

verse as conveniently as if both were directly connected with one office.

The subscribers' wires are united into cables of fourteen wires each. They are affixed to the vault of the sewer and are consequently out of sight and out of the way.

The telephone company extends the double telephone wires from the subscriber's instrument through a hole in the sewer, and connection with the proper wires and cable is made by the agents of the administration of the telegraph.

The ends of the wires of the cables are distributed over the switch boards in the wire cellar of the central office, and upon one of these switch boards the double wire of the subscriber terminates and is readily found.

The telephone used in Paris is Adir's. Three cells of Leclanché battery are employed, one for the transmitter and two for calling. Every three months the transmitters are changed, and although they might be able to work longer, this plan is adopted to insure good service.

The Pittsburg Exposition.

The seventh annual exhibition of the Pittsburg Exposition Society will be held in the city of Allegheny, opening September 6, and closing October 13, 1883. The main building is 600 feet long by 150 feet wide, with galleries 45 feet wide, extending around the entire building.

A Fatal Earthquake.

The recent accounts of the destruction in the island of Ischia, opposite Naples, revives the old time records of the ravages of the earthquake in Portugal and other countries. A sudden shock of earthquake was felt at a little after nine o'clock, July 28, in Casamicciola, Ischia, at which hour a large portion of the people were at the theater.

The ground opened in many places, while in other places there was no movement. Water gushed out of springs. Several boilers in the bathing house burst. The theater, which is a wooden structure, was literally torn open, allowing the audience to escape.

The Brush Secondary Battery.

The patent interference case of the American Electric Storage Company of New York against Charles F. Brush of the Brush Electric Company of Cleveland, Ohio, was decided Aug. 2 by giving Brush priority of invention. The declaration in the case contained three counts, each supposed to represent a distinct invention claimed by both parties.

Two Disagreements Ended.

A strike by about 900 cloakmakers in New York city was ended August 2, after an idleness of two weeks. The terms of the agreement finally made were a guarantee of \$15 per week to each salaried employe on the basis of eleven hours per day.

On the same day the lockout of 10,000 cigarmakers was ended by mutual concessions by the strikers and the manufacturers' union, the actual terms not having been made public. This lockout lasted sixteen days.

A FRUITFUL source of damage done to boilers, and one which has ruined thousands, is the practice of blowing a boiler off and immediately refilling it with cold water, while the brickwork is red hot. The Age of Steel believes that nothing will tear a boiler to pieces quicker than this.

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Contents.

(Illustrated articles are marked with an asterisk.)

Table listing various articles such as Aerial navigation, Agricultural inventions, Artificial filtering stone, Artesian wells in Algeria, Asphalt as fuel, Boring of the Channel Tunnel, Brush Electric Light Works, Brush secondary battery, Bushel of coal, Business and personal items, Captive dolphin, Central telephone exchange, Paris, China as a market, Cholera, Coining process in San Francisco, Combined tag and envelope, Dakota enterprise, Damage to boilers, source of, Detection of gas leakage, Dwell making and dwelling, Dunham's tag and envelope, Editor's, an. exper. with lightning, Effect of alcohol on digestion, Electric lamps, novel making, Eng. m'g inventions, Eruption of a live volcano, Exhibition of insects, Experiments with peas, Explosives, rule for shipment of, Fatal cramp, the, Fatal earthquake, Genius, talent, industry, New Color Reactions in the Alkali, Heating and ventilating a dwelling, How a woodchuck looks to child, Hydrokinone, a new developer, Inventions, index to new, Inventions, miscellaneous, London as commercial entrepot, Mechanical inventions, Mexican railroads, Mineral riches of Tonquin, New books and publications, Notes and queries, Nut lock, new, Oily substances in rice, Over the ocean on wheels, Pittsburg exposition, the, Pollution of streams, Postal notes, Prehistoric man, Printing surfaces on gelat. relief, Red ants, how to rid of, Refuse of a great city, Revival of cherry, the, Rochester Electric Light Works, Rotary from reciprocating, Steel in relation to modern guns, Stewed fruit for the dyspeptic, Storage for wind power, Substitute for rubber, Telephone system in Paris, Tunnel boring machine, Two disagreements ended, Ultramarine industry, developm., Value of string, the, Vesuvius, View in diamond mines, S. Africa, Westinghouse brake, progress of, Wrinkling strain of pillars, the.

