THE

AMERICAN JOURNAL

OF

SCIENCE AND ARTS.

CONDUCTED BY

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VOL. XXXV.—JANUARY, 1839.

NEW HAVEN:

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when required, it is poured back again into the basin (H) without disturbing the stone (K.)

Fig. 6, (A,) a glass cylindrical vessel, containing about a quarter of a pint, filled with a concentrated solution of silicate of potash. (B,) a fine silver wire formed into a coil, which is immersed into the fluid in the cylinder, the other end being connected with the negative pole of the battery. (C,) an iron wire about one fifth of an inch in diameter, bent somewhat in the form of an inverted syphon, immersed in the same vessel, and connected with the positive pole of the battery. (D, D) insects in their incipient state making their appearance, some on the gelatinous silica which partially covers the wire, and some on the naked wire itself. These insects appear magnified.

ART. XI.—*Notice of Danburite, a new Mineral Species;* by CHARLES UPHAM SHEPARD, M. D., Professor of Chemistry in the Medical College of the State of South Carolina.

THE mineral here described, I found upwards of two years ago, while engaged in the geological survey of Connecticut. It was collected in the town of Danbury near the manufactory of Col. WHITE, and occurred in small masses of a delicate bluish white and highly crystalline feldspar, found among fragments of dolomite, coming from a bed in place near the mills. The feldspar is extremely fetid, when rubbed or broken: in which respect it resembles the same mineral found in thin veins of dolomite at a locality a few miles distant, in the town of Brookfield,—a circumstance which leaves little room to doubt that the specimens at Danbury, though found detached, were nevertheless derived from the dolomite.

The mineral believed to be new is observed disseminated in small quantity through the feldspar (with which is likewise associated a small quantity of quartz) in fissures and cavities having the shape apparently of oblique prisms. Owing to the partial decomposition of the mineral (a change to which it appears to be particularly liable) these cavities are sometimes entirely empty. The longest of them noticed was above an inch in one direction, by one fifth of an inch in another.

Whether the mineral will be found in any considerable quantity, I am unable to say. The specimens collected, have been barely sufficient to afford the following notice.

Mineralogical Description.

Primary form. Oblique rhombic prism.

Cleavage parallel with P indicated obscurely by fissures.

Lustre vitreous, in a high degree. Color shades of honey yellow. Streak white; transparent. (The decomposing variety is nearly white, translucent and very fissile.)

Hardness=7.5. Sp. Gr.=2.83.

Chemical Description.

When heated alone before the blow-pipe, it phosphoresces and fuses slowly without intumescence into a white blebby, transparent glass. With borax, it melts with effervescence into a transparent globule. When heated in a glass tube, it emits moisture. In the condition of an impalpable powder, it is taken up by hydro-chloric acid after long digestion.

By the requisite trials, it was found to contain neither fluoric, boric, nor phosphoric acid. By heating, it lost 8 p. c. in weight. By ignition with twice its weight of anhydrous carbonate of soda, it fused into a white mass, which formed a colorless solution with dilute hydro-chloric acid. After the separation of the silica, which weighed 56 p. c., the solution was precipitated by ammonia, and the precipitate treated with carbonate of ammonia solution in large excess, which after frequent agitation and some time standing was partially evaporated; a pale yellow pellicle invested the sides of the capsule, which after drying weighed 0.85 p. c. It was treated with hydro-chloric acid, and the solution obtained afforded when tasted no impression of sweetness. Its yellowish color and easy solubility after ignition in hydro-chloric acid proved it not to be zirconia; while the absence of sweetness showed that it was not glucina. It seems most probable therefore, that it is yttria.

The portion of the precipitate by ammonia not taken up by the carbonate of ammonia, was treated with a solution of potassa. It was instantly dissolved, and on being precipitated with hydrochlorate of ammonia, washed and ignited, it amounted to 1.7 p. c.

The clear hydro-chloric solution from which the alumina and yttria? had been separated was precipitated by oxalate of ammonia, and the precipitate was washed and ignited. The residuum gave 28.33 p. c. of lime.

The solution from which the oxalate of lime had been thrown down was treated with ammonia and phosphate of soda, without having its transparency effected, whereby the absence of magnesia and lithia in the mineral was apparent. After several hours standing, chloride of platina was added, which immediately gave rise to the fine granular precipitate of the double salt of platinochloride of potassium.

Whether the mineral contains soda as well as potassa, I am not at present able to say.

The following therefore is a summary of what I have been able to infer respecting the chemical constitution of the mineral under consideration:

Silica, - - - - -	56.00
Lime, - - - - -	28.33
Alumina, - - - -	1.70
Yttria? - - - -	0.85
Potassa (perhaps with soda) and loss,	5.12
Water, - - - - -	8.00
	100.

The above result favors the idea of the following atomic arrangement: viz.

$$10\,\dot{C}a\,\dot{S}i^3+\dot{K}^3+\left(\frac{2}{3}\,\ddot{\underline{Al}}+\frac{1}{3}\,\dot{Y}\right)\dot{S}i^3+\dot{H}.$$

ART. XII.—*On Certain Cavities in Quartz, &c., in a letter to the Editor, from* Dr. WASHINGTON L. ATLEE, dated Lancaster, Penn., Dec. 9, 1837.

Dear Sir,—WITHIN our city and its vicinity I have picked up several anomalous specimens of quartz, bearing the impressions of the different faces and angles of crystals, that afterwards became detached. In most of these specimens these impressions are deep, giving a cellular aspect to the whole mass. In some, they are tabular and evidently rhombic, or portions of rhombs, having their various angles and inclined faces accurately defined. In others, the indentations are principally pyramidal and cuneiform, with here and there a tabular rhombic impression. In one large and beautiful specimen, the cells are much larger, and more uni-