Correspondence.

The Obelisk in Central Park.

To the Editor of the Scientific American:

I see in your issue of last week a communication in which it is asserted that the "Obelisk" in Central Park is a concrete structure and can be easily reproduced in native materials.

I hand you, inclosed, a piece of its companion, the obelisk which now stands on the Thames Embankment, London. Please examine it, and judge for yourself and your readers whether it is a natural or an artificial stone.

I call it a fine specimen of granite, and Professor Leeds, who is, I think, an authority in such matters, fully agrees with me. You will find it to consist of silex, mica, and beautiful crystals of orthoclase feldspar.

A large fortune is in store for the man who can make a concrete or beton like this.

R. H. THURSTON.

Stevens Institute of Technology, Department of Engineering, Hoboken, N. J., March 26, 1883.

[The specimen sent by Professor Thurston is native granite of superior quality. Our correspondent who pronounced the Central Park obelisk to be an artificial compound is evidently mistaken.—ED]

The Australian Rabbit Plague.

To the Editor of the Scientific American:

In notice in the SCIENTIFIC AMERICAN of the 25th of November, 1882, an article regarding the rabbit plague in Australia. My brother-in-law, who is a large grower of pine trees in Germany, was formerly greatly bothered by the same pestilence, and conceived the idea of having the rabbits exterminated by their natural enemy, the fox. Now I should think this could also be effectually done in Australia. Let the government introduce a large number of foxes, and prohibit their killing; in a short time the effect would be evident.

L. D.

Rotterdam, March 10, 1883.

Animals as Doctors.

M. G. Delaunay, in a recent communication to the Biological Society, observed that medicine, as practiced by animals, is thoroughly empirical, but that the same may be said of that practiced by inferior human races, or in other words, by the majority of the human species. Animals instinctively choose such food as is best suited to them. M. Delaunay maintains that the human race also shows this instinct, and blames medical men for not paying sufficient respect to the likes and dislikes of the patients, which he believes to be a guide that may be depended on. Women are more often hungry than men, and they do not like the same kinds of food; nevertheless, in asylums for aged poor, men and women are put on precisely the same regimen. Infants scarcely weaned are given a diet suitable to adults—meat and wine, which they dislike, and which disagree with them. M. Delaunay investigated this question in the different asylums of Paris, and ascertained that children do not like meat before they are about five years of age. People who like salt, vinegar, etc., ought to be allowed to satisfy their tastes. Lorain always taught that with regard to food people's likings are the best guide. A large number of animals wash themselves and bathe, as elephants, stags, birds, and ants. M. Delaunay lays down as a general rule that there is not any species of animal which voluntarily runs the risk of inhaling emanations arising from their own excrement. If we turn our attention to the question of reproduction, we shall see that all mammals suckle their young, keep them clean, wean them at the proper time, and educate them; but these maternal instincts are frequently rudimentary in women of civilized nations. In fact, man may take a lesson in hygiene from the lower animals. Animals get rid of their parasites by using dust, mud, clay, etc. Those suffering from fever restrict their diet, keep quiet, seek darkness and airy places, drink water and sometimes even plunge into it. When a dog has lost its appetite. it eats that species of grass known as dog's grass (*chiendent*), which acts as an emetic and purgative. Cats also eat grass. Sheep and cows, when ill, seek out certain herbs. When dogs are constipated they eat fatty substances, such as oil and butter, with avidity, until they are purged. The same thing is observed in horses. An animal suffering from chronic rheumatism always keeps, as far as possible, in the sun. The warrior ants have regularly organized ambulances. Latreille cut the antennæ of an ant, and other ants came and covered the wounded part with a transparent fluid secreted from their mouths. If a chimpanzee be wounded, it stops the bleeding by placing its hand on the wound or dressing it with leaves and grass. When an animal has a wounded leg or arm hanging on, it completes the amputation by means of its teeth. A dog on being stung in the muzzle by a viper was observed to plunge its head repeatedly for several days into running water. This animal eventually recovered. A sporting dog was run over by a carriage. During three weeks in winter it remained lying in a brook, where its food was taken to it; the animal recovered. A terrier dog hurt its right eye; it remained lying under a counter, avoiding light and heat, although habitually it kept close to the fire. It adopted a general treatment, rest and abstinence from food. The local treatment consisted in licking the upper surface of the paw, which it applied to the wounded eye, again licking the paw when it became dry. Cats also, when hurt, treat themselves by this simple method of continuous irrigation. M. Delaunay cites the case of a cat which remained for some time lying on the bank of a river; also that of another cat which had the singular fortitude to remain for forty-eight hours under a jet of cold water. Animals suffering from traumatic fever treat themselves by the continued application of cold water, which M. Delaunay considers to be more certain than any of the other methods. In view of these interesting facts, we are, he thinks, forced to admit that hygiene and therapeutics, as practiced by animals, may, in the interests of psychology, be studied with advantage. He could go even further and say that veterinary medicine, and, perhaps, human medicine, could gather from them some useful indications, precisely because they are prompted by instincts which are efficacious in the preservation or the restoration of health.—*British Medical Journal.*

