

Science and Art.

The Art of Dyeing.—No. 35.

COLORING STRAW—As much straw is made into hats in our country, and as colored hats sometimes become fashionable, in which case old white ones may be made "equal to the fashion," a knowledge of the processes of coloring them will be very useful to many persons.

For all colors except black, straw hats should be thoroughly cleaned, to remove all grease from them before they are dyed. This is done by steeping them for fifteen minutes in strong soap suds, then rinsing them well in hot water. It is sometimes necessary to rub bar soap on the inside of a hat at the center of the front, where it comes in contact with the head, and to brush it on a board, before all the grease can be extracted.

PEACH BLOSSOM COLOR—Take a small clean copper kettle, and add four ounces of cudbear and one of soda to one gallon of water, and boil one bonnet in this for half an hour, it will then be colored. It is now taken out, washed well in clean cold water, and dried.

SILVER GRAY—Add to the old liquor in which the foregoing hat was dyed, half an ounce of alum and one of the extract of indigo (this is now to be found in almost all druggists' stores,) and boil a hat in this for twenty minutes, when it will be colored. It is then taken out and washed.

LIGHT BLUE—To one gallon of water, in a clean vessel, add one ounce of the extract of indigo and half an ounce of alum, and boil the hat or bonnet in this for twenty minutes. It is then washed in cold water and dried in a cool place.

DARK BLUE—Into one gallon of water put half an ounce of crude tartar and one-fourth of a pound of copperas, and boil a hat in this for fifteen minutes. It is then taken out and rinsed in cold water. Into another like vessel containing one gallon of water, add one ounce of the yellow prussiate of potash, and boil the hat in this for ten minutes. It is then lifted and cooled a few degrees below the scalding point, and a little vitriol added, so as to render the liquor slightly sour in taste. The hat is then entered in this, and soon becomes a rich deep blue. If not dark enough, let it be re-dipped for five minutes in the copperas liquor, and again in prussiate liquor. It is then washed and dried. Great care must be exercised in introducing vitriol into hot water. It should be first mixed with ten times its quantity of cold water, and thus poured into the hot, for when vitriol comes in contact with hot water a small explosion takes place, and the vitriol may be thrown out into the face of the person introducing it. This advice is of some import to young chemists and inexperienced bleachers, dyers, and color makers.

LIGHT FAWN—Boil four ounces of sumac, four ounces of crop madder, four ounces of fustic, and half an ounce of alum in one gallon of water for five minutes, then introduce the hat and boil it for ten minutes. It is then lifted, and a piece of copperas about the size of a Lima bean introduced into the liquor, which is now well stirred up, and the hat re-introduced and boiled for five minutes longer, when it will be ready for washing.

LAVENDER AND SLATE—To one gallon of water add half a pound of logwood and one ounce of alum; boil the hat in this for twenty minutes, then take it out, and add one-eighth of an ounce of blue vitriol (sulphate of copper,) and boil the hat in this for ten minutes. By adding about one-fourth more logwood to this liquor, and one-fourth of an ounce of copperas, and boiling a bonnet in it for fifteen minutes, it will be colored a slate.

ANOTHER METHOD—A few years ago slate colored bonnets were very fashionable. The way most of them were dyed was by boiling in a weak logwood liquor and a little muriate of tin for ten minutes, so as to dye them a light purple. On the top of this they were dyed a light blue with the sulphate of indigo in hot water. All shades of lavender and slate may be dyed on straw hats by this method, which appears to be the best. The quantity of dye stuff must be proportioned to the depth of shade. It is an easy matter to add more when

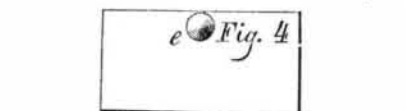
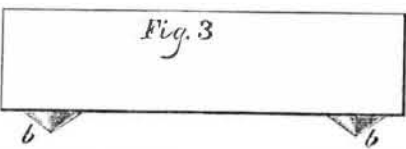
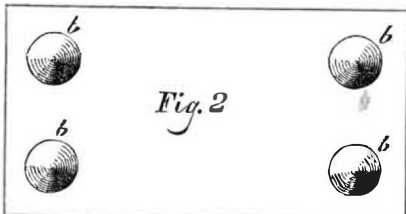
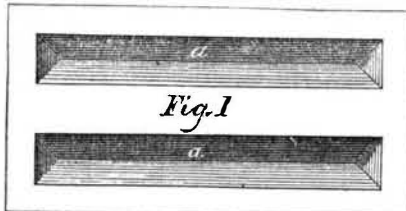
the shade is too light, but if too dark at the first dip, the color must be removed with hot soap, and the process commenced again. How necessary then to commence with a weak liquor to work up to a pattern or particular shade.

