

**An Emerald Craze in Colombia.**

United States Minister C. B. Hart writes: "Until very recently emeralds were a drug on the market of Bogota. One who desired to buy them had only to wait and have them brought to him. The famous Muzo Mine, which has produced emeralds of great value and in large quantities, lies near Bogota, and the people of this city had long been familiar with its products. This mine is operated by a French company, which insists that for the past year or so it has found almost no emeralds. However, from this source, or from some other, crude emeralds have continued to come into Bogota. Of the cut stones, set and unset, there has been an abundance in the market. Hard times have compelled many persons to offer for the sale their highly prized heirlooms, and these have been obtainable, as a rule, at very low prices. In July an emerald craze seized upon Bogota. The jewelry stores and all other establishments where emeralds are dealt in were besieged by persons who wished to buy, and by others who wished to sell; and for the same reason, men and women crowded the streets, standing in the roadway as well as on the sidewalk, some displaying their emeralds and others their money. A jewelry establishment located on the most prominent corner in Bogota was compelled to ask the police to drive the crowd away.

"As the news spread outside of Bogota, emerald owners began to rush in. This swelled the throng and sent the fever up several degrees. Sales were made right and left, at prices hitherto unheard of in this market. Persons who had not thought of selling, tempted by the wild rush to buy, brought out their emeralds and began trading. Nobody could explain the real cause of the excitement, and many are now beginning to realize that it was without real cause. In a few days the fever reached its height and began to decline. While it lasted emeralds sold, on a gold basis, at about three times their value in this market just before the excitement began. It is estimated that up to this time about 4,000,000 pesos have changed hands as the result of the furor.

"The crowd soon disappeared from the streets, and many buyers who went in on the flood tide find themselves with emeralds that will not bring the price they paid for them. Others, also inexperienced, have more or less excellent imitations as souvenirs of this extraordinary movement. It does not appear that the expert dealers have bought so extravagantly as the general public, and yet it is believed that some of these have far overreached themselves.

"The only approach to an explanation for this craze is that a Bogota dealer who went to Paris recently, on his return to this city began to buy emeralds at higher prices than had been ruling in the market. This seems to have started it. Some of the experts say that this dealer drew out of the market long before prices reached their height, and that he did so because emeralds were selling in Bogota for more than they would bring in Europe."

**A RACING AUTOMOBILE.**

In Paris it has become quite the fashion to have automobile races covering long distances, and manufacturers build special machines for this purpose. The prevalence of good roads in France favors this sort of sport. But in this country, the road conditions as a rule, are against automobile racing, though the era of the bicycle has done much to effect road improvement.

Our illustration of a special racing gasoline propelled Winton machine showing, Mr. Winton's hand on the driving lever, has been built extra heavy to withstand the strains liable to be put upon it by reason of rough roads, and also to enable it to travel at a speed of twenty-eight miles an hour, where possible. It will be noticed that acetylene dash lamps are on the front, and also the signal horn midway between them. It is equipped with a seven horse power Winton engine and is expected to do the work intended for it very easily. The vehicle is to be used in making a time record between Chicago and New York sometime this fall.

**A Pneumatic Letter Copying Book.**

A novelty is a pneumatic letter-copying book. The device is intended particularly for the use of travelers who cannot have access to a press. The book is similar to an ordinary copy book in general appearance and is provided with clasps to hold the covers firmly and furnish resistance to internal air pressure. The leaves are moistened in the usual way with a brush or

sponge, or damp cloth, and the book is closed and clasped and the air bag is pumped up by means of a bulb. The pressure is even and good copies can be obtained by its use.

**A PORTABLE ACETYLENE GAS LAMP.**

A new acetylene gas lamp has been invented by Peter Josserand, of Josserand, Tex., which is particularly adapted for use as a table-lamp, and which is arranged to insure a uniform, perfect, and brilliant light.