TABLE OF CONTENTS OF THE SCIENTIFIC AMERICAN SUPPLEMENT No. 897, For the Week ending August 11, 1883.

Price 10 cents. For sale by all newsdealers

Table listing contents of the supplement with page numbers. I. CHEMISTRY AND METALLURGY.—Crystals from Slow Combustion of Ether, 6322; Freezing Point in Acid Solutions, 6323; New Color Reactions in the Alkali, By B. AINSWORTH, 6324; Chemical Composition of some Food Animals, By SIR JOHN DENNETT LAWES and JOSEPH ENRY GILBERT, 6324; Ready Test for Sulphite of Soda, 6324; On Some Theoretical Considerations Connected with the Hardening and Tempering of Steel, By PROF. CHANDLER ROBERTS, 6342; Recovering Silver from Waste Gelatine Plates or Paper, By J. PIKE, 6352. II. ENGINEERING AND MECHANICS.—The Lyman-Baskell Gun, 6328; Improved High Speed Engine—2 figures, 6328; Improved Locomotive and Tender—5 figures, 6329; The Engineering and Metal Trades Exhibition, London.—Parker's screw machine and band saw for iron and steel.—2 figures, 6330; Military Ballooning, By B. BADEN POWELL.—Successful use of balloons in warfare.—How objections may be overcome.—Principles of navigation, 6339. III. TECHNOLOGY.—Brickwork, By J. WOODLEY.—Origin and progress of brickmaking.—Advantages of bricks over other building material.—Importance of perfect bonding, 6330; The Use of Butter, Milk, and Mammary Tissue in the Manufacture of Butterine, By C. M. TUDY and G. W. WIGNER, 6333; Manufacture of Fertilizers from Sewage, 6342. IV. DECORATIVE ART.—Chairs from the Collection in the Louvre, Paris.—An illustration, 6332. V. ELECTRICITY, LIGHT, ETC.—The Origin of Atmospheric Electricity and its Connection with the Electrical Occurrences upon our Globe, By L. ZEENDER.—Galvanism, thermo-electricity, etc., due to friction.—Effect of the revolution of the earth upon its atmosphere.—Electricity generated by the motion of the earth.—Beds of iron ore become electro magnets.—Hot zones generators of electricity.—Cause of thunderstorms, 6333; A New Astral Photometer.—Several figures, 6338. VI. MINERALOGY.—Sulphur and its Combinations, By CHAS. EHRMANN, 6333. VII. HORTICULTURE.—Mushrooms.—2 illustrations, 6340; The Big Trees of California.—Two engravings and map showing routes from San Francisco to the big trees, 6340; Buckwheat.—A neglected crop, 6340; Blanching Celery.—2 figures, 6340. VIII. MEDICINE AND HYGIENE.—Common Defects in the Sanitary Arrangement of Houses and their Remedies, By Prof. W. H. CORFIELD, 6335. IX. BIOGRAPHY.—Sir Edward Sabine.—Ex-President of the Royal Society, 6338. X. MISCELLANEOUS.—Resistance of Cotton to High Temperature.—Dry heat.—Superheated water.—Superheated dyestuffs.—Singeing heat, 6342; Poultry Farming, 6342. XI. NATURAL HISTORY.—Locusts as Food for Man, By D. A. LYLE.—Creases and habit in eating.—Experiments in cooking locusts.—Locusts eaten by Moors and Arabs, 6335.

THE REVIVAL OF CHERRY.

Those to whom fifty years is a memory readily recall the cherrywood tables, bureaux, drawer chests, that were then in fashion, when the more gaudy and more costly mahogany had but lately come in. It is an evidence of a return to good taste that the wood of the cherry tree is again in favor, not only as it exists in old furniture, but in its new requirements. It is largely used in cases for musical instruments—melodeons and organs—and in furniture—chairs and tables—after being "ebonized," or blackened by acids and dyes. But it is also coming again into use in its natural color. One of the finest banking houses in the Eastern States is finished entirely in cherry, and it is beautiful. The wood, filled and not varnished, has a soft glow not possessed by any other, and has none of those distortions of grain that are so unpleasant in mahogany.

