

till the greater part of the water is dissipated and supply its place by proof spirits of wine, which will combine with the isinglass. Strain the whole through a piece of open linen, taking care that the consistency of the mixture shall be such that when cool it will form a trembling jelly. Extend a piece of black or flesh-colored silk on a wooden frame, and fix it in that position by means of tacks or twine. Apply the isinglass—after it has been rendered liquid by a gentle heat—to the silk with a brush of fine hair. As soon as this first coating is dried, which will not be long, apply a second and even a third. When the whole is dry, cover it with two or three coatings of balsam of Peru. In Remington's Pharmacy will be found a cut of a machine for spreading plaster.

(2860) J. E. S. asks: 1. What is the derangement that causes itching in chilblains? A. The derangement is usually due to an inactive skin and poor circulation, as a consequence of warming hands and feet before the fire when they are cold and damp. 2. Why do they recur in the same spot? A. They occur in the extremities, where the circulation is poorest, and are red swollen patches which are the seat of severe itching and tingling. 3. What is the best remedy for the same? A. Increase the activity of the skin and general circulation by a generous diet, active exercise and friction. Rub on soap liniment, or equal parts of tincture of camphor compound and tincture belladonna applied night and morning. See next query.

(2861) R. P. B. says: About two years ago I saw in your paper a cure for chilblains which I tried with success. I have not had a return of them till now. I have a slight touch of them, and have forgotten the cure. A. a. Equal parts of tincture camphor compound and tincture belladonna, to be rubbed in night and morning. b. A saturated solution of salt in warm water is also good. c. Local faradization of the parts is also good. 2. After a cold the glands of my neck swell quite badly. Can you tell me the cause and what will stop it? A. The causes of gland enlargement are manifold. Hereditary predisposition and impairment of health are predisposing causes, but it is local irritation or inflammatory disease in organs or tissues with which these glands have connection that the source of enlargement may frequently be traced. Treatment is to bring up the general condition of the system by use of iodide of iron in the form of pills or sirup (internally) and an external application of tincture of iodine over the swollen parts. If much pain be present, a useful liniment is one of equal parts of chloroform, belladonna liniment, lanadum, and spirits of camphor. See preceding query.

(2862) C. G. C. says: Would you kindly inform me of the medicinal properties, uses, doses, etc., of salol and exalgine? A. Salol (C₆H₄(OH)CO₂C₆H₅) is a derivative of salicylic acid. One atom of hydrogen is replaced by the phenyl group. In the small intestine salol is broken up by the pancreatic juice, and yields 36 per cent phenol and 64 per cent salicylic acid. Salol is largely used as a substitute for salicylic acid in rheumatism and neuralgic affections, and as an internal antiseptic in the treatment of typhoid fever, etc. Dose—1 to 2 grms., or 15 to 30 grains, smaller doses being preferable. Exalgine is a derivative of the aromatic series discovered by Brignonet. It is prepared by the action of methyl iodide on sodium acetanilide. In its physiological action it resembles antipyrine. It is used more for the relief of neuralgic pains than it is to reduce fever. It is also said to decrease the amount of sugar in diabetes. Dose for an adult 10 grains.

(2863) W. J. R. asks: 1. What is chloride of calcium? A. A chemical salt, a compound of chlorine and calcium. 2. Is it liquid or solid? A. Solid, easily soluble. 3. Where can it be obtained in large quantities, and at what price? A. At any wholesale druggist's; 10 cents a pound upward, according to quality. 4. Is it ever used to absorb moisture, and with what success? A. Yes; with good success. 5. What is the best substance known for absorbing moisture? A. Phosphoric anhydride, the pentoxide of phosphorus.

(2864) A. W. L. says: Will you please tell me what horse leek is? In reply to query No. 12, June 14, 1887, SCIENTIFIC AMERICAN, the name is used. I have searched almost everywhere for the information without obtaining satisfactory result. A. Horse weed we think is the term you mean. It is called also Ambrosia trifida, horsecows, bitterweed. It is an annual, flowers in August and September. It is found in low grounds from Canada to Georgia, and west to Louisiana and Arkansas. An infusion made from this weed has been recommended locally in mercurial salivation. *Sempervivum testorum*, or house leek, is indigenous to the Alps. It now grows throughout Europe on old walls and houses and is cultivated in North America. The leaves have an acidulous taste and contain malates. House leek is refrigerant, antispasmodic, astringent. Its expressed juice was once used in dysentery and hysterical disorders. Externally it is used as a dressing for ulcers and chronic skin diseases and hemorrhoids. It is also used to soften corns and warts.

(2865) Oakland asks how to solidify pure charcoal (spherical or spheroid) for filtering purposes. A. Mix charcoal dust with molasses, press into shape, and bake at a red heat in a closed vessel. The block should be embedded in charcoal dust. There must be some outlet provided for gases; the closing of the vessel must not be hermetical. Sand or ground pumice may be mixed into the composition to increase its porosity.

