

pears when the screen is surrounded by a thin cylinder of lead. The observation that the rays may be made visible, presumably by causing fluorescence of the retina, is confirmed. Our present knowledge of X-rays may be summed up by saying that the rays from a discharging apparatus are a mixture varying in absorptibility and intensity, that the composition depends chiefly on the duration of the discharging current, that different bodies absorb different kinds of rays, and that the X-rays are produced by the cathode rays, and the phenomena of both are probably of the same nature.

The experiment of producing light from household refuse, now being tried for the first time at Shoreditch, a London suburb, will be watched with interest by the civilized world. The refuse is burned in twelve destructor cells, each having a grate area of twenty-five square feet, and each pair heating a water-tube boiler, which works at a pressure of 200 pounds. Suitable engines use the steam for driving three high and three low-tension electric generators. The destructors are operated throughout the twenty-four hours; but, as the power is chiefly required for light, heat is stored day by day, warming water to feed the boilers at night. The destructors are designed to burn 20,000 tons of refuse per annum. It is estimated that this will furnish electric light and power and warm baths for the 124,000 inhabitants of Shoreditch.

The Araxes river, in Transcaucasia, has shifted its ancient bed, and now flows directly into the Caspian sea, instead of into the Kura, at a point sixty miles from the latter's mouth.

The idea that the moon has an appreciable action upon earthquakes and the weather, has been maintained for a quarter of a century by M. de Parville, the French physicist, who notes that the scientific world is now beginning to recognize such effects. Concerning the much-discussed question of the influence of the moon upon vegetation, M. de Parville says: "If we must speak with a certain reserve of the lunar influence on tree-growth, we should add that no one has shown that such influence does not exist." * * * M. Rousset, in his critical study, calls to mind an experiment that I made a long time ago in the tropics, by planting side by side ten seeds in the wane of the moon and ten others at full moon. The plants sowed at new moon grew noticeably more rapidly than those at full moon. I explained this phenomenon by saying that the first appeared just in time to profit by the moon's light, while the others, after germination, were not exposed so long to the lunar rays. * * * The hypothesis may be good, but perhaps it does not correspond to the reality. Nevertheless, it is confirmed by an observation of M. Carbonnier, who has, on his part, shown that at full moon coniferous and cryptogamic vegetation is more active than in other lunar periods. However this may be, the arguments presented against the lunar influence are insufficient to reverse the popular prejudice."

Since the beginning of May, a new system of reckoning the hours has been in force in Belgium, noon being repre-

sented by 12, and midnight by 24 or 0, according to circumstances. A train starting exactly at midnight is said to leave at 0 hour, and one arriving at that time is considered due at 24 o'clock. The dials of existing clocks at railway stations have been adapted to the new system by placing the numbers 13 to 24 under the 1 to 12.

The penny-in-the-slot principle has been applied in France to a machine for producing X-rays. The apparatus contains the stored electricity and a Crooke's tube in a small box, separated from which, by a little space, is the fluorescent screen. A suitable coin enables any person to view his bones and other marvels for a certain time.

Dr. Weinek's great photographic atlas of the moon is to be made on scales of ten to thirteen feet for the moon's diameter.

From scientific experiments upon more than 2,000 persons, Dr. J. H. Kellogg, of Battle Creek, Michigan, has determined the effects of one ounce of alcohol administered internally to be the following: (1) To diminish nerve activity; (2) to diminish cerebral activity; (3) to impair the co-ordinating power of the brain; (4) to lessen muscular strength; (5) to decrease digestive activity to a notable extent. Both his medical experience and laboratory research have convinced him that it is an error to regard alcohol as an aid to digestion, as it has proven highly detrimental. This influence upon the digestion, he declares, is exactly what would be expected of a drug that, like alcohol, is a paralyzer of protoplasmic activity, an anaesthetic and a sedative, and not, as has been erroneously supposed, a stimulant.

Ireland of prehistoric times was the gold country of Europe. In no other country, at any rate, has so much manufactured gold of early ages been found, not less than 400 specimens of Irish gold antiques being contained in the museum of the Royal Irish academy alone, while the British museum gold antiques illustrative of British history, are entirely Irish. Trinity college, Dublin, has many fine examples, and there are large private collections. Native gold occurs in seven localities in Ireland, and the ancient miners may have had sources of supply that are now worked out or lost.

Painful wounds frequently result from pricking the fingers with a pen. An examination of sixty-seven samples of school inks has been made by Dr. Markman, of Leipzig, who finds most of the inks to be made of gall-nuts, and to contain saprophytes, bacteria and micrococci. In two instances a bacillus that proved fatal to mice in four days was cultivated from migrosin ink. The poisoning, from pen pricks is attributed to pathogenic microbes, and it is assumed that keeping the ink covered lessens the risk.

TAXABLE LANDS.

The attorney general has submitted a reply to the State board of equalization on the question "Are unsurveyed railroad lands taxable?" As a matter of law, Mr. Bishop concludes that

lands are not taxable by the State. The opinion in full reads as follows:

Under the provisions of the Constitution and revenue laws of this State, except certain exemptions, shall be taxed in proportion to its value to be ascertained as provided by law. It is also provided that the word "property" as thus used shall include money, credits, bonds, stocks, franchises and all matters and things, real, personal and mixed, capable of private ownership. Assuming that the railroad company has a possessory claim under the Congressional grant, to the lands in question, it might be claimed with some degree of reason that they would come within the definition of property as above set out, and that such possessory right would therefore be taxable at whatever might be considered to be its true value, if it were possible to definitely locate and describe the same. Upon investigation, however, I find that the precise question which you ask has been adjudicated by several of the State courts, as well as the Supreme court of the United States in which it has been held that such lands are not taxable, on the ground that it is impracticable to attempt to assess them. It is a well established principle of law that land assessed for the purpose of taxation must be so described as to definitely locate and identify the same. In the railroad land grants there are certain lands excepted out of them, such as have been sold or otherwise disposed of by the United States, or those to which homestead or preemption claims have attached, or mineral lands. Until the surveys are made it cannot be known what parts of the land are within those enumerated exceptions or what sections or parts of sections or parts of sections will belong to the company, nor until then, can the locality of the lands be determined so that a description will identify them.

Our revenue law provides that land must be assessed in parcels or subdivisions not exceeding 640 acres each and tracts of land containing more than 640 acres which have been sectionized by the United States government must be assessed by sections and fractions of sections. Such description could not be applied to unsurveyed lands, nor could a description defining in by metes and bounds be adopted because it would be impossible to locate exactly any part or parts thereof. So that the only possible way to designate or describe unsurveyed railroad lands would be, as sections and parts of sections to be hereafter ascertained when the surveys of the United States are extended over them.

I think it is plain that this would not be a description by which the identity of the lands could be established, and that it is equally plain that the possession of the lands so designated cannot be established until the surveys are made.

You are therefore advised that as a matter of law, such lands are not taxable by the State.

Mrs. M. Kiser, 49 years of age, was reaching out of a second story window in Denver, fixing a clothes line, when she slipped and fell, striking on her back. She lingered three hours in great agony, when death came to her relief.