ART. XLV.—*A new Meteorite from Mexico*; by J. EDWARD
WHITFIELD.

WHILE in Mexico during the summer of 1888, Prof. H. A. Ward, of Ward and Howell, Rochester, N. Y., obtained an undescribed mass of meteoric iron weighing 33·0 kilos.

The meteorite was found on a peak of the Sierra de San Francisco, called La Bella Roca, in front of Santiago Papasquiari in the state of Durango. The date of its discovery and the name of the finder are unknown.

The two greatest dimensions of the mass are $24\cdot13^{\text{cm}} \times 34\cdot92^{\text{cm}}$; an idea of the shape and general appearance may be had from the accompanying cut which shows what is supposed to be the front and back of the meteorite, at least during the latter part of its flight.

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The composition of the metallic portion does not differ materially from that of other meteorite irons as the following analysis will show.

Fe.....	91.48
Ni.....	7.92
Co.....	0.22
P.....	0.21
S.....	0.21
C.....	0.06
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	100.10

A feature of the meteorite is the presence of large, deep pittings on one side; these are a little greater in diameter just below than immediately at the surface and each one has a little substance left at the bottom, which evidently is the remains of what originally filled the cavities. I succeeded in breaking from the bottom of one pitting material sufficient to determine its nature. It proved to be troilite as the analysis will show.

NiS 2.13, FeS 85.27, Fe 9.37.

The exposed surface of the troilite was greatly decomposed; this portion gave by analysis the following figures.

NiS 2.07, FeS 37.51, Fe_2O_3 37.80, Moisture = 19.85.

This decomposition gives grounds for the idea that the deep pittings were formed by the removal of troilite nodules, partly while the mass was hot and partly by the subsequent weathering.

There are nodules of troilite throughout the entire mass of the meteorite but none are removed, so as to form pittings, on any other part of the surface but the side which is supposed to have been the front.

The mass is deeply furrowed, as may be seen to some extent in the figure, and all the furrows tend away from the side containing the pittings.

Slices of the meteorite, when etched, show rather coarse Widmanstätten figures and also dark diagonal bands of troilite.

From the locality in which this meteorite was found it is but proper that it should be called "La Bella Roca."

I am indebted to Messrs. Ward and Howell for the material for examination and the privilege of description.

Chemical Laboratory, U. S. Geol. Survey,
Washington, D. C., March 3d, 1889.