ART. XIV.—*A Remarkable Nugget of Platinum*; by PETER COLLIER, of Washington, D. C.

SEVERAL years ago I came into possession of a nugget of platinum, said to have been found upon land adjacent to the village of Plattsburgh, New York. Upon examination, the nugget was found to be composed entirely of native platinum and chromite disseminated through it. This chromite was black and of a somewhat resinous luster. The dimensions of the nugget were: length 4 cm., width 3 cm., thickness $2\frac{1}{4}$ cm. Its weight was 104.4 grams. The specific gravity of the entire nugget was 10.446, and an average of three determinations with a pycnometer of small fragments of the native platinum gave 17.35 as their specific gravity.

This indicates the composition of the nugget by weight to be about as follows: chromite 54 per cent, native platinum 46 per cent. The nugget was found to be slightly attracted by the magnet, a fragment weighing .09 gram being raised by the magnet. The metallic portion, separated as completely as possible from adhering chromite, was dissolved in aqua regia, leaving a slight residue, which was mainly chromite and sand, of only .74 per cent. The chromite was decomposed by fusion with bisulphate of potassium. Its composition is given as follows:

Cr ₂ O ₃	54.944
FeO	31.567
Al ₂ O ₃	5.690
SiO ₂	3.731
CaO	3.405
MgO	.941
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	100.278

There appeared in the interstices of the mass a little earth which probably accounts for the above results of analysis. By deducting these impurities the above analysis would be:

Cr ₂ O ₃	63.511
FeO	36.489
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	100.000

An analysis of the platinum gave as follows:

Platinum	82.814
Iron	11.040
Palladium	3.105
Iridium	.627
Rhodium	.286
Copper	.397
Alumina	1.953
Lime	.069
Magnesia	.030
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	100.321

Owing to the small quantity of the mineral taken for analysis, 1.45 grams, and the difficulty in separation, the above analysis is perhaps not rigidly exact, and in fact the presence of osmium was unmistakable, although its amount was undetermined. The above analysis, however, shows conclusively that the specimen is a genuine nugget of native platinum; and upon an investigation of the person who found the same, it seems established beyond question that his statement is correct, since the mode of its occurrence and the locality is such as to render the statement quite credible.

Several other specimens were said to have been found at the time when this was discovered, but owing to their real value being unknown they were mislaid or lost. A personal examination of the locality shows it to be in a drift deposit which is of considerable extent. Adjacent rocks exposed upon the surface show well-defined glacial scratches, and the boulders constituting this deposit are mainly from rock not present in place in that immediate locality. The occurrence of the platinum metals in the St. Lawrence valley has long been known, and the presence of extensive deposits of chromite and its mineral-associate, serpentine, in the same general locality is well established, but so far as I can learn this nugget appears to be remarkable not only for its size, but also as an indication of the probable presence of this metal in a locality hitherto unsuspected.