WIRE SUSPENSION FOOT BRIDGE AT PLATT NATIONAL PARK.

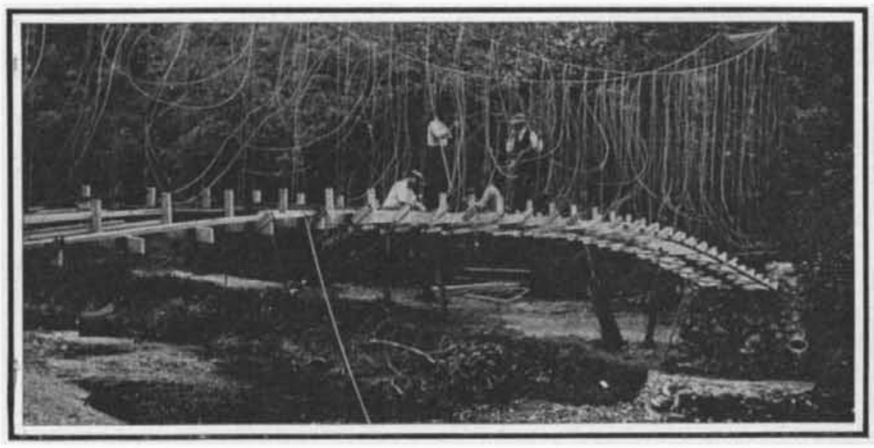
BY W. L. SALVAGE.

The accompanying cuts show the latest addition to the attractions of Platt National Park, Sulphur, Okla., in the form of a wire suspension foot bridge across Rock Creek, by which visitors have easy and safe access to the waters of its principal springs. The span is 112 feet, the width of roadway 3 feet in the clear, and the height above low water 24 feet. The towers consist of four 70-pound railroad rails each, set in concrete base and joined at the top by portal plates of boiler iron bolted through the flanges of the rails. These towers are set 3 feet in the concrete and have a net height of 27 feet to the top of the portal plate. Concave caps or "saddles" are fastened to the top of the towers to receive the supporting cables. The cables are ¾ inch Swedish iron with hemp center. The anchorage at the north end of the bridge, which is on a level with the floor, consists of a pit 5 x 12 feet and 7 feet in depth, at the bottom of which the cables are passed around 2-inch iron rods and secured by clips. This pit was filled with concrete of the proportions of 1-2-4 and was reinforced with a network of ½-inch iron rods at intervals of one foot, from bottom to top. The south anchorage consists of iron rods 1 inch in diameter and 6 feet in length, with welded eye to receive cable hook, threaded for 5 feet and supplied with six hexagonal nuts. These rods were set 6 feet into the solid rock of Bromide Cliff, the holes being filled with plastic cement mortar of the proportion of 1 to 2. At the north anchorage the cables are 9 feet apart at the surface, the distance to the top of the tower being 70 feet. At the south anchorage the cables are somewhat less, owing to the shorter distance to the fastenings. The width at the top of the towers is 6 feet. The width of the cables in the center of the bridge is 5 feet. Soldered to these cables at intervals of 3 feet are loops or "stirrups" of No. 8 galvanized wire, graduated in length from the ends to the center of the bridge so as to give a camber of 6 feet. Into these stirrups are placed floor beams 2 x 6 inches and 8 feet in length, upon which the superstructure of wood is supported. Drawn taut over the upper edges of these floor beams and fastened to iron rods in the concrete of the tower bases, are five No. 8 wires, placed as a precaution against an up-lift by the wind. Four planks, 2 x 8, with spaces of 2 inches, are laid lengthwise on the floor beams and upon these are three layers of inch floor boards, the first two layers placed at angles of 45 degrees and the last straight across, all layers having spaces for the free circulation of the air. The stringers are 2 x 8, dapped to 5 inches and strengthened by stays 2 x 4, 18 inches in length. On top of the stringers are the posts for the lattice, 2 x 4 and 36 inches in length. These are braced by 2 x 4 braces spiked to the end of the floor beams. On top of the lattice posts are caps 2 x 4 set on edge, on the top of which is the hand rail 2 x 6 with beveled edges. All dimensions are fastened by No. 40 spikes and all inch stuff by No. 10 nails. Lateral vibration is overcome by guy wires running from intervals of 28 feet on the bridge to anchorages on either bank of the stream. These and the supporting wires are adjusted by simply twisting them with an iron rod, care being taken to avoid kinks.

