

## Science and Art.

## The Art of Dyeing.—No. 33.

**BLACK ON WOOLEN AND COTTON FABRICS**—In article 30, describing the process for dyeing a black on woolen goods, it is stated that sumac, except used in very minute quantities, imparts a rusty brown color to the fabric. On the other hand, it is stated in article 32 that a considerable quantity of sumac is positively necessary in dyeing a full black on cotton goods. It might, therefore, be inferred that it is impossible to color mixed fabrics of wool and cotton, such as muslin-de-laines, a good black, but this is not so. The following process for doing it, however, is not, so far as we know, described in any printed work. It consists simply in coloring the wool of the fabric a good black first, by the process described in the article referred to, then washing the goods, and steeping them for eight hours in a cold liquor of sumac; after which they are dyed by the process described in article 32, to color the cotton, only using weaker liquors, and the logwood not above blood heat. The last lime liquor may also be omitted, but the goods must be washed before they receive the logwood. It has been discovered that sumac only acts upon wool to injure its color when used at a high heat, such as is required in wool dyeing, but not when given cold, and the temperature of succeeding liquors kept correspondingly low. This explains the nature of the above combined processes for coloring such goods a good black. In many factories where cotton and wool waste are swept up and mixed together, and dyed previous to being carded, spun, and woven into cloth, much trouble has been experienced for want of knowledge like the above. Any other color can be dyed on such mixed fabrics by combining the two processes described in these articles for dyeing cotton and wool, always taking care to dye the goods by the woolen process first, and by the cotton one last. Woolen and silk mixed fabrics, and silk and cotton mixed fabrics, can all be colored by combining the separate processes described for dyeing each separately. Some colors, like olive green, may be dyed on woolen and cotton mixed goods at one dip, by the woolen process, and even woolen and silk mixed goods may be dyed a red with cochineal at one dip, but there are exceptions to the general rule.

Printed muslin-de-laine dresses of any color or pattern may be redyed and made a good black by following the above process; the only exception being those goods which are printed with a resist paste, such as second mourning, having white dots or stripes. Claret colors are very easily dyed on printed muslin-de-laines, covering up the whole print and making it one color—which of necessity must be full and dark.

Some dyers keep a tub of old sumac standing, for the purpose of dyeing such fabrics by the process described, imagining that they effect a saving thereby. This is a mistake on their part, for sumac liquor, especially in hot weather, soon ferments, and generates acid in excess, which both injures the goods and their colors (this hint may be useful to tanners, as from it the inference is natural that if the bark vat is allowed to ferment with skins in it, the action will be injurious to the quality of the leather.) Fresh sumac liquor, and no other, should be used in the art of dyeing.

The foregoing hints will no doubt be very useful to many of our manufacturers, as cotton is now somewhat extensively used in making the warps of cloth which pass current in the market for all wool.

Black wool, when of a deep rusty shade, by receiving too much logwood, can easily be reduced to a good color by a weak sour, but cotton cannot be treated in the same manner.—The effort of the dyer, therefore, must be rather to give a little less than too much stuff in dyeing the cotton of mixed fabrics. As the color on woolen goods is also more permanent, and more difficult to discharge than that on cotton, of course the latter cannot stand the fulling process so well.

**TO DYE WOOD BLACK**—Boil the wood in a strong liquor of logwood for half an hour, then take it out, and rub its surface with a piece of sponge which has been dipped into a solution of copperas. Gunsmiths dye their ramrods by

steeping them in a strong solution of logwood for about twelve hours, then coating them with the copperas solution, an ounce of which is sufficient for five dozen. To boil them in strong ink would answer the same purpose.

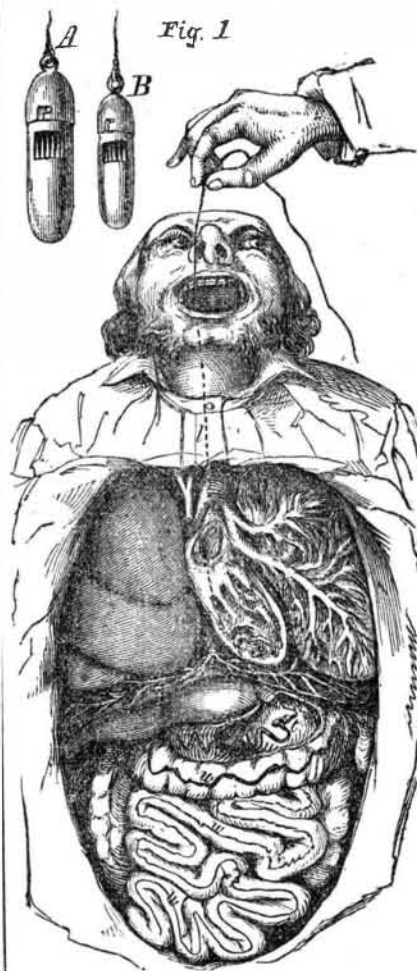
**TO COLOR IVORY BLACK**—Make up a very strong solution of logwood, a little fustic and copperas, and boil the ivory in this for twenty minutes, then take out the articles, dry them, and rub over their surface with a little sweet oil. Ivory balls, umbrella tips, &c., may be dyed black in this manner.