(2866) R. N. asks: What acid or acids will dissolve pure gold into a soft, spongy mass? A. Gold is dissolved by a mixture of hydrochloric acid with an oxidizing agent such as nitric acid. On evaporation it may be thickened, but with danger of decomposing the soluble chloride of gold.

(2867) A. J. W. asks: Will you please inform me of a cure for red pimples in the face? A. Pay strict attention to diet and habits of life, avoid rich, highly seasoned, indigestible foods, take ordinary tonics, and especially arsenic. The most efficient local application is a saturated solution of boric acid in alcohol, washing the face but once a day in warm water. Dry with a soft towel and apply the solution. This (the boric acid solution) may be applied three or four times daily. Rochelle salts in water are also a good external application.

(2868) N. O. P. asks: Can you tell me of any medicine that will reduce flesh without injury to health? I have tried all kinds of exercise, but I keep gaining all the time, till I am commencing to feel clumsy. A. Systematic exercise, strict attention to diet, avoiding starches, sweets, malt liquors, wines, etc. Drink freely of alkaline mineral waters, and take (if an adult) 1/4 grain of potass. permanganate twice daily.

(2869) A. G. asks: Can you tell me how to congeal gasoline so it will be thick like lard, and it looks white, just about like lard? A. Some petroleum can be thickened by emulsion with aqueous extract of slippery elm bark or with a strong solution of glue. We doubt if you will succeed with true gasoline.

NEW BOOKS AND PUBLICATIONS.

FINANCIAL REVIEW. Annual. 1891. William B. Dana & Co. Office Commercial and Financial Chronicle. New York, N. Y. Pp. 156.

This work is an excellently arranged and systematized review of the railroad business of the country for the past year. It gives the finances of each road in a detailed statement, with a tabular statement in brief at the top of the pages of the statistical part. It is preceded by treatises on the past year, business and speculation, and general financial and commercial topics. Numerous railroad maps are given to show the routes of the different railroads described. The statements of highest and lowest prices of railroad bonds in New York (monthly for five years), and of stock and bond quotations in this city and other markets, Boston, Philadelphia, and Baltimore, is a particularly attractive feature.

THE CRYSTAL BUTTON, OR ADVENTURES OF PAUL PROGNOSIS IN THE FORTY-NINTH CENTURY. By Chauncey Thomas. Edited by George Houghton. Boston and New York: Houghton, Mifflin & Co. 1891. Price \$1.25.

This work is offered as a companion piece to Edward Bellamy's "Looking Backward." It very ingeniously depicts the supposed advances in science and art that are to come, and treats of governmental relations to the people, which, like all his class of writers, he depicts as very uncomfortably close. The less governed the best governed is a maxim foreign to all this school from the days of Sir Thomas More to the Bellamy epoch. It is very graphically written, and will be found interesting reading.

PRELIMINARY SURVEY AND ESTIMATES. By Theodore Graham Gribble. London: Longmans, Green & Co. 1891. Pp. xx, 420. Price \$2.25.

The subject of rapid survey of large regions of uncivilized country, the preliminary work of reconnaissance and kindred subjects form the topics of this work. The practical way in which so eminently practical a subject is treated, and the description of the application of special methods to what may be called the rough work of surveying and topography, give its value to the work and indicate its general scope. We believe the work will be acceptable to many civil and military engineers.

A YEAR BOOK OF FACTS ON DRY GOODS.—The Textile Publishing Company, New York City, have issued a year book for 1891, containing statistical tables important to the dry goods trade. It contains a valuable compendium of the new tariff law and abstracts of the banking, interstate commerce, and recent decisions by the Treasury officials and Board of Appraisers.

TO INVENTORS.

An experience of forty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequalled facilities for procuring patents everywhere. A synopsis of the patent laws of the United States and all foreign countries may be had on application, and persons contemplating the securing of patents, either at home or abroad, are invited to write to this office for prices, which are low, in accordance with the times and our extensive facilities for conducting the business. Address MUNN & CO., office SCIENTIFIC AMERICAN, 361 Broadway, New York.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted February 17, 1891.

AND EACH BEARING THAT DATE.

[See note at end of list about copies of these patents.]

Table listing inventions and their patent numbers, including items like 'Adding machine, E. F. Jewett', 'Aerial ventilator, Davis & Brown', 'Air brake, R. W. Bayley', etc.

Table listing inventions and their patent numbers, including items like 'Bracket, G. R. Naffs', 'Brake, See Air brake', 'Briquets, composition for combustible, E. M.', etc.

Table listing inventions and their patent numbers, including items like 'Insect powder distributor, L. A. Preston', 'Iron, See Sad iron', 'Ironing board, S. C. Horn', etc.