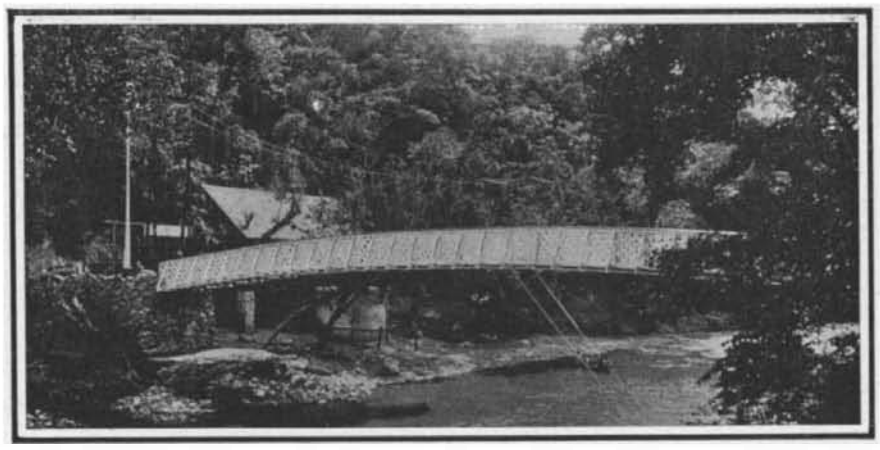
Total weight of bridge, 8,790 pounds. Bridge and twenty persons at 150 pounds each, 11,790 pounds. Safe strain on two cables, 64,000 pounds. Safe load on bridge, including the bridge itself, 11,860 pounds.

The bridge was designed by H. V. Hinkley, consulting engineer, Sulphur, Okla., and constructed by the government on force account, under the supervision of A. R. Greene, superintendent of Platt National Park. The estimated cost was $630, but the actual cost somewhat exceeded this amount.

The Bridge as Viewed from the North Bank. Note the Steel Rail Towers.



Attaching the Wire Suspenders to the Framework of the Floor.



The Completed Snspension Foot Bridge across Rock Creek, Platt National Park.

The Towers Consist of Fonr 70-Pound Railroad Rails Set in a Concrete Base.

WIRE SUSPENSION FOOT BRIDGE AT PLATT NATIONAL PARK.

TESTING FOR HARDNESS.

BY J. F. SPRINGER.

What do we mean by the hardness of metals? A razor is hard—to that we all agree. And we say, thinking of such steel and of the diamond, that one thing is harder than another if it is capable of scratching it. This test has been in use for time out of mind, and if age is any guarantee of correctness, it ought to

(*Continued on page* 138.)

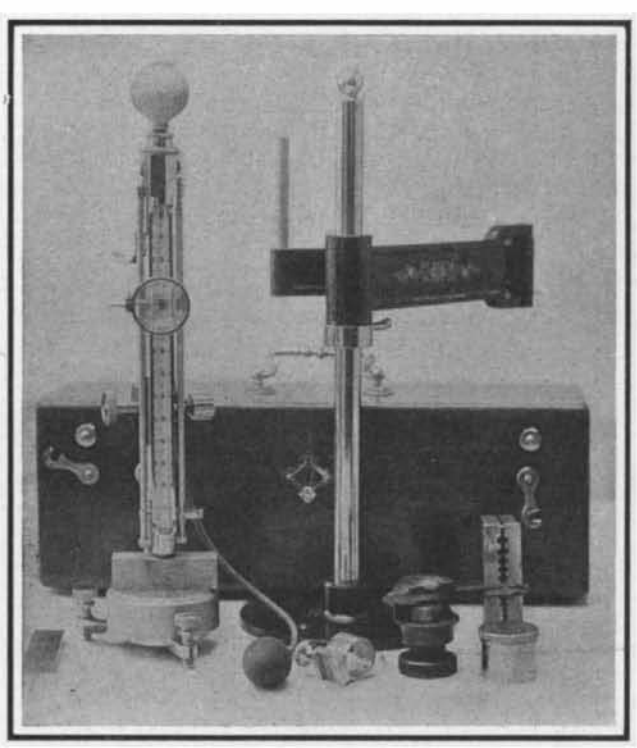


Fig. 1.—The Scleroscope, A New Instrument for Testing the Hardness of Metals.