The timber is chosen from the wild cherry, which in New England and the North generally does not usually grow to a girth of more than twenty inches, but in some of the Western States and in the South frequently attains a diameter of twenty-four inches. The domestic fruit cherry gives some good specimens of small timber, but as the tree is rarely sacrificed until it is past bearing and is decayed, this source of supply is precarious. Like all close grained timber, the best specimens are those which grow singly in exposed situations and not in a dense forest. The facility with which cherry can be worked makes it a favorite with the cabinet maker.

EFFECT OF ALCOHOL UPON DIGESTION.

It cannot be claimed that we have yet learned all that is to be known about our stomachs and the reactions that take place within them, notwithstanding the fact that one man, at least, lived for many years with an open window, as it were, in his stomach.

Every contribution to our knowledge of the subject based on real, first hand, experimental proof, has some value, hence we think that the recent experiments of Dr. P. J. Spenser upon the effect of wine on the medical properties of pepsine are worthy of careful and thoughtful attention, imperfect as they are.

Pepsin, also known as chimosin, is one of the active ferments of digestion. For medicinal purposes it is prepared by scraping the well washed stomach of a hog, and in this state possesses the property of dissolving a large quantity of coagulated albumen, such as the white of egg. Dr. Spenser, in his paper read before the Ohio State Pharmaceutical Association, gives the amount of white of egg (hard boiled) that will be dissolved by one grain of the pure pepsine, of different makers, when mixed with eight drops of pure concentrated hydrochloric acid in six hours. The amounts varied from 68 to 170 grains, with an average of about 80 grains.

He found that the acid alone would dissolve half as much as the acid and pepsin, or 40 grains, and that eight drops of acid and 100 c. c. of ten per cent alcohol would dissolve as much albumen as the ordinary commercial pepsine and acid would together. This would make alcohol equal to pepsine as a digestive agent for egg albumen. For raw beef the case is quite different; acid and alcohol having less power than acid alone, while acid and milk sugar dissolved as much meat as the best pepsine with acid.

It is to be regretted that alcohol was not tried in combination with pepsine.

In conclusion, Dr. Spenser states his conviction that an hour's exercise in the fresh air is equal in digestive power to any usual dose of pepsine, regardless of maker. When commercial pepsine is used it should be as fresh as possible.

H. Seeman has proved (Centralblatt fur Med. Wissensch.), that free hydrochloric exists in the stomach, although the presence of peptones prevents its detection by means of methyl violet. This is probably one reason why it has so long been an unsettled question whether it was hydrochloric or lactic acid that gave the acidity to the gastric juice.

AERIAL NAVIGATION.

A certificate of incorporation has been filed in the office of the Secretary of State of Illinois for the "Aerial Navigation Company of Chicago," the object of the incorporators being "the transportation of passengers and freight through the air." It is asserted that the machines to be manufactured by this company are a perfection of the one tested at Hartford, Conn., several years ago, which at the time attracted considerable interest. Probably this refers to several trials of a balloon made by Mr. E. F. Ritchel, of Bridgeport, Conn., who exhibited in Hartford, in June, 1878, a balloon with propelling apparatus attached by which the upward and downward movements of the balloon could be governed, and by which in calm weather its course could be directed.

The balloon was a horizontal cylinder of silk, twelve feet long and twenty-four inches diameter, capable of containing about 3,000 feet of gas. Suspended to it by cords and steel rods was a flat frame of brass pipe, pointed at each end, and having a seat for the operator. In front of the seat was a gear wheel with two cranks, connected by a vertical shaft and a horizontal shaft to two propeller wheels, one at the lower end of the vertical shaft under the frame, and the other in front of the operator, and this wheel was attached to the shaft by a universal joint so that it could be turned a distance of about thirty degrees from the shaft in a horizontal plane by the feet of the aeronaut. This wheel was the propelling power and also the steering device. The levitat-