Early Potatoes.

A correspondent of the *Country Gentleman* says: The earliest potato, as far as my experience goes, is the Early Electric. Last season, in order to test the comparative earliness and yield of the new varieties alongside of the well known kinds, I planted at measured distances a definite number of hills of each of the kinds given in the following table. They were all planted in the midst of a field of potatoes, and given the same cultivation as the whole field. Single eyes were planted, one in a hill, on the 15th day of May.

Name.	*Time of ripening.*	*Product per acre.*
Early Electric	Aug. 7	93⅓
Early Ohio	Aug. 15	116⅔
Early Mayflower	Aug. 15	177½
Brownell's Best	Sept. 7	237½
Clark's No. 1	Sept. 1	162⅔
Early Telephone	Aug. 15	175
Beauty of Hebron	Sept. 1	179½
Early Rose	Sept. 1	159
Magnum Bonum	Sept. 10	157¼
Late Rose	Sept. 15	194
Snowflake	Sept. 7	189
White Star	Sept. 25	206
White Elephant	Sept. 25	232
Burbank	Sept. 25	220
Matchless	Sept. 15	135
Pride of America	Sept. 25	191½
Late Snowflake	Sept. 25	226½
Belle	Sept. 15	225
Defiance	Oct. 1	382⅔
St. Patrick	Oct. 1	250
Rose's Seedling	Oct. 1	228
Roger's No. 4.	Oct. 1	299½
Watt's Orange	Oct. 1	237½
Queen of the Valley	Oct. 1	199
Champion of America	Sept 25	258
Roger's No. 7	Sept. 25	258
Cook's Superb	Sept. 25	254½
Silverskin	Sept. 25	234
Mammoth Pearl	Sept. 25	257

The dying of the tops was taken as the period of ripening. It will be seen that the Early Electric is three weeks earlier than Early Rose. Had it been planted very early, I presume the yield would have been satisfactory. The Defiance was by far the best producer; quality good. The handsomest potato was Rose's Seedling; all large. Great care was necessary in making the experiment, which those who grow potatoes expressly for seed will appreciate.

A New Use for Gas Mains.

From time to time notices have appeared in these columns of the pneumatic clock system introduced by MM. Popp and Resch. In this system a great number of subscribers' dials are regulated by pneumatic impulse traversing a service of air tubes actuated from a central station. The success of this scheme has inspired an American company with the idea of doing the same work without undertaking the trouble and expense of a distributing service of air tubes by the simple expedient of utilizing the existing gas pipes. This enterprising body of speculators have secured a patent for their system, which is thus described: "A special gas holder for holding gas under a pressure greater than the normal pressure in the mains, is so arranged in connection with the gas holder and mains of a common gas lighting system that at certain times it is opened to the mains, and thus imparts an impulse to the gas therein contained. One leg of a U-tube, partly filled with mercury, is placed in connection with the mains, and receives the impulse of pressure already mentioned, which causes the mercury to rise in the other leg, and thereby completes an electrical circuit, and gives a signal which can be used for regulating clocks or any similar purpose." Thus it will be seen that the invention, like all other great ideas, is as simple as it is grand. Only one thing is needed to make the proposal practical—the consent of the gas companies; but of this nothing is said.—*Journal of Gas Lighting.*

New Invisible Ink.

C. Widemann communicates a new method of making an invisible ink to *Die Natur*. To make the writing or the drawing appear which has been made upon paper with the ink, it is sufficient to dip it into water. On drying, the traces disappear again, and reappear by each succeeding immersion. The ink is made by intimately mixing linseed oil, 1 part; water of ammonia, 20 parts; water, 100 parts. The mixture must be agitated each time before the pen is dipped into it, as a little of the oil may separate and float on top, which would, of course, leave an oily stain upon the paper.

