

Earthen Filtering Plates.—G. W. Reye & Sons, of Hamburg, make filtering plates from a mixture of one part of gypsum with three parts of imperial earth in water. They can be purified after using by washing or burning. When impregnated with carbolic acid they also become useful as disinfectants.—*Dingler's Journal*. C.

Electric Sun.—Lontin has been exhibiting in the building of the Industrial Exhibition in the Champs Elysées, Paris, a circular electric light, formed by four voltaic arches. He uses four carbons placed radially, the two which are in the same diameter being connected with the same pole, so that an arch extends from each of the carbons to each of its neighbors. These four arches unite to form a complete circle and produce a light of extraordinary brilliancy.—*Dingl. Jour.* C.

Dissociation of Metalloids.—Pictet proposes a plan which he thinks might effect the dissociation of metalloids, but which is too costly for him to undertake at his own expense. It consists of a parabolic mirror, with a section normal to the sun's rays which should have at least 35 metres (41·86 sq. yards) of surface. He estimates that this would give a heat equivalent to 1000 calories (2200 thermal units) per minute, and that such a heat would probably be sufficient to decompose any of the metalloids which are really compound bodies.—*Les Mondes*. C.

An Intensified Electro-Magnet.—Dr. Stone recently exhibited before the Physical Society a very interesting electro-magnet of novel construction, and based on a principle which will probably be applied with advantage in the construction of electro-magnets for dynamo-electric machines and telegraphic apparatus. It is known that electro-magnets enclosed in jackets of soft iron are far more powerful than when the copper coil of wire is unenclosed. In fact, the iron jacket, like the second armature or diaphragm in M. Ader's form of Bell telephone recently described by us, has the effect of exalting the magnetic power of the poles. Dr. Stone does not employ a soft iron jacket, but instead of using copper wire to wind the bobbins he uses best charcoal annealed iron wire about $\frac{1}{8}$ in. in diameter. Four wires are wound on in parallel circuits, and the current is split up among them in "multiple arc." They are insulated from each other by paraffine wax. By this felicitous arrangement the lifting power of Dr. Stone's large magnet is, with a battery of four or five Buusen cells, increased four-fold.—*Engineering*.