

"Sky Glows."

"Sky glows," termed by some of the European astronomers as aurora displays, are now the subject of interesting discussion in astronomical circles, especially among the scientists of Europe.

These phenomena were first observed about July 1 at Copenhagen, Königsberg, Berlin, Vienna, and other places. Mr. W. F. Denning, the English astronomer, says: "Certain features of the glows struck me as being essentially different from exhibitions of normal auroræ boreales. No streamers whatever were seen. Clouds observed were of peculiar character, and some of them showed traces of spiral formation. Though thin, they were strongly illuminative, and stars shone through them with surprising distinctness."

This feature of the phenomenon was seen in the eastern section of the United States following the break in the protracted heated drought which has prevailed in the Eastern, Middle, and South Atlantic States.

For some time a peculiar strong orange-yellow light over the horizon, the color of which was more orange in its lower parts and more yellow in its higher parts, has been observed all over northern Europe and the United States. Clouds or spiral streams of various tints were brilliantly outlined across the sky, so luminous that few stars could be seen, and the Milky Way was hardly distinguishable.

Mr. Brauner, of the Bohemian University, and Mr. Denning both say they saw no trace of the characteristic auroral bands or columns in this phenomenon. Mr. Denning says: "Whatever the true nature of the recent exhibition may have been, it is certain that something in the air exercised the capacity of reflection in a very high degree. The period was one of great heat and thunder storms."

An interesting feature of the phenomenon was that a high barometric maximum was lying in the north, and the winds were from that direction during the time of the nocturnal glows.

Accompanying these glows at night there were solar halos daily, which through telescopic observation showed, in the features of the atmospheric distortion of the sun's limb, the existence of two distinct drifts of the atmosphere.

The Current Supplement.

The current SUPPLEMENT, No. 1704, describes an up-to-date German fire-brigade station. All the vehicles described are automobiles. Prof. Silvanus Thompson gives a brief history of electric motive power. Because of their cheapness, the supply of matches amounts, for the whole world, to about two thousand million, an output made possible only by the almost total elimination of hand labor from their manufacture. Almost every operation from the sawing of the log to the filling and labeling of the boxes is performed by ingenious machines. The character of these machines and the method of their operation is described by O. Bechstein. The first of a series of articles on galvanizing is published. The English correspondent of the SCIENTIFIC AMERICAN gives an interesting biography of the famous physicist, Lord Rayleigh. A Roman sculptor has made a reconstruction of Imperial Rome, pictures of which are published. Prof. E. A. Birge concludes his article on the respiration of an inland lake. A soft coal fire is the subject of an article by the well-known engineer, Prof. Vivian B. Lewes, in which he describes the chemical processes of soft coal combustion. The transformation of heat into work is graphically described by Sidney A. Reeve. In all the fields of botanical research there is no more interesting subject than fungi. This subject is interestingly discussed by Sanford Omensetter.

"Lusitania" Breaks all Records.

The Cunarder "Lusitania" has added to her glory by beating her former short course record from Daunt's Rock, outside Queenstown, to Sandy Hook lightship by 3 hours and 40 minutes. Her new time between the starting and finishing lines of the course is, adding five hours for the difference between our own and the British clock, 4 days and 15 hours. Her best previous performance, also over the short northern course, which was completed on November 2 last, was 4 days 18 hours and 40 minutes.

On her best day's run, on the nautical day ending at noon on Monday, when she covered 650 nautical miles in 25 hours and 20 minutes, her average speed was 25.66 knots.

The readiness of Japan and China in adapting themselves to western methods of electrification, says the Railway News, is to-day amply evidenced in the work going on in the large cities of these two countries. Yokohama has its electric tramways. Tokio, the capital of Japan, has a fine system of electric railways. The railway engineers and directors are Japanese. Shanghai has recently completed a splendid system of tramways. Hongkong has operated street railways for several years with good results. There are many other cities in Japan and China which will undoubtedly follow the above-named cities and employ electricity.

Correspondence.

A Real "Human Ostrich."