**OSTRICH FEATHERS**—These beautiful feathers are dyed black in the same manner as ivory, but, to prevent them being injured by the agitation of the water, they should be sewn up in a coarse cotton cloth bag. When colored they should be washed, then beaten with the palm of the hand upon a firm cushion until they are dry. This opens up their fibers and makes them look handsome.

**STRAW HATS** are dyed black in the same manner as wood (like the ramrods,) only a solution of copperas is made up in a pail, and they are steeped in this for half an hour after they have been boiled in the strong logwood.

**HORSE HAIR** is dyed in the same manner as ivory, and so is human hair intended for wigs. These items we have no doubt will be of great service to many of our readers.

## Tape Worm Trap.



The accompanying engravings are views of a trap and process for removing tape worms from the human stomach and intestines, for which (trap and process) two patents were granted to Dr. Alpheus Myers, of Logansport, Indiana, on the 14th of last November. The nature of the process and the manner of practicing it is represented in fig. 1. It shows the hand of the operator fishing for the tapeworm.

A B represent two traps of full size for operating on patients of different ages. *w w* represent the intestines of the patient, and *u* the tape worm. *t* is the trap, which has been swallowed and taken into the stomach, and is suspended by a fine silk thread, *l*, in the hands of the operator. The tape worm is represented attacking the bait in the trap, *t*, and is on the point of being caught. Fig. 2 are enlarged figures of a trap to show its parts more fully. It is a neat small instrument of the shape A and B, fig. 1; it is made of very thin sheet gold or silver. A in fig. 2 shows all the parts of the trap—the inside part being in dotted lines; B of same figure shows the main outside tube with its catch pin and the coiled spring, *g*, removed; the spring is set at the bottom of B, when the trap, as in fig. 1, is ready for use; fig. 2, shows the small bait tube, *d*, with its bait fork, *e*; also the cap, C,

which is placed over B; also catch, *b*. The thread, *h*, is attached to link, *i*, of the cap, C. The bait is placed on fork, *e*, of the small tube, *d*.

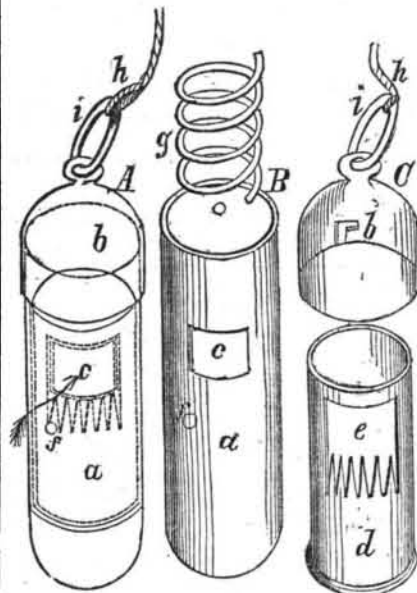


Fig. 2

This tube has a very small flange on its bottom edge. Tube, B, has an opening, *c*, in its side, and a small pin, *f*, projecting inside, about little more than a hair's-breadth. The coiled spring, *g*, is forced to the bottom of tube, B, under *a*, and the bait tube, *d*, placed in B, with its bottom resting on the coiled spring. Its flange at the bottom catches delicately on the pin, *f*; the bait fork, *e*, with its bait, when the instrument is ready for use, is opposite the opening, *c*, as shown, so that the tape worm, *t*, puts its head into the small opening, *c*, and attacks the bait. The process of removing a tape worm from the stomach is as follows:—The patient is first put upon a strict course of fasting for several days, and allowed nothing but water to allay thirst. The tape worm then becomes exceedingly hungry, and by instinct draws itself into the stomach to seek for that nourishment which is now denied it in the intestines (all intestine worms do this, and sometimes pass up into the throat.) The trap, A or B, fig. 1, is now baited with any nutritious food—such as a piece of cheese—and placed on fork, *e*, the points of which are very sharp and fine. The trap is then swallowed as shown in fig. 1, and the thread, *l*, fastened to some proper object, and he left at his ease for some hours, perhaps from six to twelve. During this period the tape worm will have attached its sucker-mouth to the bait, as shown, and by a little wriggling, it displaces the small flange of tube *d*, from the delicate pin *f*, and then the coiled spring, *g*, under it, forces up the inside bait-tube into the upper part of the tube, B, and the tape worm is pressed between the upper edge of opening *c*, against the fine prongs of fork *c*, and is thus transfixed and caught. The spring, *g*, is made of such tension that the worm is merely transfixed, and not cut through, which must be avoided. The patient can tell when the worm is captured. He rests for a few hours afterwards, and by careful and gentle drawing up of the trap, the worm is abstracted with it, and gently wound round a spool or quill. Great care must be exercised in drawing it up, so as not to break it.

