AN exhibition is now in progress at Clarendon Hall, New York City, of a Dr. Tanner, who claims to be existing without any nourishment, but that derived from rinsing his mouth occasionally with cold water. At the date of our seeing Dr. Tanner, eight days of such fasting were supposed to have been carried out. The fact that Dr. Tanner has declined those rigid conditions prescribed by Dr. William A. Hammond, which would have made fraud impossible, and is watched merely by persons of his own selection, deprives the so-called experiment of scientific interest. Under these circumstances a judgment of the case is impossible; but a critical observation of Dr. Tanner and his surroundings was very unfavorable to the genuineness of the proceedings. During the fifteen minutes we remained, two opportunities were presented for Dr. Tanner to take food unobserved by his watchers—once when he ordered the light to be removed, and the room was made sufficiently dark to obscure his movements; and again when Dr. Tanner left the room and reclined on the top of the portico; during this time the watchers were in another room, and had we been confederates of Dr. Tanner, we could have handed him food unobserved.

WE are informed that the Earl of Rosse dseires the services of an Assistant Astronomer for his well-known Observatory. The address of Lord Rosse is Birr Castle, Parsonstown, Ireland.

On the shores of the Lake of Constance the rare phenomenon of a perfect solar halo was noticed on May 4, at noon. The large ring, which from time to time assumed splendid rainbow tints, remained visible for more than two hours. At Berlin the phenomenon of mock suns was observed on the 9th inst., at 8 A.M.

The *Proceedings* of the Davenport Academy of Natural Sciences, while it contains a number of papers in natural history, is noteworthy mainly for the large number of papers on subjects connected with American ethnology, and chiefly on various mound explorations. We are pleased to see that this society continues to prosper. It had the originality to elect as its president for 1879 Mrs. Mary L. D. Putnam.

In the Transactions of the Academy of Science of St. Louis are several papers deserving attention. Mr. N. Holmes has a specially interestfng paper on the "Geological and Geographical Distribution of the Human Race," and students of the science of language will be interested in M. Coruna y Colludo's account of the Zoque language, spoken in the State of Chiapas, Mexico. There are two magnetic papers by Prof. Nipher; a paper on *Pentremites* by Dr. G. Hanbach; on the genus *Pinus* by M. G. Englemann, who has also a short paper on Acorns and their Germination.

Mr. C. S. Sargent, Harvard Professor of Arboriculture, has published, in his capacity of Special Agent of the approaching United States Census, a "Catalogue of the Forest Trees of North America," preliminary to one which will be added to the census report on the forest wealth of the United States. He desires information concerning the geographical range of any species; the most favorable region and elevation and geographical formation for its multiplication and perfection; its exceptionally large dimensions; its common or local name; and its products and uses.

Professor C. G. Rockwood, of Princeton, who has for some time devoted his attention to the study of earthquakes and volcanic phenomena, desires to come into communication with other workers in the field of Seismology, either at home or abroad. He is especially desirous to obtain correspondents upon the Pacific Coast, who would aid in collecting information in regard to earthquake shocks in that region, where they are so much more frequent than on the Atlantic seaboard. Professor C. W. Fuchs, formerly of Heidelberg, but now of Merin, Tyrol, Austria, has for the last fifteen years published annual statistics of earthquakes, and as it is clear from these lists, that but few cases of such phenomena in America are noted, we trust our readers will respond to the present request of Professor Rockwood.

FARADAY'S OBSERVATIONS ON SILVERING GLASS.

1,540 grains of nitrate of silver being treated with 955 grains of strong solution of ammonia, and afterwards with 7,700 grains of water, yields a solution to which, when clear, 170 grains of tartaric acid, dissolved in 680 grains of water, is to be added, and then 152 cubic inches more of water, with good agitation. When the liquid has settled, the clear part is to be poured off; 152 cubic inches of water to be added to the remaining solid matter, that as much may be dissolved as possible; and the clear fluids to be put together and increased by the further addition of 61 cubic inches of water. This is the silvering solution, No. 1. A second fluid, No. 2, is to be prepared in like manner, with this difference, that the tartaric acid is to be doubled in quantity. The apparatus employed for the silvering of glass plate consists of a cast iron table box, containing water within, and a set of gas burners beneath to heat it; the upper surface of the table is planed, and set truly horizontal by a level and covered by a varnished cloth; heat is applied until the temperature is 140 deg. Fah. The glass is well cleaned, first with a cloth; after which a plug of cotton, dipped in the silvering fluid and a little polishing powder, is carefully passed over the surface to be silvered, and when this application is dry it is removed by another plug of cotton, and the plate is perfectly clean. The glass is then laid on the table, a portion of the silvering fluid poured on to the surface, and this spread carefully over every part by a cylinder of india-rubber stretched upon wood which has previously been cleaned and wetted with the solution; in this manner a perfect wetting of the service is obtained, and all air bubbles, &c., are removed. Then more fluid is poured on to the glass, until it is covered with a layer about the one-tenth of an inch in depth, which easily stands upon it, and in that state its temperature is allowed to rise. In about ten minutes or more silver begins to deposit on the glass, and in fifteen or twenty minutes a uniform opaque coat, having a greyish tint on the upper surface, is deposited. After a certain time the glass employed in the illustration was pushed to the edge of the table, was tilted that the fluid might be poured off, then washed with water, and examined. The under surface presented a perfectly brilliant metallic plate of high reflective power, as high as silver can attain to; and the coat of silver, though thin, was so strong as to bear handling, and so firm as to stand polishing on the back to any degree, by rubbing with the hand and polishing powder. The usual course in practice, however, is—when the first stratum of fluid is exhausted—to remove it, and apply a layer of No. 2 solution; and when that has been removed, and the glass washed and dried, to cover the back surface with a protective coat of black varnish. When the form of the glass varies, simple expedients are employed, and by their means either concave, convex, or corrugated surfaces are silvered, and bottles and vases coated internally. It is easy to repair an injury in the silvering of a plate.

The advantages are—the production of a perfect reflecting surface; the ability to repair; the mercantile economy of the process (the silver in a square yard of surface being worth only 1s 8d); the certainty, simplicity, and quickness of the operation; and, above all, the non-employment of mercury.