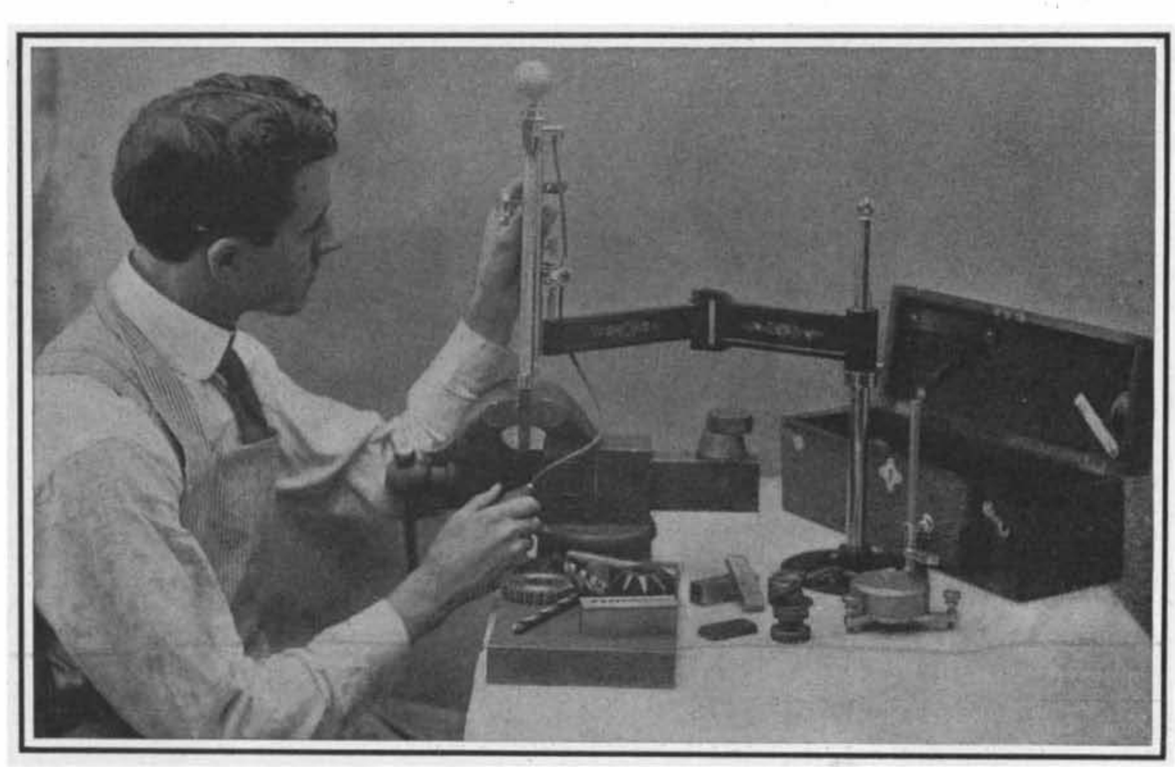


Fig. 2.—The Rebound of a Pointed Weight Dropped on the Specimen Registers the Instantaneous Resistance of the Latter to Deformation.

TESTING FOR HARDNESS.

A pretty table decoration is easily constructed by anyone who has water and electricity "laid on" in his dining room. In a shallow tank with a wooden bottom and glass sides electric bulbs are mounted under glass globes which are hermetically joined to the bottom of the tank to protect the connections from water. The wires pass through the bottom of the tank, which is also traversed by three concentric tubes, two of which rise to a height of several feet, while the third and largest terminates below the edge of the tank and serves as an efflux pipe. The water enters through the smallest tube and its fall is broken into cascades by two or more flat domes of colored glass which are supported by the intermediate tube. Under these domes are arranged very small electric bulbs of various colors which are fed by wires which pass up the space between the two long tubes. The effect is heightened by placing shells and aquatic plants in the tank.