To the Editor of the SCIENTIFIC AMERICAN:

While the writer was in the office of Drs. Gale and Bartle, of North Bend, Ore., who are the best surgeons here, a man called for treatment and complained of a severe pain in the lower region of the stomach. He was examined, sent at once to the Catholic Hospital, and operated on at 2 that afternoon. I inclose herewith a full list of articles found in his stomach, also photo which I had taken on the spot.

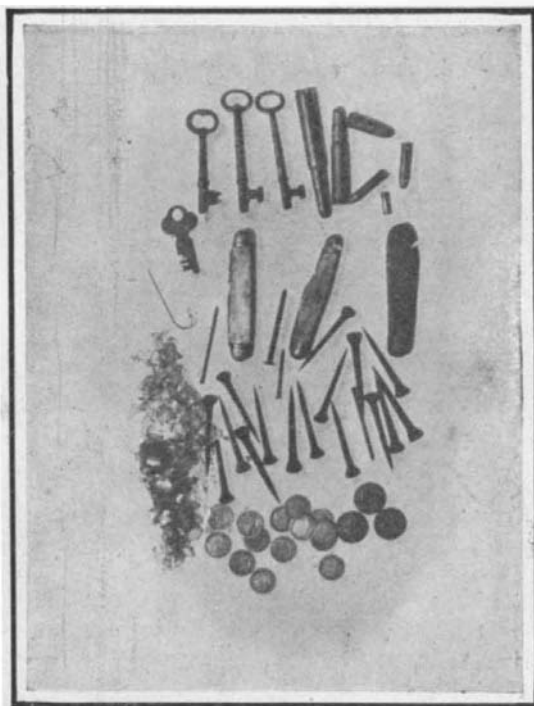
Drs. Gale and Bartle, also Father Curley and nurses were present. In sending the inclosed data, I do so that you may use same if you see fit. The man is alive and nearly well, and feels much improved.

The data I send are all true to the letter and will appear in leading medical journals.

Bandon, Ore, July 8, 1908. **FREDERICK GRAHAM.**

Owing to the fact that to the public it sounds like a fairy tale or a huge joke, I hereby give you a few facts about the operation on Frank Durga at the Mercy Hospital June 30, 1908.

Durga was born in Hillsdale, Mich., in 1853. Twenty-four years ago he found some glass and nails in a beef stomach and reasoned that if a beef could live after eating such things, he could. Hence his freak appetite began. He followed circuses, etc., for years, eating glass, nails, and other small articles. He traveled extensively and has been all over the United States, but never in Hawaii, as stated in another paper, and has been in this locality one year. He came under our observation about three months ago, and was suffering from severe cramps after having



AN AMAZING COLLECTION OF ARTICLES TAKEN FROM THE STOMACH OF A MAN.

eaten two electric light bulbs. Since that time he has had repeated attacks of cramps and finally entered the Mercy Hospital on June 22 and was operated on June 30, 1908. On reaching the stomach, this large mass was easily located, dragging the stomach far below its normal position and forming a pouch which rendered it impossible for any of this mass to reach the pylorus and be evacuated.

We removed 5 rifle balls, 3 jack-knives, 4 door keys, 17 horseshoe nails, 4 6-penny nails, 1 fish hook, 1 end from jointed rod, 1 plate from jack-knife handle, 15 dimes, 3 nickels, and 4 ounces of glass. Weight, 1 pound 14 ounces. The operation occupied fifty-five minutes.

The patient is now on liquid diet and is recovering. These are absolutely facts and can be vouched for by the hospital authorities here. **DRS. GALE and BARTLE.**
North Bend, Ore.

