in the poorest localities, by which liberality on the part of the government neat school-houses will be erected in 100 communes. The Associations established by teachers for their mutual assistance received a grant of 8000 fr. as a mark of sympathy with the object they have in view.

— *School Globes* —This invention consists in mounting two hemispheres in armed standards, which slide in parelled places toward or from each other in such a manner that on separating them the several parts or lines marked on their inner and outer surfaces retain their relative position opposite to each other. It consists further in the arrangement of a primary pedestal provided with a series of screw sockets in combination with a screw shank projecting from the lower end of the head, in which the armed standards of the hemispheres slide, in such a manner that one or more globes can be placed on the primary pedestal or taken from the same and returned to their original pedestals at pleasure. It consists also in combining with the sliding armed standards, slotted swivel socket in such a manner that the globe can be turned freely in either direction. John R. Agnew, of Mercersburg, Pa., is the patentee of this invention.—*Scientific American.*

SCIENTIFIC INTELLIGENCE.

— Everyone who has used an air-pump has noticed the clouds of vapor which form in the receiver after a few strokes of the piston, and which arise from the air yielding up a portion of its moisture as the pressure is diminished. If these vapours are viewed by light transmitted from a candle, prismatic colours will appear; but to insure a distinct and fine halo Mr. Slack recommends the following plan: Place a large receiver on the principal plate of an air-pump, and a small one, holding about a quarter as much as the former, on the smaller plate. Turn the stopcock so that when the pumps are worked the small receiver only shall be exhausted, the large one remaining full. When a vacuum has been made, place a taper on one side of the large receiver, and stand on the other, keeping the eye on a level with its light, and suffering no other illumination in the room. Now, suddenly turn the stopcock so that a portion of the air from the large receiver shall rush to the exhausted smaller one. At this moment a splendid halo will appear, and it is an interesting and by no means an easy task to notice the exact order in which the colours are exhibited. The average decision arrived at in one set of experiments was as follows: A yellow light seemed to rush from a circumference to a centre, forming a luminous disk, which passed instantly to a red-orange hue, and then to a brilliant emerald-green. At this point the green central disk appeared to expand outwardly and take the form of an external ring, the centre resuming an orange tint. The changes in the phenomenon are exceedingly rapid, and their duration so infinitesimal that it is impossible to note and describe all the chromatic effects, among which some rich purple rings will be observed, before the luminous circles disappear. Those who wish to perform the experiment with an air-pump that has only a single plate should connect its receiver by a pipe and stopcock with a larger closed vessel full of air, and then proceed in the manner described. A large amount of light is injurious to the results, as it overpowers the coloured rays If the experiment were performed on a large scale it would probably be effective in a lecture-room.

Under ordinary circumstances there is enough moisture in the air to give rise to pleasing effects; but they will become more striking if a few drops of water are sprinkled on the inner surface of the large receiver. It is also interesting to notice the variations that occur if alcohol or liquid ammonia be substituted for the water. In the latter case, the clouds formed are denser and less evanescent.—*Intellectual Observer.*

— Sir John Herschel has devised an elegant mode of illustrating the action of minute refracting spheres. He mounts the spores of the common puff-ball in a film of oil between two pieces of glass. When these are held close to the eye, and a candle viewed through them, beautiful concentric halos appear.—*Ibid.*

— In a valuable treatise on the vegetable productions of Norway, which has been published by Dr Mueller, in connection with the Norwegian department of the Exhibition, some extraordinary facts are related respecting the influence of the long duration of light, during the summer months, on the growth of vegetables in the higher latitudes in Norway. At seventy degrees N. it was found that ordinary peas grew at the rate of three and a half English inches in twenty-four hours for many days in summer, and that some of the cereals also grew as much as two and a half inches in the same time. Not only is the rapidity of growth affected by the constant presence of light, but those vegetable secretions which owe their existence to the influence of actinic force on the leaves, are also produced in far greater quantity than in more southern climates; hence the colouring matter and pigment cells are found in much greater quantity, and the tint of the coloured parts of vegetables is consequently deeper The same remark applies to the flavouring and odoriferous matters, so that the fruits of the north of Norway though not equal in sacharine properties, are far more intense in flavour than those of the south. (*Ibid*)

— Mr. Chalmer Miles, army surgeon at Halifax, asserts that the *Sarracenia purpurea* discovered by Sarrasin in Canada and commonly known as the pitcher plant or side-saddle flower, is a specific for small pox. He prescribes repeated doses of a decoction of the root of this plant before the eruption has taken place. The effect will be to hasten the breaking out which will follow in a few hours, when a second potion is to be administered, and, after an interval of five or six hours, a third dose which will cause the pustules to dry up. If the disease is far advanced when the medicine is first given to the patient it will still have the effect of reducing the fever, a second dose causing the pustules to fall off without leaving a scar. Dr. Miles has forwarded some of the plants to England where their efficacy will be fully tested. He discovered the medicinal virtues of this herb from the Indians of Nova Scotia who, it is said, invariably keep it at hand dry and pounded for use.

If the small pox should make its re-appearance during the coming winter, we in Canada should not be excusable were it permitted to continue its ravages without an attempt being made to check it by means of a remedy so easily obtainable. The *Sarracenia purpurea* grows in abundance in the savannas and marshes of Canada East, and has often been found in the environs of Quebec. It would be well to secure a sufficient quantity during the present season and cause the roots to be dried. We translate the description given of it by Sarrasin and reproduced by Charlevoix; which, through the kindness of the Rev. Mr. Bois, author of an interesting pamphlet on that subject we are able farther to illustrate by a wood-cut:

"This plant is of extraordinary aspect; its root is half an inch thick and provided with fibres; from the collar several leaves are thrown out which form a kind of ruffle towards the point; these leaves are corniform (or pitcher-form), five or six inches in length and very narrow at their base, but spreading out considerably higher up. These corniform leaves, which touch the ground near the root of the plant, grow in the shape of a semi-circle throughout their length, the convex surface being underneath and the concave above; and they are also closed at the bottom and open at the top. The upper part of the leaf is more than an inch in length and two in breadth, rounded, and winged near the aperture; it is hairy on the upper surface, and being shaped somewhat like a spoon receives the rain which is collected and effectually retained in the horn shaped lower leaf. The lower or corniform part of the leaf, if indeed it can be called a leaf, is very short, the horn being open or slit down, with the edges rolled outwards in a manner that gives much firmness to the parts forming the opening On the hollow side of the horn there is another leaf which in reality is but a continuation of the corniform leaf; it is narrow at its extremities, rounded and broad in the middle, and somewhat resembles the wattles of a turkey. The stem rises from the centre of this group of corniform leaves and is about an arm's length; it is hollow, the size of a goose quill, and supports a flower of six petals, and of two forms,—five petals being disposed in a circle and supported by a flower-cup with three leaves. From the centre of this flower (which falls only when the fruit is ripe) rises the pistil, destined to become the fruit. The latter is raised on five sides and divided into as many cells that contain oblong, streaked seeds, resting upon the placenta. The placenta is but the continuation of the stem projected about one sixth of an inch beyond the fruit. Upon this projection the sixth leaf is situated; it is much thinner than those attached to the corolla which are tough, thick, of an oblong shape, and of a reddish color when the fruit is ripe. This sixth leaf forms a crest in the form of a pentagon. The entire part turned outward is convex, while that towards the fruit is concave. Each angle bears an incision 1/6 inch in depth; and the plant grows on marshy ground. The root is perennial, and acrid to the taste."