Automobilists often find it desirable to know the quantity of gasoline on hand at any instant in order to avoid exhausting the supply before reaching the goal and to know whether the speed should be increased or diminished. As the tank is lined with lead an ordinary gage rod can not be used and the glass tube employed in water gages is too fragile. A breakage during the race would be fatal and it is doubtful whether such a device would be accepted by the managers of the trials, who prefer a container of the simplest and most easily examined form and would probably object to the presence of the stuffing box joints which could be so contrived as to make the level of the liquid in the glass tube different from that in the body of the container and thus facilitate and conceal fraud.

The Bayard-Clement firm has devised a magnetic gage which is not open to these objections and indicates the level with great accuracy. It was first used at the recent Grand Prix. The container is traversed from top to bottom by a tube *B*, which bears spiral grooves on its inner surface. Inside the tube is a float *A*, furnished with pegs *D*, which engage in the grooves. The float, therefore, rotates as it descends, making one entire revolution in sinking from the top to the bottom of the tank. The rotation is communicated to a flat vertical rod *E*, which is placed in the axis of the tube and passes through the float. The rod is pivoted at top and bottom and bears at the top a horseshoe magnet *F*, the poles of which revolve with a very small clearance beneath the top of the tank, which is of non-magnetic metal. A magnetized needle mounted on a pivot above the top of the tank follows the rotary movement of the magnet and indicates on a graduated circle the azimuth of the latter. As the float turns with the magnet and sinks as it turns, descending from the top to the bottom of the tank in one revolution, the pointer thus indicates the height of the float and hence that of the liquid.

TESTING FOR HARDNESS.

(*Concluded from page* 136.)

be faultless. But of late years a new product in the form of an air-hardened manganese steel has come into use which product is capable of resisting the file and yet appears to be comparatively softer than the file. In fact, it seems possible that we have here another property of metals which comes to the aid of hardness proper in resisting the abrading action of the file. This property is toughness. Stopping to think, we see that it is quite possible with the slow-moving file that toughness comes in and obscures the test.

Now if this analysis be correct, hardness would appear to be the instantaneous capability of a metal to resist deformation. And differences in hardness we would define as the different degrees of resistant energy of various specimens when the elastic limit is exceeded.

If this description of hardness be correct, then the scleroscope invented by Mr. Albert F. Shore would seem to measure it exactly. The instrument consists essentially of a tiny weight pointed at one end, a piece of glass tubing, and a scale of measurements. The weight fits inside the tube, which serves as a guide. Upon holding the tube upright and allowing the weight to fall, pointed end downward, a sharp blow will be struck upon any specimen placed in position. A scale, graduated from 0 to 140, is placed behind the tube. Upon this scale, the rebound is measured. Referring to Fig. 1, the glass tube may readily be seen held in position by a standard on the left. The rod seen to the right of the tube swings freely from its upper end, and is, in fact, a plumb rod, employed for the purpose of enabling the operator to hold the instrument in a vertical position. The bulb seen at the top is used to exhaust the air from the tube and thus raise the weight. Once in position at the top of the tube the weight is detained by a suitable catch. When it is desired to operate the instrument, the finger hook seen on the left is pressed down and the bulb lying on the table is compressed. The weight is now released and free to fall.

The specimen to be tested should present a horizontal surface at the lower end of the tube. If it is of suitable size and shape it may be held in a clamp. If of irregular form, it may be imbedded in a composition of tar and asphaltum. This material affords in itself an illustration of hardness in reference to a quick blow. For it supports the specimen when subjected to the instantaneous impact with little or no yield, although the specimen may be imbedded in it with no trouble.

If the piece to be tested is large or if it is inconvenient to remove it from its position, the essential part of the instrument may be disengaged from its base, and used separately. This is a matter of great convenience. Thus, by opening a bearing box, both shaft and box may be tested. If the brasses are harder than the steel, it is a combination which may produce trouble; for should the bearing at any time become dry, the shaft would be cut.

By following out the line of procedure suggested by this illustration, a manufacturer will be able to assemble the parts of a machine on the principle of combining with a more expensive piece a softer, less expensive one, so that when wear takes place the less valuable part may be the one to suffer instead of the other. Likewise, the part removable at greater trouble may be associated with a softer and more easily removable piece. These principles are of great value in machine construction, and need only to be mentioned to be understood.