The lamp comprises a base supporting a bowl forming a generator in which the calcium carbide is contained and in which gas is generated. A cap screws on the generator and terminates in a pipe by which a wa-



THE JOSSERAND ACETYLENE-LAMP.

ter-reservoir is supported. A tube provided at its upper end with a burner, extends through the reservoir and serves to conduct the gas. Water is supplied from the reservoir to the generator below by means of a pipe provided with an automatic valve. As shown in our enlarged detail view this valve has a downwardly extending stem fitting loosely in the end of the water pipe, and an upwardly-extending stem receiving the end of a rod screwed in a cap closing the valve-chamber. The screw-rod is provided with a collar engaged at its lower end by a spring coiled around the stem. A tube opening into the valve-chamber above the valve, conducts the water to the generator.

When the screw-rod is screwed down, the valve is seated to cut off the water supply, but when the rod is screwed out until the collar abuts against the under side of the cap so as to allow the spring to hold the valve loosely to its seat, then the water rises in the valve chamber and flows drop by drop to the generator. When the gas pressure overbalances the water pressure, the valve is seated, thus preventing the fur-

ther generation of gas. When the gas pressure has diminished, the valve is opened by the water and generation is resumed.

The supply of carbide can be replenished by unscrewing the generator cap and placing the required quantity of the material within the bowl. The water reservoir can be filled by means of a filling cap.

**British Consular Reports.**

Feidrn's Magazine laments the inadequacy of the British Consul Reports which are issued without notice at uncertain intervals, and which are mostly prepared by men who have not had the advantage of any commercial experience. The reports are sold and with few exceptions are quite useless either in consequence of the incompetency of the authors or from the great delay in their publication, rendering the information out of date. Of late, instead of giving information which might possibly be of value they consist, for the most part of reproving homilies addressed to British manufacturers on the subject of their failings. A properly organized commercial section is now a necessity to the government of a manufacturing country. This is shown by both Germany and the United States whose consular service in trade respects is very superior. The American Consular Reports are issued daily and are sent to all newspapers who will use them. The Consular page in the SCIENTIFIC AMERICAN SUPPLEMENT, which is published weekly, gives an excellent idea of the value of these reports.

**On the Blue Color of Water.**

In an article that appeared in No. 1, Vol. XVIII, of the Recueil des Travaux Chimiques des Pays-bas et de la Belgique, W. Spring again discusses the questions as to the cause of the blue color of water. Many physicists have regarded the blue color of the sea and of lakes as not belonging to the water itself, but as being produced by the reflection of the sunlight from invisible particles which the water always contains in suspension. This idea was suggested by the theory then held regarding the cause of the blue color of the sky. Earlier experiments of Spring led him to the conclusion that water itself is blue, and that the fine particles which it holds in suspension, while contributing very much to its illumination, exert no appreciable influence on the intensity of the blue color. Soret had previously, in 1869, expressed this same opinion. As neither the work of Soret nor that of Spring appears to have convinced everyone, Spring has again taken up the subject with the object of determining experimentally the optical properties of the particles in clear waters, parallel rays from a powerful electric light were passed through (1) distilled water, (2) the drinking water of Liege, and (3) rain water that had been allowed to stand. In all cases the presence of particles became apparent, the clearest being the drinking water. There was no evidence of a blue water. Now four experiments were performed.

1. A cell containing a solution of magenta was interposed between the source of light and the tube containing the water, so that only red light passed through the latter. Under these conditions the light appeared red and its intensity was not diminished.

2. The light was passed through a solution of picric acid before it was passed through the water. The yellow light was not in the least modified by being passed through the water.

3. The water was illuminated by blue light produced by interposing a cell containing an ammoniacal solution of cupric hydrate or a piece of cobalt glass. The result was the same as in the first two experiments. The color was not changed by passing the light through the water.

4. Green light produced by passing it through a solution of nickel chloride gave the same results, that is to say, the color was not changed.

These experiments show that the particles, to which clear water, distilled of natural, owes its illumination, have the power to reflect the red, the yellow and the green waves, and that they cannot, therefore, be the cause of the blue color of water. Reflecting with equal facility waves of all lengths, they return the sunlight to us without chromatic change. The author concludes that water is blue of itself, and that the particles which it holds in suspension are the principle cause of its illumination. According to their nature, they determine also the modification of the color of the water, and produce greenish tones when they do not destroy all the natural color.—Am. Chem. Jour.



THE WINTON RACING VEHICLE.