The Great Red Spot on Jupiter.

BY G. D. RISCOX.

The phenomenon of the now famous red spot upon the surface of the planet Jupiter has drawn the attention of observers to an apparent condition of internal planetary activity not heretofore observed, or only beginning to be seen through the means of the great advance in telescopic power and definition lately acquired.

The intensity of this spot seems to be now vanishing after a duration of about three and a half years, during which time observations have been made of its physical appearance and for the purpose of detecting any local or relative change of position. Also for the purpose of ascertaining the period of rotation of the planet, as compared with the period heretofore assigned from observations of its cloud spots.

The two periods of rotation are observed to vary about 5½ minutes; giving the rotation by the cloud spots as 9 h. 50 m. to 9 h. 50 m. 9 s., while the rotation by the great red spot was found to be 9 h. 55 m. 34 s.

The times given for rotation by observations upon different cloud spots also vary enough to give us, together with the varying contour of the cloud belts, strong evidence that what we see of the planet Jupiter is not the body of the planet itself, but rather a vast sea of *cloud*, possibly thousands of miles in depth, kept afloat by the intense heat of the body of the planet.

From the well known laws of circulation of gases, vapors, and cloud masses, as illustrated by the circulation of the atmosphere, together with the progress and direction of the great storms, cyclones, and tornadoes upon the earth, and as are beginning to be elucidated in the cyclonic action of the sun spots, according to Faye's theory, which best meets the conditions deduced from spectroscopic observations; we cannot do otherwise than come to the conclusion that the solid body of Jupiter has never been seen—that our observations are only of the surface of vast envelope of cloud, that by its rapid rotation is constantly creating and keeping up an intercirculation, such as our trade winds and equatorial doldrums, upon a vast scale.

In this connection we have only to carry our minds back to the beginning of the Azoic age of our world, and to imagine the surface just crusting over and still red hot in zones, with our entire oceans hanging as a vast cloud above, and precipitating its dense vapors as rain upon the hot and hissing surface. It was then that the activity of natural forces were at their height. It was then that the upheaval of the intensely heated masses from below met the cloud bursts from above, and produced the same class of phenomena that has lately been observed, upon a vastly larger scale, upon the planet Jupiter.

If, in view of the low density which has heretofore been given for Jupiter, we can reasonably accept an atmospheric or cloud depth of eight or ten thousand miles, the apparent great diameter of the red spot may be assumed as only the irradiation to, and illumination of the deep cloud stratum by an igneous mass, much smaller than the apparent size of the red spot, as we see it from the earth.

The size of the great spot, 26,000 by 8,000 miles, may be, for a planet 88,000 miles in diameter, only the illumination of a reasonable upheaval of the highly heated mass of the interior corresponding with the remains of such masses upon our earth.

The apparent retrograde motion I think is illusory, for I see no tenable reasoning to sustain the theory that has been advanced that it is a floating island, or crust floating upon a liquid surface. Nor does there appear any good reason for regarding it as of a periodical character, or bearing any relation to other periodical physical phenomena, as suggested by the Dearborn observer. But on the other band, an assertion in the report of the Dearborn observations, "that the apparent center of the red spot does not coincide with the true center, except when on the central meridian," goes far to explain the theory that the red spot, as seen by the telescope, is an area of the outer cloud stratum illuminated by an igneous mass upon the body of the planet. And also that its diurnal rotation should be fixed by the observed rotation of the red spot, instead of as heretofore by the rotation of the cloud spots.

American Pork in Europe.

At the last meeting of the French Academy of Sciences, M. Bouley, in presenting a work by M. Joannes Chatin on trichinosis, stated that the work had converted him to the opinion that France ought to devote her energies to the production of pork sufficient for the home demand, and absolutely prohibit importations of American pork, which, he said, almost invariably contains trichinæ, and is nourished on "unnamable *debris*."

The new German law prohibiting the introduction of American pork has quite recently gone into operation. But it is said that our pork exporters rely upon the continuance of the trade by diversion through England, France, and other countries. They assume that the Germans must and will have American pork, law or no law, worms or no worms.

WE had thought that paper had been put to the utmost uses some time ago, when machinery belting, car wheels, etc., had been made of it; but now we learn that in Breslau, Germany, a chimney fifty feet high has been erected of paper pulp, chemically prepared to resist combustion. What will paper be used for next?