

SCIENTIFIC MUSEUM.

Receipts for Dyeing.

A few receipts for dyeing on a small scale will be found very serviceable, especially when regular dyers are not at hand. The articles for the respective colors are merely given, as the depth of shade must be at the discretion of the operator.

LILAC—Archil, a root to be bought at the druggists. The color, which is very powerful, is extracted in boiling.

NANKEEN—Boil equal quantities of Spanish annatto and pearlsh in water till dissolved.

BLUE—Indigo is generally used; but, as its preparation is not so simple as others, it will be better to purchase a bottle of blue dye.

YELLOW—Fustic chips, weld or dyer's weed tumeric, or Dutch pink.

GREEN—May be produced by mixing the requisite portion of blue with either of the preceding.

RED—Archil, madder, cochineal, and Brazil Wood are employed to give silk a bloom, else it is only used by itself when lilac is wanted.

SCARLET—Silk cannot be dyed a full scarlet; but a color approaching it may be given to silk by first dyeing it in crimson, then dyeing it with carthamus, and lastly, yellow, without heat.

BLACK—Logwood and green copperas are commonly used; but the color is improved by first boiling the article in a decoction of galls and alderbark. If previously dyed blue or brown, by means of walnut peels, it will be still better.

[The above receipts are from the "Baltimore Sun," which would not publish them unless it believed that it was conferring a benefit upon its readers; but unless the receipts are correct, they will assuredly do evil. They are not correct—but then such receipts are very common, and to be found in books professedly correct, and are calculated thereby to deceive the editors of our best newspapers who are not practical chemists. Let us explain and correct the above receipts.]

ARCHIL—This substance will dye a lilac on silk; but not on cotton. It is not prepared as above—it is a lichen, and is steeped in urine and lime-water for a month before it is fit to be used. A patent was granted on the 15th of June, 1852, to Leon Jarossens, of this city, for manufacturing archil. The color which it makes is beautiful, but will only stand exposure to the sun a very short time—it is one of the fugitive colors.

NANKEEN—This is the name of the color; it is a peculiar buff. The way to make it is described correctly above, but as in the lilac receipt, the mode of dyeing the goods is not given. Annatto dyes a poor fugitive but beautiful color, and should never be used for that purpose, on any goods to be exposed to the sun, air, or that require washing. It dyes cotton and silk a buff, salmon, and orange. Acids redden it, alkalies strip off the color.

BLUE—The bottle of blue dye spoken of must mean the extract of indigo, or the sulphate of indigo, neither of which will dye cotton. The urine blue vat, in the old farm houses for dyeing wool, is the only safe process for inepters to try.

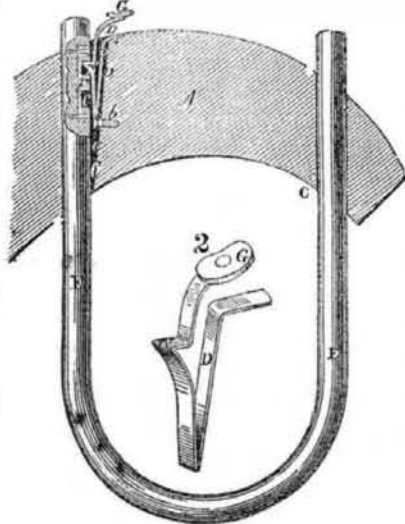
GREEN—The fustic and blue spoken of above, will dye silk and wool, the former hot, the latter by boiling, the blue must be the sulphate of indigo. Yellow on cotton is dyed with the bichromate of potash, and the acetate, or nitrate of lead; or with yellow oak bark, and the sulpho-chloride of tin.

RED—The receipt for red, above, does not tell how a red can be dyed on any kind of goods, for none of the substances mentioned will dye a red, without the use of a mordant madder, lac, cochineal, and Brazil wood, are used for dyeing red; cochineal will not dye a red on cotton, but it makes the most brilliant scarlet of any substance known, on silk and woolen goods. The chloride of tin and the cream of tartar are the mordants. It is a simple dye. Every good farmer's wife knows how to dye madder red. The mordant, used, is alum, with a little argil (impure tartar). It is not used for silks, only cotton and wool. The goods, must be well washed, out of the alum liquor, before they are put through the madder bath.

BLACK—Let no person boil woolen goods in galls or alderbark prior to the logwood dye; a very small quantity of galls is useful, but if too much are used the goods acquire a brown color. Cotton cannot be dyed a good black without being prepared with sumac, but woolen goods are dyed black by boiling them one hour first in a kettle containing some bichromate of potash, about two ounces to the pound of goods, then airing them, washing, and boiling in logwood, one pound at the rate of 5 oz. to the pound; or copperas can be used for the bichromate of potash, and is the old way, only a little fustic must be employed, or the color will not be a jet but a blue black.

