

## SCIENTIFIC MUSEUM.

## Oil Varnishes.

In these varnishes, as in spirit varnishes, almost every operator has his own receipts. So that it is only the general outlines of their composition that can be given.

Drying oil, or boiled oil, is one of the most common varnishes, and is used to mix with colors, partly as a vehicle, and partly to cause them to dry quickly. Linseed, or nut oil, is boiled with a very small proportion of dried white lead, litharge, saccharum saturni, or white vitrol, generally an ounce either of each article, or a proportionate quantity of several to the heat of oil. Sometimes the oils are merely left to stand upon litharge for a long time.

Oil varnishes for covering pictures are not much used, as they are not easily removed. They are mostly composed of gum mastic, various proportions of copal varnish, Canada balsam, and thinned with oil of turpentine.

The varnish used for bright armor and weapons, by our ancestors, was 3 lbs. of brown rosin, 2 lbs. of turpentine, dissolved in 10 pints of boiled linseed oil.

The engravers' varnish for covering copper plates, and preventing the acid used in etching from corroding the places wished to be left blank, varies much in its composition. The hard varnish used with Callot's aqua fortis is merely mastic dissolved by boiling in an equal weight of drying linseed oil. Le Boffe's soft varnish, which is that generally used in England, is made by heating 2 oz. of white wax, and adding to it, by degrees, first, 1 oz. of mastic in fine powder, and then 1 oz. of asphaltum, keeping it on the fire until all is completely dissolved. Mr. Lowry used 4 oz. of asphaltum, 2 oz. of Burgundy pitch, and 2 oz. of white wax, melted together. The varnish called the soft ground is prepared by adding some real suet to the soft varnish already described.

The French artists use gum benzoin instead of asphaltum, making their soft varnish of eight ounces of linseed oil, in which is dissolved one ounce of gum benzoin and white wax, and keep it on the fire till one-third is boiled away. For their hard varnish they add more white wax, so as to enable it to be made into a solid ball.

The superior clearness of copal to either shell lac or amber, gives it an advantage in varnishes and japan work; but the difficulty of dissolving it, either in oils or spirits, is very great. By grinding it with camphor, or by first melting it and letting it drop into water, it becomes more soluble.

The japanners' copal varnish is made by melting 4 lbs. of copal in a glass matrass, until the vapor condensed upon any cold substance, drops quietly to the bottom; then adding first a pint of boiling linseed oil, and afterwards about its own weight of oil of turpentine.

[For the Scientific American.]

## Tobacco for Wounds.

I am not one of your regular correspondents, but I take it for granted that anything that is for the good of society is welcomed by you. I have seen a number of deaths reported from Tetanus, or lock-jaw, induced by wounds from nails and other iron instruments. The oxide of iron, when introduced into the flesh, by puncture of nails, &c., or cuts from rusty edge-tools, occasions the most intense pain, as I have experienced; many others have testified to the painful nature of such, though otherwise not dangerous wounds. Tobacco (abused by friend and foe as it is) will relieve the pain resulting from such wound, in ten or fifteen minutes, if properly applied; my mode has been to take a piece of good strong tobacco and chew it until it is saturated with saliva, and then apply it with a bandage. It has never, within my knowledge, failed to give relief, and I have seen it applied to wounds that were deep and painful. H. VAN ANSDALL, Eaton, Ohio, 1851.

## Tea on the Himalays.

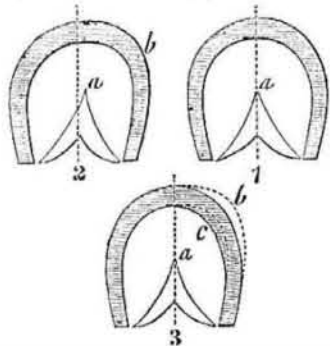
There is a district in the East Indies called Kemaon, situated among the Himalays, to the north-west of Nepal, some hundreds of miles from Assam. It is a portion of the province of Delhi, and extends to the country lately owned by the Sikhs. Since 1842, tea nurse-