At present, two styles of hammer are used in the scleroscope—one with rather a sharp point, the other somewhat more blunted. The sharp-pointed weight strikes a blow of 75,000 pounds to the square inch. As the weight is quite small, it is necessary, in order to secure this result, that but a very minute area shall be in actual contact. Great difficulty was experienced in securing a material suited for such exacting service. The diamond was tried, but failed. Finally, using the scarcely perfected instrument itself in the effort for success, a method of treating steel was devised which enables the manufacturer to produce a weight capable of withstanding such a tremendous shock upon a very small point. When this hammer, after falling freely for about ten inches, strikes the surface of a fine grade of hardened steel, it rebounds about seven inches. As the scale is divided into 140 parts, such steel registers about 100 points. This rebound is sufficient to enable a distinction to be made between steels differing but slightly in hardness. Thus the fine grades of hardened pure carbon tool-steel range from 90 to 110 points. The same steels, unhardened, disclose a hardness of 40 to 50 points, if unannealed. If annealed properly, the hardness drops to about 31 points. Now the lower carbon steel (as railway rails) annealed show a hardness of about 26 to 30. Brass may be as hard as 30 or it may fall as low as 12. Wrought iron has been found to be 18 hard, while zinc and copper but 8 and 6, respectively. Turning to the alloy-steels, we find manganese self-hardening steel showing a hardness of 60 to 85. High-speed tool-steel, hardened, discloses an instantaneous resistance equal to 100 to 105. This seems to indicate that the finest pure carbon tool steel may be made harder than the alloy steel. But there are so many varieties and grades, and variations in handling, that we must not regard these figures as settling once for all the comparative hardness of these two important kinds of tool steel.

An interesting matter is the effect of compression. This seems, almost without exception, to increase the hardness of the metal. Thus wrought iron increases from 18 when in ordinary condition to 30 when compressed. Lead, which is, of course, very far down in the scale, varies from 2, uncompressed, to 3, compressed. But zinc shows the remarkable variation from 8 to 20—150 per cent increase. Hard brass, 30, may be made still harder by compressing its particles.

This new method of testing comes into direct competition with the Brinell method. The latter proceeds by the slow pressure of a ball upon the surface to be tested. The amount of permanent compression is taken as indicating the lack of hardness—or, expressed differently, as indicating by its reciprocal the degree of hardness. Thus, the deeper the permanent indentation, other things being equal, the softer the metal. It is to be noticed particularly, that it is not the original deformation that is relied on, but the permanent one. These matters of slowness and permanency would appear to be mutually corrective. Thus, by slow compression we should effect a deeper indentation. But, as recovery is allowed, and only the permanent indentation measured, the deformation would have a tendency to recover. At any rate, the Brinell method has proved itself of advantage during a considerable period of trial, and the new method would appear to correspond well with it; for comparative tests have been made, disclosing for the most part a rather striking agreement between the ball method and the drop-hammer procedure. Moreover, the scleroscope would seem to possess a very desirable property in the readiness with which it may be applied.

The Price of Sugar in Olden Times.

Cane sugar was produced by the Chinese at a very remote epoch. In western countries it was a more recent introduction. The Roman writers Pliny, Varro, and Lucian, at the beginning of our era, barely mentioned it. It was then known by the name of Indian salt and honey of Asia, Arabia, or India. In 1090, Crusaders arriving in Syria discovered sugar cane, which became a favorite dainty of the soldiers. During the following centuries the sugar cane was introduced into Cyprus, the Nile Delta, the north coast of Africa as far as Gibraltar, Sicily, and the kingdom of Naples. It reached Spain in the fifteenth century and thence was carried to Madeira and the Canaries. In 1644 the French imported it into Guadeloupe and a little later into Martinique and Louisiana. The Portuguese introduced it into Brazil and the English into Jamaica.

According to the Rivista Scientifico-Industriale, a hundredweight of sugar cost the following amounts in London and Paris, from the middle of the thirteenth to the end of the nineteenth century:

Date.	London.	Paris.
1260	1,031 francs = $206	....
1300	1,250 " = 250	....
1350	837 " = 167	....
1372	....	2,845 francs = $569
1400	1,156 " = 231	....
1426	....	1,441 " = 288
1450	1,500 " = 300	....
1482	....	1,375 " = 275
1500	267 " = 53	....
1542	....	340 " = 68
1550	458 " = 92	....
1598	....	534 " = 107
1600	397 " = 79	....
1650	402 " = 80	....
1700	266 " = 53	....
1750	103 " = 20	....
1800	191 " = 38	....