The tape worm, or tænia, receives its name from its resemblance to a mason's tape. It is the worst of the various species of worms which afflict the human family. Some of them are exceedingly long; they vary from a few feet to 20, 30, 50, and even 100 feet. It is jointed, resembling a measuring tape spaced out in inches. Every joint of this worm is, in reality, a distinct worm: the creature is at first broad and short; when it multiplies in the bowels, the young adhere to it and each other endwise, so as to form a sort of chain, which lengthens as they continue to increase, and at last becomes injuriously long, hence merely breaking this worm does not destroy it, for any separate link is one entire worm, and cannot be injured by being separated from the others. This is the reason why great care must be exercised to remove the worm entire, and not to break it, for if but one link is left it propagates, and soon increases its tenacious brood, uniting them to itself. The tape worm is very detrimental to health; it cannot be otherwise. There have

been some cases indeed, of persons having them without being sensibly affected, but these are exceptions to the rule.

The removal of the tape worm from the human body has always been a desideratum with physicians. The above figures certainly represent an original and ingenious method for removing them, and Dr. Myers, not long since, removed one fifty feet in length from a patient, who, since then, has had a new lease of life.

More information in relation to this invention may be obtained by letter addressed to the patentee.

## Volcanic Mud Phenomenon.

On the 19th ult., as the steamer *Tishomingo* was wending her way up the Ohio river, the officers and passengers on board of her beheld a remarkable upheaving of waters in the center of the stream. When about seventy-five miles below Louisville, they beheld a dense body of mud and water, some thirty or forty feet in diameter, thrown up, somewhat after the manner of a fountain, to a height of fifteen feet. It rose and sank several times.

## Literary Notices.

**OLD KNICKERBOCKER**.—In this number for August, the merry poet, John G. Saxe, of Vermont, has a few sweet and pleasant lines on his thirty-ninth birth day, thus letting us know he will be forty next June; may he live sixty longer. Clark's Editor's table is inimitable. His wit is rich, racy, and vigorous. Published by S. Hueston, Broadway.

**PURFAM'S MONTHLY**.—The leading article of this Magazine for August, is on Turkish Wars of former times; giving an account of an old fashioned English-American, Capt. John Smith, of famous memory. There is a curious article on animal talk in which a dentist made a great display in pulling hundreds of cats teeth. The articles are all good, as usual, and worthy of this Magazine. Dix & Edwards, Publishers.

**BLACKWOOD'S MAGAZINE**.—The number of this far-famed Magazine, for this month, has just been issued by its enterprising American Publishers, Leonard Scott & Co., 54 Gold st. It contains "The Story of the Campaign," continued; the most reliable account of operations in the Crimea; also "Zaidex" continued, and a slasher on "the imperial policy of Russia." The concluding article is on "Reform in the British Social Service," and is a cutter. It is an able number.

**THE NEW YORK QUARTERLY**.—The number of this solid periodical for this quarter, contains some very profound articles. The leader is on "The Last Days of Colonial Independence," and bears the stamp of ability. Another on "The Journalism of Great Britain and America," is also very instructive. From it we learn that the *Edinburg Gazette*, (still alive and thriving,) has been published since the year 1800. It is a good number. James G. Reed, Publisher, No. 349 Broadway.

**SURVEYS FROM THE MISSISSIPPI TO THE PACIFIC**.—We are indebted to A. Campbell, C. C. in the War Department, for Reports of explorations and surveys to ascertain the most practicable route for a railroad to the Pacific. Such documents are of no small value to us, in obtaining information on subjects which we discuss in our columns. Our thanks are due to Mr. Campbell for his attention to us.



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