ries have been planted and extended in this region, and the plant has thriven wonderfully, the proceeds being regarded as of the finest quality of black tea. After various experiments, it was found that the plants first imported were not of a character hardy enough for these heights in such a latitude, and a Mr. Fortune was engaged to go to the north-western regions of China and procure plants more likely to thrive. He succeeded, and returned with 12,000 living plants, an endless variety of seeds in a germinating state and eight tea manufacturers, so that the Himalayan valleys and slopes are likely to become tea gardens on a gigantic scale. Some samples of the produce were sent to the Exhibition at London, and the Company hope to offer it soon in the market at the usual prices of good Chinese teas.

## On Interfering Horse-Shoes and the Remedy.

The following information respecting horse-shoes, and the remedy, is obtained of Mr. J. O. Proctor, No. 44 Duane street, this city, a practical and experienced blacksmith, and whose theory and practice, we are positive, are correct:—

"In the Scientific American of the 11th instant, there is an illustrated method of preventing horses from interfering, by Mr. Jewett. His theory is not a new one, but it is a wrong one, and calculated to do much mischief to all who do or may follow it. His plan never can prevent a horse that is in the habit of doing so from interfering with the forward feet, and the same treatment is required for them as for the hind feet. Mr. Andrews' mode, as spoken of in the article referred to, is much better, but the grand object, or rather remedy, to be provided, is to make the feet of interfering horses natural, that is the foot which strikes, for in most cases only one foot is liable to do this. The method which I present has been practiced in Boston, and other places, with marked success, by good horse-shoers, for more than fifty years.



In the accompanying engravings figure 1 is an interfering foot, figure 2 is a natural foot, and figure 3 is the interfering foot operated on to cure the evil. In the interfering foot, figure 1; the toe, *b*, inside projects beyond the other side a greater distance from the line, *a*, drawn through the centre of the foot. The remedy for this is not by projecting the shoe, but cutting away the projection of the foot, as shown by the dotted lines. In summer the foot should stand level, but in winter it may be treated as suggested by Mr. Andrews. The horse is just the same as a man, in respect to the action of his feet; the throw of the foot is as the projection of the toe, and as the heel is inclined; and if the boots of a man when worn down on one side on the heels, prove the easiest to wear, then so will it be with a horse—and this would prove Mr. Jewett's theory to be correct; but everybody knows the reverse to be the fact. In remedying the defect of an interfering foot, by cutting away, the skillful blacksmith uses his judgment regarding the amount to be cut. It may be that the hoof will not allow a sufficient quantity to be pared off instantly to cure the evil at once, but by trimming off a certain quantity at one time, and a little more some time afterwards, the foot of any horse can be shaped according to the will of the blacksmith. It is the same with our finger and toe-nails. Figure 2, therefore, shows the hoof cut away a little more towards the centre line, and the inside, *c*, forms a smaller radius than the other side, as the horse, having formed the habit of interfering, will still have an action of the foot to do so; but by this the proper treatment I have set forth, it will be remedied by proper attention in time, and remedied permanently, too. J. O. PROCTOR, Machinist." New York.

## Rheumatic Fever Treated with Acetate of Potash.

In "Braithwaite's Retrospect" there is a very interesting account of the treatment of rheumatic fevers with the acetate of potash, by Dr. Golding Bird: he mentions a case of a girl, 16 years of age, who traced her attack to sleeping in a kitchen under-ground. The left limb and shoulders were attacked, and she labored under inflammation in various joints. She was in a very bad state when brought to him; he ordered twenty-five grains of the acetate of potash to be taken every fourth hour, in a camphor mixture, and eight grains of Dover's Powders were taken every night. The patient was much better on the third day; the medicine was continued, and on the seventh day the ankles were free from pain, and she was greatly improved. On the fourteenth day she was free from pain in every joint. To each dose of the acetate of potash, taken every four hours, four grains of the ammonia citrate of iron were added, when, on the 21st day, she was quite well. Another case was that of a woman 29 years of age, who had rheumatic fever caused by getting wet. She was very ill, and her shoulders and wrists were much swollen and very painful; she was treated in the same way as the other, only the doses were a little larger. On the third day she was much relieved; on the sixteenth day all the joints were well; the patient then took two grains of the bisulphate of quinine three times a day, and was soon quite well.

