

SCIENTIFIC MISCELLANY.

Colored lights in great variety are obtained by a London company by coating the lamp bulbs with a mixture of an alkaline silicate, silicon, cryolith, and the desired mineral colors.

What we don't know about milk is of such importance that a Brussels publisher has felt justified in starting a periodical devoted wholly to the scientific study of this food product.

A new tape-worm described by a Japanese physician is of gigantic size, being more than four inches broad and about thirty-five feet long. In the ordinary tape-worm, new segments are produced by the head, the rear segments being the most mature, but in the new species each segment divides, and the old and young alternate. The symptoms produced are those of the common species intensified.

In the eager collection of meteorites, stones not of celestial origin are brought forward in great numbers. M. Meunier mentions that not long ago some Corsicans were convicted of forging meteorites by coating ophites and serpentine with sulphur and lamp-black; and the famous meteorite of Iglast has been proven to be furnace slag. A three-pound iron ball made by negroes deceived Schweinfurth, who supposed it a meteorite from the Libyan desert.

The necessity for new fuel supplies is stimulating European inventors to great activity. The new process of Herr Stuber is claimed to convert peat and lignite into briquettes having a heating value fully equal to brown coal, and Germany's 5,000,000 acres of peat-beds are consequently rising in importance. Not less noteworthy is the system by which M. Riche, of Paris, claims to treble the yield of gas from the destructive distillation of wood, peat or lignite, the product being scarcely inferior to coal gas.

Wood alcohol is gaining an ill reputation all its own. Dr. H. Moulton has pointed out to the American Medical Association that no other known substance when swallowed so uniformly selects for attack the optic nerve and retina, and in thirty cases of poisoning from it reported within two or three years, fifteen have resulted in total blindness, while twelve cases of blindness from Jamaica ginger and other essences seem to have been due to contained wood alcohol. The quantity taken has varied from a dram to an ounce or more. After moderate doses the symptoms—such as nausea, vomiting and headache—do not appear until the second or third day, and disturbances of vision are delayed a day or two longer, when blindness becomes total in twelve to forty-eight hours.

The filament of the incandescent lamp has been found by Janet, a French physicist, to reach a temperature of 1610° to 1720° C. The radiation, though surprisingly small, is sufficient to boil water.

Scientific walking and marching have been strangely neglected, in the view of Mr. Giles A. Daubeney, a former officer in the British army. He finds that when walking on the level, up hill, or down-hill, the best and safest work with the least fatigue can be had only by adapting to each case the length of pace, the time of each pace, and the attitude and movements of the arms and the whole body. Greater efficiency of soldiers and civilians will come from better walking.

Maté, or Paraguay tea, which is the favorite beverage among a population of some 20,000,000, grows wild in the woods of the southern half of South America. For many years its cultivation was a lost art. Although large plantations were planted by Jesuit missionaries more than a century ago, later attempts to raise the plants were fruitless, and not until recently have new plantations been established in Paraguay. The secret of cultivation, it is alleged, is that the seeds will not germinate until treated with a potassium salt. The leaves are usually prepared for market by roasting over a brushwood fire, grinding to powder, and ramming into rawhide bags; but the dried leaves are sometimes merely broken. With a liberal supply of maté, native Paraguayans are said to do hard work for days at a time with scarcely any food.

The ordinary infectious cold is mentioned as by far the most common of all diseases. Citing evidence of its infectiousness, Dr. Willoughby Gardner, an English physician, states that Conway, Nansen and other explorers, with their men, have been free from colds while exposed to the dampness and severe weather of the Arctic regions, but have at once caught cold on entering a settlement. High mountains and open-air sanitoriums show a like immunity. So infectious is the ordinary cold that its spread may be followed, and Dr. Gardner has watched a cold pass from house to house and has even traced it from village to village, and has listened to explanations of sufferers that it was caught from an open window or some fancied imprudence!

An improvement of the Goldschmidt process of welding and casting metals adapts it to the unskilled workman. The crucible is of iron with a refractory lining, and the bottom is closed by one or more small iron plates, the top having an iron cover with a fuse-hole in

the center. A substantial tripod is used as support. The crucible is charged with "thermit" mixture, which consists of powdered aluminum and oxide of iron or other metal, and for each pound of its weight may yield nearly half a pound of molten metal, and on this is placed a kindling material connected with the fuse. Within a few seconds after the fuse is lighted, the contents of the crucible become fluid from the heat of the oxidizing aluminum. The reduced iron from the oxide melts the supporting iron plates and passes through the bottom into a refractory mold, the special advantage of the new method being the holding back of the corundum slag floating on top. In welding, the clay mold is made to clasp tightly the rails or broken shaft, with the opening over the ends to be joined. The appliances are simple, and not least of the claims for the improved process is its convenience for repairs on shipboard.

THE GATES AJAR.

Sunday's papers contained an evidently truthful and most important story from St. Louis, which throws more light on the actual state of things beyond the grave than all the reports of the Society for Psychical Research. It tells how a good lady decided to commit suicide, and how, while she was about it, her daughter heard the voice of her father, who had been dead for ten years, calling to her in considerable excitement and distress, to look after her mother and stop her. So the daughter got up, found what she was at, and stopped her.

From this it is perfectly plain that after death we can still keep tab on what is going on here, and that under exceptional circumstances we can holler loud enough to be heard in St. Louis. One cannot help wondering, however, what the especial emergency in this case may have been; we would think that the daughter and friends would feel somewhat uneasy about it. Why was pa so solicitous that ma should not join him at that time, knowing that she was bound to come sooner or later? Was he alarmed for her or for himself? Did he know that she would not enjoy the place prepared for her? Or didn't he want her to see him at some occupation he was engaged in? Or did he feel that he needed a few more years to rest up? It would be curious to know what more they hear from pa.

TO CURE A COLD IN ONE DAY.

Take Laxative Bromo Quinine Tablets. All druggists refund the money if it fails to cure. E. W. Grove's signature is on each box. 25c.