

brooks and waterfalls, the occasional depressions by small lakes shining in the sun.

The sea abounds with fish; the offshore rocks are the resort of sea lions and formerly of sea otters; the streams afford the trout fisher abundant sport, and about their mouths the red salmon leap and play. In October the hillsides offer store of berries, and in all this land there is not a poisonous reptile or dangerous wild animal of any sort.

The inhabitants of these islands are an interesting and peculiar race. Their characteristics have been well described by Veniaminoff, who knew and loved them. By the testimony of their language, physique and culture they are shown to be a branch of the Eskimo stock, driven from the continent, as the shell heaps reveal, at a very ancient date and isolated since from contact with any other native race, specialized and developed by their peculiar environment to a remarkable degree. Conquered by the Russian hunters of the eighteenth century, practically enslaved for a century, their ancient religion frankly abandoned for the rites of the Greek Church, an apathetic reticence replaced the rollicking good nature characteristic of the Eskimo people. In 1865 they were supported by the company; the men shipped off in hunting parties in search of the sea otter were separated from their families sometimes for many months and rewarded according to their success; but, while the company provided food for all who needed it, the time of the Aleut was not his own. I have already mentioned that the fur seal at that time had very little commercial value. The fishery on the Pribiloff Islands was conducted by Aleuts under supervision, and the skins were mostly shipped to China or Europe. It has been noted as surprising that the value of the fur-seal fishery is so little referred to in the arguments urging the acquisition of the Territory in 1867. This was not an over-

sight; the seal fisheries at that time were not especially lucrative, and the millions which the industry has since produced could not have been predicted in 1867.

(To be continued.)

A SIMPLEX SPECTROSCOPE.*

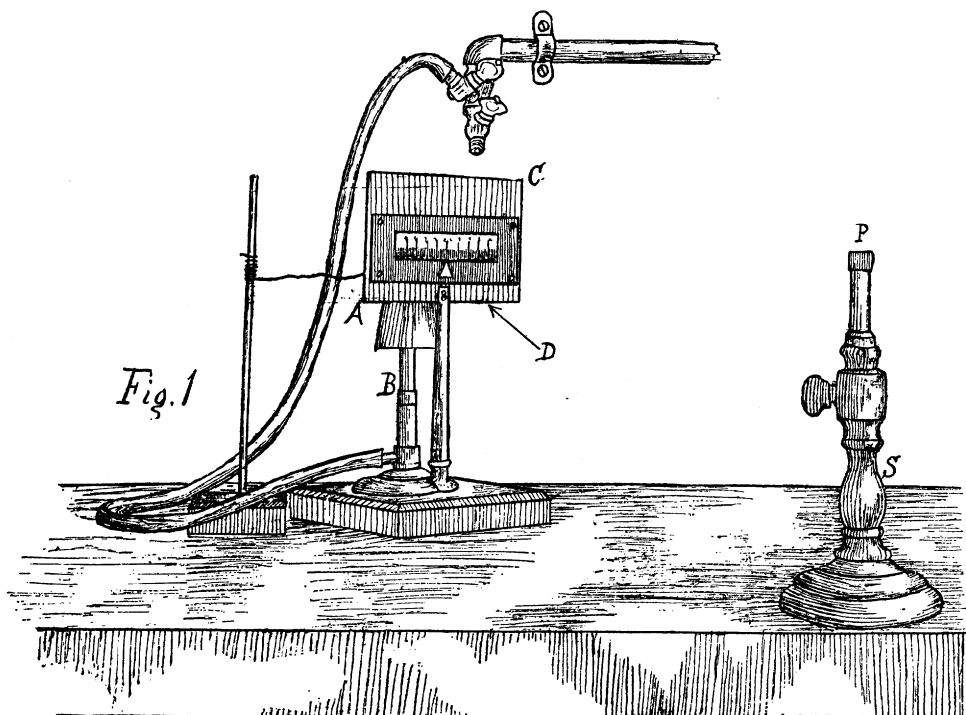
For the purpose of explaining the construction and operation of the spectroscope to beginners, the simplest form was desired and after various modifications of the usual form had been constructed, the following arrangement was devised and has proved eminently satisfactory. No lenses are required and only a small prism of fair quality.

The apparatus is shown in perspective in Fig. 1†. P is the small prism, about 1.5 cm. on a side and 60° refracting angle. B is an ordinary Bunsen burner with chimney. AC is a metal screen, supported upon a stand, and having a rectangular opening in its center covered by a scale in millimeters upon translucent paper or celluloid, covered upon the back with mica to protect it from the burner. Under the center of the scale is a triangular opening about 8 mm. high and 5 mm. wide at its base. The plan of the location of the parts is shown in Fig. 2. The scale AC is about 50 cm. from the prism.

The operation of the spectroscope is as follows: The light from the burner B, passing through the opening D, falls upon the prism P and is refracted into the eye placed somewhere at E, and the light appears to come from a direction similar to D' E. The scale is illuminated with a strong sodium light, obtained either by placing a 'sodium chimney' on the burner B, or by putting a sodium bead in the top of the flame. The scale being seen only by sodium light appears clear and distinct in

* Unpublished paper by Holbrook Cushman; edited by W. Hallock. See SCIENCE, December 6, 1895, p. 757.

† See SCIENCE, December 6, 1895, note on p. 761.



some position as at $A' C'$. If, for example, strontium is introduced into the flame the observer will see a red triangle appear under the scale $A' C'$ at some such place as D'' , Figs. 2 and 3. If thallium is used a green triangle will appear as at D''' . In other words one can read the positions of the points of the colored triangles at the bottom of the scale, just as the positions of the colored lines are read on the scale in an ordinary spectroscope. A little practice and care will enable one to read the positions of the triangles to 0.1 mm, and thus to obtain about as good results as with the customary more elaborate and more expensive form. This little piece of apparatus has proved a great help in making the principles of the spectroscope thoroughly clear to students doing laboratory work. Of course it is desirable to have a black screen to prevent light from entering the

eye from the direction of $A' C'$. In fact it is very convenient to blacken the wall for a considerable space behind this apparatus.

COLUMBIA COLLEGE, December 10, 1895.

THE GEOLOGICAL SOCIETY OF AMERICA.

THE Geological Society of America held its eighth annual meeting in the main building of the University of Pennsylvania, at Philadelphia, December 26, 27 and 28. The first session of the Council took place at the Hotel Lafayette at eleven o'clock on the 26th. The ballot for officers was canvassed with the following result:

President, Joseph Le Conte, Berkeley, Cal.; First Vice-President, Charles H. Hitchcock, Hanover, N. H.; Second Vice-President, Edward Orton, Columbus, O.; Secretary, H. L. Fairchild, Rochester, N. Y.; Treasurer, I. C. White, Morgantown, W. Va.; Editor, J. Stanley-Brown, Wash-