ART. XLV.—*Notice of a Meteorite which fell in Hindostan in 1857*; by J. LANG CASSELS, M.D., Professor of Chemistry, Cleveland Med. Coll., Ohio.

THIS meteorite fell near the small village of Parnallee in the extreme south part of Hindostan, and was obtained and sent to the Western Reserve College, Ohio, by the Rev. H. S. Taylor, a graduate of that Institution, at present connected with the Madura mission. Along with the stone he sent the following account of its fall, &c.

"Two meteoric stones fell on the 28th of February, 1857, from a clear sky, about noon, near the village of Parnallee, where some of our Christian people live. The smaller one weighs 37 pounds, and the larger is three or four times as heavy. The larger fell first, the smaller two or three seconds after, and some two or three miles south of the first one. The larger falling into tenacious and hard earth sunk into the ground but two feet and five inches. It came from the north, making an angle with the vertical of about fifteen degrees.

"The smaller one fell perpendicularly and sunk into the ground two feet eight inches. As no rain had fallen since they fell, I was able, on going there three days ago—April, 1857—to make sure their depth, to see just the impression they left when taken up, and to assure myself by enquiry and observation as to the stones having fallen there. Some children were picking cotton within a few rods of the first when it fell; and two women were standing near the place where the second fell. A cloud of dust was seen to be raised in each case, for the ground was very dry. Before night the larger stone was visited by crowds of persons from the neighboring villages, who commenced worshipping it as the image of their deity which had fallen from heaven."

The noise which these meteorites made while passing through the atmosphere is described as being terrific to all in the vicinity; and Mr. Taylor adds, that it was reported to have been heard some 15 or 20 miles from where they fell.

With much difficulty Mr. Taylor succeeded in obtaining both meteorites from the natives, who closely clung to them with great reverential attachment; but the Madrass government having learned of their fall, claimed them as a matter of right, and they accordingly were taken from him and placed in the Madrass Museum where the larger one still remains. Through the influence of some friends, Mr. Taylor, with commendable zeal and much perseverance, succeeded in regaining the smaller one, which he generously sent to the mineralogical cabinet of his alma mater in Hudson, Ohio.

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This meteoric stone has all the appearances of this class of meteorites; it is coated with the usual black vitrified crust, and although angular in its general outlines, it is more or less rounded on these angles; it has numerous spots on its surface, varying in size from a line to an inch and a half in diameter, with a corresponding varying depth; some of them being a quarter of an inch deep—as is attempted to be shown in the accompanying figure. Internally it is a mottled grey color,

having numerous circular spots of dull white. Throughout its recent surface are numerous brilliant specks of nickel, and distinct crystals of nickeliferous iron with a good deal of iron rust. Olivine and schreibersite can also be identified with a magnifier.

The meteorite is remarkable for the great amount of nickel it contains—nearly 17 per cent, while the iron is about 3 per cent. This metal is not uniformly distributed throughout the mass, as is plain even by an examination of the surface by a magnifier.

The magnet abstracts 21·151 per cent from the powdered stone. Color of the powder olive green. Sp. gr. 3·421—3·464.

An examination of the stone detected the presence of silica, lime, potassa, soda, oxyd of iron, sulphid of iron, oxyd of chromium, oxyd of manganese, iron, nickel, cobalt, copper, sulphur and phosphorus.

[A pisolitic structure is very evident in the stone, spherical masses of meteoric pyrites enclosing often a minute granule of white silicate, and surrounded with a coating of a blackish color and magnetic. A similar pisolitic structure has been noticed in other meteorites, as for example in that of Weston, Conn., (1807, Dec. 14). The mottled character of the fresh fracture, presenting large patches of gray and white contrasted with a darker ground, is strikingly similar in these two stones. Very unlike however is the distribution of the iron which in the Connecticut stone

exists in nodules of some size, while in the Parnallee stone there is a remarkable absence of particles larger than a pin's head. The surface of the Parnallee stone under a file shows countless points of metallic reflection, the metallic nickel being almost in a spongy state resembling silver reduced from its chlorid by zinc. The mineralogical constituents of this stone are clearly brought out on a polished surface, which then presents a porphyritic appearance.*]