills composed of the syenite, are such as to make it evident that the fossiliferous beds in some places over-lie worn down parts of the volcanic rock. But all these intrusive masses are cut by a set of dykes, whose relations to the fossiliferous strata are not so certain. These dykes are composed of a finely granular base, with an earthy fracture, consisting of feldspar and pyroxene, and having a dark brownish-grey color. In this base are imbedded rounded forms of black augite, giving brilliant cleavage surfaces, and varying in size from masses not bigger than a pin's head to some of several inches in diameter. These are associated with various sized nodules of calc-spar, filling cells that do not attain the diameter of the largest masses of augite, and with small spangles of mica, grey in fresh fractures, but weathering to a brass-yellow on the surfaces of slightly weathered cracks and joints. Small crystals of sphene were occasionally observed in the rock. In the nomenclature of d'Halloy the rock would be called a *melaphyre*, and is the *augite-porphyry* of some German authors. By many geologists, from the accidental presence of the calc-spar nodules, it would be called an amygdaloidal trap.

These dykes bear a striking resemblance to some of those which intersect the lower silurian group in the vicinity of the mountain of Montreal, and may be possibly of the same age; but none of them have yet been traced continuously from the Laurentian into the fossiliferous rocks.

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BY PROFESSOR HENRY, LL.D., WASHINGTON.

Read before the Canadian Institute, February 13th, 1858.

In the Eighth number of the Canadian Journal (Vol. II., p. 130) was published an admirable paper, by Professor Henry, Secretary of the Smithsonian Institution, on "Acoustics applied to public buildings." Through the kindness of the author, we are now enabled to present to our readers the accompanying diagrams in illustration of