According to a contemporary, a new dyke to protect the double-track trestle of the "North Incline" of the Southern Railway, over which cars are run on to the car ferry on the Illinois side of the Mississippi River near St. Louis, has recently been completed. Floods had cut into the principal dyke protecting the trestle from high water, and had finally attacked the trestle itself. In making repairs a new dyke was added at right angles to the channel. An excavation was made about 5 feet deep and 50 feet wide; willow mattresses, closely woven and wired, were laid in the trench and covered with limestone riprap, which amounted to 1½ cubic yards for each 100 square feet of mattress. The up-stream side of the mattress was dipped about 2 feet, and heavily ripped at the toe to prevent under-scour. Piling was then driven through the mattress about 20 feet from the up-stream edge.

Employment of Sulphurous Acid in Sugar Refining.

In recent years pulverized zinc and aluminium, various sulphides and, in particular, sulphurous acid have been substituted for the lime, blood and bone black which were formerly used for purifying the crude sap of the sugar beet. The chemical purifying agents possess the advantages of being more active and of uniform strength, so that they can be employed with certainty of effect.

Fouquet and Weisberg have recently described a method of purifying saccharine liquids with sulphur dioxide or anhydrous sulphurous acid. This gas may be made directly by burning sulphur in specially contained furnaces or obtained from the cylinders in which it is sold in a compressed and liquid form. The gas is allowed to bubble through the sap, syrup or molasses until it exactly corrects the alkalinity which has been produced by a previous addition of lime. The process is controlled by drawing off measured quantities of the liquid and adding to them, from a burette, a standard acid solution until the liquid ceases to redden a solution of phenol-phthalein. The quantity of acid added gives the relative alkalinity of the saccharine liquid.

As sulphurous acid has a very energetic decoloring action only a small quantity is required and the cost of the operation is only a cent or two per ton of beet root. The minute quantity of calcium sulphite which is formed remains in the molasses and not a trace of it is found in the refined sugar. It should be observed in this connection that common sugar is one of the purest articles of commerce. Prof. Pellat, requiring a specimen of absolutely pure sugar in order to establish a method of analysis for the use of the government in fixing the tax on sugar, applied, not to his colleague, the professor of chemistry in the Sorbonne, but to the Say sugar refinery. All (French) white sugar, whether it is purchased in the form of loaves, cubes or crystals, is, to all intents and purposes, absolutely pure.

Color Museums Demanded.

A novel suggestion was put forward at the recent international art congress at the Victoria and Albert Museum by Mr. Alexander Millar, a prominent manufacturer and designer, who urged the need for systematic color training and recommended the establishment of "color museums." This idea, he explained, had received sympathetic support from many great artists. In every educational center and in every school there should be collections of objects selected for their beauty of color alone. There should be analytic color sections, showing the color scheme apart from the accidents of form and shadow.

The collection, continued Mr. Millar, need not be very costly. Why should not a beginning be made by making a selection from the beautifully colored textiles which appear from time to time in shop windows? The expense would be very small. Year by year beautiful stuffs are being produced and allowed to drop into oblivion. If such a collection be not formed now it might be that one hundred years hence our museum authorities will buy at a fancy price a collection of imperfect fragments of the very stuffs which could be now acquired for a nominal sum.

He spoke of what he knew when he said that such a collection would be heartily welcomed by all designers and by every one concerned with arts and industries in which color played an important part.—London Daily Graphic.

Consul Walter C. Hamm, at Hull, sends the following summary of motor accidents and prosecutions occurring in Great Britain in April of this year and compares it with April of 1907. It will be seen that in every instance but one there has been a large increase, the figures for the same month in the respective years being as follows:

	1908.	1907.
Accidents	79	58
Persons killed	25	16
Persons injured	49	28
Motorists summoned	310	158
Motorists convicted	291	141
Motorists convicted for driving dangerously, etc.	54	54
Motorists convicted for exceeding the speed limit	218	74
Motorists convicted for other offenses	19	13

In six of the fatal accidents the motorists were blamed, while of the other accidents, in seven cases the injured persons were subsequently awarded damages, and in ten cases the drivers were fined. There were four more instances of cars running away after causing accidents. The British public is becoming concerned over the increasing number of these accidents. It is probable that stricter laws governing the running of motor cars will be passed in the near future intended to lessen, if not entirely prevent, such accidents.