New Ox Yoke Fastener.

FIG. 1



The annexed engravings are views of an improvement for a new plan of fastening the bows in ox yokes, invented by Messrs. True & Morrell, of Hampton Falls, N. H., who have taken measures to secure a patent.

Fig. 1 is a vertical section, showing how one of the bows is secured by a spring in the hole of the yoke-beam, and figure 2 is a view of the spring which fastens the bow. The same letters refer to like parts.

A is the yoke-beam (a part of it only is shown); it is made in the common manner. E is the bow, it is formed like those in common use, with the exception of a part near the inside end, having a notch made in it in which a plate of metal, F, is secured by screws or otherwise; this plate has two recesses or notches, c, made in it. The bow is represented as being inserted in the yoke-beam, A, and secured in its place by a bent steel spring, D. The inner bow-hole, C, is wider than the outer one,—a a showing the enlargement to allow the spring to act. This spring is secured by a screw at the top of the beam, and a screw, b, at its lower bend, supports it in its place. D' is a projection on the spring which fits into the recess, c, in the metal plate, F, of the bow. G is a catch on the end of the spring.

OPERATION—By taking hold of the catch, G, of the spring, and pulling it towards a, the projection, D', is then drawn of the recess, c, in the bow, to allow it (the bow) to be pulled out; the spring, on being released, immediately springs back. To insert the bow, the spring is drawn to the one side, in the same manner as the bow is released, and then it (the bow) is pushed up into the holes of yoke beam A, either with the lower or upper recess, c, as may be desired opposite the projection, D', of the spring. By releasing the spring from pressure on catch, G, the projection, D', springs into the recess, c, and keys the bow to the yoke beam. In a certain sense it may be called a self-keying yoke, and is a good improvement over the eye and loose wedge key, for fastening the bow to the beam in yoking up.

More information may be obtained by letter addressed to the inventors.

Studying the Weather.

In Lloyd's Rooms, at London, there is a curious weather gauge. It is an index turned by the vane on the roof, constantly showing by the vane below the direction of the wind, while a pencil is attached to a chart, and moved by the same power, so as to mark the precise course in which the wind has been blowing for days; making a record as distinct as the pencilled course of a ship on the master's

chart at sea. Studying this map of the winds, an insurer may make some calculation upon the progress of a vessel, and shape his business accordingly.

The Coach Rattle Avoided.

An intelligent contributor furnishes "The Boston Transcript" with the following account of an improvement which is soon to be introduced for public favor. He says:—

"To prevent the noise and din of omnibuses and other carriages on their way through the streets, has long been a great desideratum; and the public will be rejoiced to be informed that a mode to accomplish so important an object has at length been obtained. The improvement is said to have emanated from a practical engineer, and to be applicable to all sorts of vehicles for the common roads. By a proper arrangement and connection of the doors and windows, on the part of the manufacturer, the shaking and rattle generally so peculiar to them may readily be avoided.— But to get rid of the sound of the wheels, as they strike against the pavement, has hitherto been considered almost an impossibility. This, we learn, may now be accomplished in the most simple and effective manner. All that is necessary is merely to cover the rims with india-rubber tires, of from an inch to an inch and a half in thickness, according to circumstances. At first it was thought that the india-rubber would lack strength and durability; but, being expressly prepared for the purpose, it is asserted that it will endure a long time."—[Exc.]

[We have seen the above in a great number of our exchanges within a few weeks. This invention was described in Vol. 3, Scientific American. The india rubber cannot wear as long as iron tires, but it may be an improvement to line between the felloes and tires with india-rubber.]

Tomato Figs.

As the time for preserving tomatoes is at hand, the following receipt may be useful to many of our readers. It was received by the Directors of the South Carolina Institute from Mrs. Johnson, to whom a premium was awarded at the last Fair for tomato figs:—Put three pounds of clarified brown sugar to every five pounds of tomatoes. They must be first scalded to remove the skin, then place in a stone jar tomatoes and sugar alternately, to extract the juice; in twenty-four hours boil them in their own juice until the sugar penetrates and they look clear, but not so much as to mash them. Very little boiling is necessary. Return them to the jar to remain two days, when you must pour off the syrup; boil it and throw over them. Let them remain two days, and then shake them from the syrup, and dry on dishes, turning them every day for a week of good drying weather in the sun. Should the weather be damp after the boiling is finished, they can remain in the syrup until good weather. When perfectly dry, pack down in small wooden boxes, treating each layer to sifted loaf sugar.

Sleep and the Senses.