## Treatment of Rheumatism by Lemon Juice.

Dr. Rees, of Gray's Hospital, London, is of opinion that lemon juice is very excellent for chronic rheumatism of the gouty order. By using lemon juice along with small doses of the tincture of the sesquichloride of iron, he has, in several cases, effected cures which had baffled every attempt made before for that purpose. In one case, a lady who had been a cripple for several years, was eventually restored, after persevering in the use of the lemon juice for eight weeks.

The doses used are from one to two ounces every six hours.

## Medical Properties of the Skull-Cap.

C. H. Cleveland, M. D., in an article in the N. J. Medical Reporter, states that he has received a letter from Ariel Hunter, M.D., giving his experience of the above named herb for the cure of nervous disorders. He has been in the habitual use of this herb (*scutellaria laterifolia*) for fifteen years. The herb is well known as the blue-side flowered skull-cap, which he considers superior to valerian—a well-known herb which has been used in medicine almost from time immemorial. In very severe cases he has ordered a pill of the extract of stramonium of half the size of a wheat grain, and of a strong infusion of skull-cap, a large tea-spoonful every hour, which has proved very effectual. For cholera it has been uniformly successful.

## Iowa Coal Field.

Dr. Owen, the geologist, who surveyed this State, by order of the United States Government, stated before the American Scientific Association, in reference to the deposits of Iowa, that between Johnson and Iowa Counties, an uplift of carboniferous sandstone is encountered, which is probably near the eastern limits of the Des Moines coal field. The Iowa river meanders near the eastern margin of the coal, but the seams presented on the river are of inferior quality. It is upwards of two hundred miles in the direction of the valley of the Des Moines across the great coal fields. Westwardly it extends from the Des Moines River nearly across the State of Iowa. The entire area of this coal field in Iowa alone cannot be less than twenty thousand square miles, in all embracing a country nearly equal in extent to the State of Indiana.

He estimates the beds of coal to be one hundred feet in thickness, and lying near the surface, they must be capable of being worked easily and at small expense.

Iowa is destined to be one of the greatest States in the Union, as it possesses a fine climate, a fruitful soil, and has abundance of useful minerals within her bosom. Her population thus far are of a good class to lay the foundations of an intelligent moral and industrious community. Her coal fields alone are enough to make her great at some future day.

## LITERARY NOTICES.

LABLACHE'S COMPLETE METHOD OF SINGING.—This is a work just published, for developing the voice and rendering it flexible, with examples for illustration and exercise for singing, by Louis Lablache, a celebrated French teacher, this being a translation of his French work. This is a work of no doubtful merit, but of real sterling quality; it contains a number of new exercises for sustaining the voice. It is for sale by Oliver Ditson, and Clapp & Co., Boston, and J. E. Gould, Broadway, this city.

TRAUTWINE ON RAILROAD CURVES.—A masterly work, by John C. Trautwine, the eminent Civil Engineer on "The Field Practice of Laying out Circular Curves for Railroads," has just come forth from the printing press of Messrs. Barnard & Sons, Philadelphia. The work is well printed on good paper, and bound in morocco with a flap and pocket, rendering it very suitable for the pocket, as all such works should be. This work will form a very desirable Vade Mecum to Civil Engineers, especially the younger gentlemen of the profession. There is a table of Natural Sines and Tangents to single minutes, in a very portable form, and got up with the most scrupulous care, so that it is absolutely reliable. The method of laying out a curve, by tangential angles, is illustrated and described; also a method by means of "deflexion angles," and a method to do so by the eye, &c. This is a really good work, and we heartily recommend it to our Civil Engineers.