In regard to the price of transportation, in 1550 it cost 10 francs, or nearly $2, to send 250 kilogrammes or about 553 pounds of sugar from Antwerp to London, and 24 francs to send 50 kilogrammes by sea from Venice to Antwerp. It is well known that the discovery of the saccharine principle of beet root was made by Olivier de Serres, the gardener of Henri IV, in 1605. The first beet sugar factory was established in 1795, near Berlin, by Achard. In France, at the time of the continental blockade, the increase in price of sugar to 6 francs or $1.20 per pound proved a powerful stimulant to the establishment of beet-sugar factories. On January 2, 1812, Benjamin Delessert, a Paris sugar refiner, presented for the first time specimens of indigenous sugar to Chaptal and declared that the manufacture of beet sugar was in actual operation at Passy.

An Electric Moth Trap.

The Saxony authorities have discovered what would seem to be an excellent way to put an end to the caterpillar plague which is having such a disastrous effect on the local forests. They have discovered a method to catch the brown nun moths that lay the eggs from which the caterpillars come in enormous quantities. They make use of what they call the electric light trap. This consists of two large and powerful reflectors placed over a deep receptacle and powerful exhaust fans. The whole has been erected on top of the municipal electric plant at Zittau. At night two great streams of light are thrown from the reflectors on the wooded mountain sides half a mile distant.

According to the Electrical Review the results have been astonishing. The moths, drawn by the brilliancy, come fluttering in thousands along the broad rays of light: When they get to a certain distance from the reflectors the exhaust fans take up their work and with powerful currents of air swirl them down into the receptacle. On the first night no less than three tons of moths were caught. It has been decided to build another trap on the Rathaus Tower, and the fight with the moths will be continued.

The forests of central Europe have, from time to time, been ravaged by raids of moths from Russia, whose larvæ denude the trees of their foliage. The splendid pines of the Lausitz Mountains are this year threatened with destruction.

Another section of the through railway line from Keelung to Takow was opened to traffic on February 20, 1908. This is the section from Sansaho to Korisho, a distance of nine miles, which has involved some very heavy tunneling and bridging work. There are eight tunnels and three rivers have to be crossed, including the river bed of the Daiankei, which is crossed by a bridge 1,600 feet long and supported by eight spans. Only about four miles of the permanent way remains to be opened, and this, it is expected, will take place this year (1908). Meanwhile the journey from the capital to Tainan has been reduced to 12 hours 13 minutes, the distance being 200 miles.

"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, Könisberg, 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.

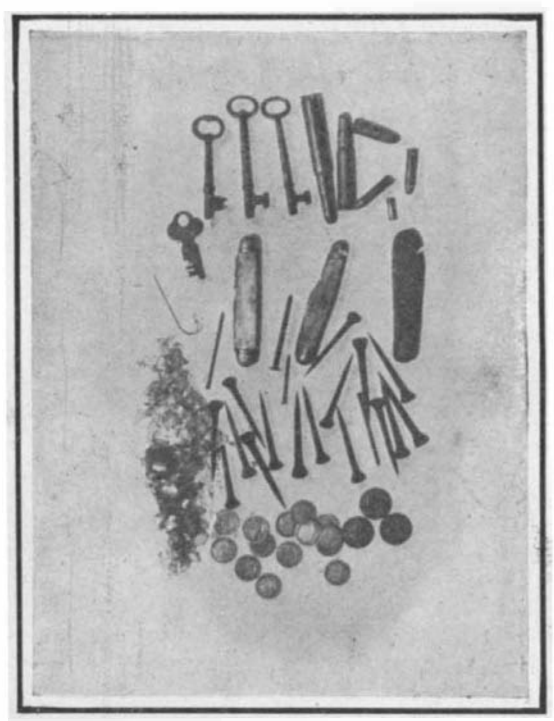
Drs. Gale and Bartle, also Father Curley and nurses were present. In sending the inclosed data, I do so that you may use same if you see fit. The man is alive and nearly well, and feels much improved.

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 riprapped 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.