According to M. Cabanis, a French physiologist, the muscles of the legs and arms lose their power before those which support the head; and these last sooner than the muscles which sustain the back; and he illustrates this by the cases of persons who sleep on horse-back, or while they are standing or walking. He conceives that the sense of sight sleeps first, then the sense of taste, next the sense of smell, next that of hearing, and lastly that of touch. He maintains also, that the viscera fall asleep, one after another, and sleep with different degrees of soundness.

LITERARY NOTICES.

ILLUSTRATED NEWS—ENLARGED—We are happy to find our neighbors of the "Illustrated News" are prospering so well as to afford to increase the size of their journal to double its former dimensions. Interesting events are transpiring so frequently lately that the publishers of the "News" find they cannot give a view of all the interesting scenes daily occurring, without enlarging their sheet, and they have very generously adopted a size of just double its former dimensions. The various subjects of interest brought to our "Crystal Palace" will occupy a very prominent space in the "News," and we predict for it a circulation unsurpassed by any weekly journal published in the world. This week's numbers contains views of Plymouth and the Pilgrim Jubilee which came off there on the 1st inst. H. B. Beach, publisher, 130 Fulton st, New York.

LITERARY MUSEUM—This is a paper devoted strictly to literature, as its title indicates, and a better

family paper is seldom met with; the stories it contains are well written and less objectionable than the stories published in most other literary papers. To say it is the best literary family paper published in the United States, might be doing injustice to such literary papers of high merit as "Makin's Model Courier," "The American Union," and other papers of high standing, but we may say that the "Museum" compares favorably with any literary paper published in the world. Ossian E. Dodge, publisher, 12 School st, Boston, Mass. Terms \$2 per annum.

PUTNAM'S MONTHLY—The August number of this sterling magazine we find upon our table, teeming with the choicest literary matter as usual. G. F. Putnam publisher, 10 Park Place, N. Y.

SHIPBUILDER'S MANUAL—Number 7 of this useful work is now published, and can be obtained at Adrance, Sherman & Co., No. 2 Astor House, this city.

MECHANICS, INVENTORS,
AND
MANUFACTURERS.

SPLENDID PRIZES!

The first number of the Ninth Volume of the SCIENTIFIC AMERICAN will be issued on the 17th of September. We are grateful for the very liberal encouragement which we have received from our readers, and take this occasion to express to them our gratitude. We are also under many obligations to our cotemporaries for favorable notices.

The next volume will be commenced with new and beautiful type, printed on paper manufactured expressly for this publication, of greatly increased weight and finer quality: this item alone will increase our yearly expenses over \$3000; in addition to this we shall increase our present able Editorial force as it is our intention to continue the Scientific American, "the leading and most reliable practical scientific journal in the United States." It will continue the unflinching advocate of all useful improvements, and it will fearlessly expose all unreliable and deceptive schemes appertaining to its character; [in this respect it has gained a reputation superior to any other work of the kind in the world.]

The opening of the Crystal Palace in this city forms an object of rare public interest; we shall devote a full page of the paper every week to careful criticisms, reviews, and illustrations of the objects most worthy of attention. We hope to render this department especially interesting to all our readers, whether they visit the Fair or not. The copious and finely executed engravings of machinery, new inventions, etc.—the four hundred pages of valuable scientific and practical reading—the useful receipts—the full report of all the Patent Claims, and the reliable character of the journal on all branches within its field of labor—render it worthy of the support which it has so liberally received from its intelligent class of readers.

The circulation of the Scientific American during the present volume has exceeded 18,000 copies per week. The edition on the new volume will be commenced with 23,000, which we feel confident will not be an over calculation. Subscribers, to ensure the numbers from the commencement of the volume, should send in their subscriptions early, as many were disappointed in not obtaining the complete set of the present volume.

The Scientific American is in form suitable for binding, and each volume is accompanied with a full index of all the subjects, which renders it an Encyclopedia of Useful, Scientific, and Mechanical Information for present as well as future reference.

Hoping to stimulate our readers to greater activity in spreading the circulation of the Scientific American, we offer the following Splendid Prizes for the largest list of mail subscribers sent in by the first of January next:—

\$100	will be given for the largest list.
\$75	for the second largest list.
\$50	for the third ditto.
\$45	for the fourth ditto.
\$40	for the fifth ditto.
\$35	for the sixth ditto.
\$30	for the seventh ditto.
\$25	for the eighth ditto.
\$20	for the ninth ditto.
\$15	for the tenth ditto.
\$10	for the eleventh ditto.
\$5	for the twelfth ditto.

The cash will be paid to the order of the successful competitors, immediately after January 1st, 1854.

These prizes are worthy of an honorable and energetic competition, and we hope our readers will not let an opportunity so favorable pass without attention.

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