HINTS AND HELPS TO HEALTH AND HAPPINESS, by Dr. John H. Ross, Amity street, New York: published by Derby & Miller, Auburn, N. Y.—It would be difficult to catalogue all the various publications issued annually from the American press, which are devoted to a popular exposition of the causes of ill health so prevalent in this country. In most of these publications extreme views are urged, which do not meet the general feelings of the people. The work before us occupies a medium ground, and the author presents our fallings and the remedy in a new and, we should think, sensible manner. The work is unexceptionable in language.

WHITE'S CHURCH MELODIST.—This is one of the best compositions of sacred music we have seen,—the collection includes many of the finest old standard tunes, whose tones, familiar to us of old, breathe a spirit of devotion, falling upon the ear in cadences so soft and sweet, that the expanding soul revels, as it were, in the regions of a higher bliss: the very choicest gems of the old style appear to have been culled and arranged in this collection, which alike abounds with a variety of original music of the highest order, consisting of tunes, sentences, chants, anthems, &c. The arrangement is by E. L. White, editor of the "Modern Harp," "Boston Melodeon," &c. &c. There is no collection more generally or better adapted to social and religious worship, singing schools, &c. It is published by J. E. Gould and Co., New York.

Messrs. Dewitt & Davenport have sent us Peterson's Magazine for November; it is a good number. Also, "The Game Cock of the Wilderness, or the Life of Dan Marble," a pleasant and mirth-provoking publication. Price 50 cents; pp. 235; several illustrations.

NEW MUSIC.—"Home, I feel, is Drawing Nigh," for two voices; poetry by G. Soane, Esq., music by E. T. Loder. "The Hour of Parting," duet; words by Elizabeth Anne White; music from "I Capuletta I Montechi," by Sig. Bellini. "First Violet," by Walter Powell, music by Mendelssohn. "Bertha Walter, composed by Charles Voss. Published by Oliver Ditson, Boston, and J. E. Gould & Co., N. Y.

## NEW PROSPECTUS TO MECHANICS, INVENTORS, AND MANUFACTURERS.

## SEVENTH VOLUME OF THE SCIENTIFIC AMERICAN.

MESSRS. MUNN & CO., AMERICAN & FOREIGN PATENT AGENTS, and Publishers of the SCIENTIFIC AMERICAN, respectfully announce to the public that the first number of VOLUME SEVEN of this widely circulated and valuable journal was issued on the 20th of September in AN ENTIRE NEW DRESS, printed upon paper of a heavier texture than that used in the preceding volumes.

It is published weekly in FORM FOR BINDING, and affords, at the end of the year, a SPLENDID VOLUME of over FOUR HUNDRED PAGES, with a copious Index, and from FIVE to SIX THOUSAND ORIGINAL ENGRAVINGS, together with a vast amount of practical information concerning the progress of INVENTION and DISCOVERY throughout the world. There is no subject of importance to the Mechanic, Inventor, Manufacturer, and general reader, which is not treated in the most able manner—the Editors, Contributors, and Correspondents being men of the highest attainments. It is, in fact, the leading SCIENTIFIC JOURNAL in the country.

The Inventor will find in it a weekly DIGEST of AMERICAN PATENTS, reported from the Patent Office,—an original feature, not found in any other weekly publication.

TERMS—\$2 a-year; \$1 for six months.

All Letters must be Post Paid and directed to MUNN & CO.,

Publishers of the Scientific American, 128 Fulton street, New York.

## INDUCEMENTS FOR CLUBBING.

Any person who will send us four subscribers for six months, at our regular rates, shall be entitled to one copy for the same length of time; or we will furnish—

|                                   |      |
|-----------------------------------|------|
| Ten Copies for Six Months for     | \$ 8 |
| Ten Copies for Twelve Months,     | 15   |
| Fifteen Copies for Twelve Months, | 22   |
| Twenty Copies for Twelve Months,  | 28   |

Southern and Western Money taken at par for subscriptions, or Post Office Stamps taken at their full value.