BROWN—Into one gallon of water introduce half a pound of logwood, one pound of peachwood, and one of fustic, and one fourth of an ounce of alum. A hat is boiled in this for twenty minutes, then lifted, and half an ounce of copperas introduced, stirred up well, and the hat re-entered, and boiled for ten minutes, then lifted and washed. More dye stuffs will make a darker shade. A deep brown can also be dyed on bonnets with catechu, by pursuing the same process as that described for dyeing brown on cotton in the preceding articles; the only difference in the process is simply to use hotter liquors for the straw.

ANOTHER METHOD—Boil the bonnet in one ounce of blue stone and four ounces of alum in one gallon of water, for twenty minutes.—Lift it out and rinse it, then boil for half an hour in a clean liquor containing half a pound of peachwood, the same of fustic, and two ounces of logwood, in one gallon of water. It is then lifted out, and one ounce of copperas introduced and stirred up in the liquor. The hat is now re-entered and boiled for ten minutes longer.

The alum, blue stone, and copperas must be entirely dissolved before a hat is placed in the liquor; if this is not done, it (the hat) will be spotted. By using a larger kettle than the one specified for dyeing one hat at once, any number of hats can be so colored at one operation, by using a proportionate amount of dye stuffs to those laid down for dyeing one hat. Coarse hard straw is far more difficult to dye than Leghorn or Tuscan. Chip hats are also dyed in the manner described, but do not require so much dye stuffs. Straw hats must be handled with great care, so as not to break the braids. Horse hair hats can also be colored in the manner described,

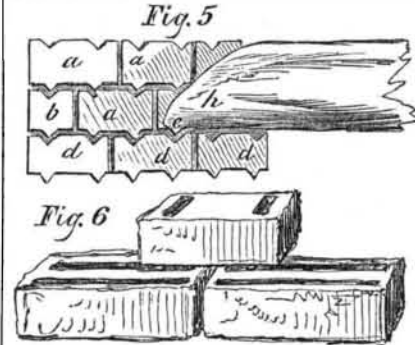
Patent Brick.



The annexed figures are views of an improved brick, for which a patent was granted to Levi Till, of Sandusky, Ohio, on the 19th of last June. The nature of the improvement consists in forming each brick with channels or grooves upon the top, and with projecting conical spurs upon the bottom and upon one of its ends.

Figure 1 shows the two channels or grooves, *a a*. Fig. 2 represents four projecting conical spurs intended to fit into the grooves, *a a*, of another, and vice versa. Fig. 3 is a side view of a brick, showing the conical spurs, *b b*, in elevation. Fig. 4 represents a small spur, *e*, intended only to keep the bricks as laid in the wall, at such an exact and uniform distance apart as shall leave the proper space for mortar. Figure 5 shows a section of wall with the end of a joint, *h*, laid upon it, which can be done by the carpenters on each story, as soon as the bricks are laid. *a a* and *d d* show

the ends of brick, and *b* is the half brick. A piece, *e*, is nailed on the end of the joist to fit into the channel of brick, and which acts as a tie. Fig. 6 is a perspective view of three of these bricks. The following extract from the specification sets forth the advantages claimed for this brick:—



"It will be perceived at once that in bricks made upon this plan, the improvements will consist, 1st, in the greater security and strength of the walls locked and bound together by this device. 2nd, the bricklayer is enabled to lay several courses without the use of the line, and with much greater rapidity and accuracy than with common brick, it being scarcely possible to go wrong; and, 3rd, the spaces for mortar between the bricks are necessarily uniform, exact, and equal.

"These improvements are believed to distinguish my invention from all others, and especially that of Edmund Cartwright, patented in 1795, inasmuch as my bricks rest firmly upon their several conical projections within the grooves, and are at the same time imbedded in mortar, while those of Cartwright cannot come in contact with each other to resist external force, until the mortar is first ruptured, thus destroying the solidity of the wall. Another essential difference may be added, that bricks made on Cartwright's plan are much more costly, and must be varied in form, to suit the various kinds of work to be executed, while mine are cheap and suited to all kinds of work, without change of pattern."

These bricks, united together, form a continuous chain—very suitable for the construction of domes and other such structures, as they are well adapted for resisting outward thrust, and they can be united by any "bend" which is possible for common brick. The wall cannot separate, while there is sufficient weight on the top to keep the spurs in their channels. Such bricks will be good for building deep shafts in mines.

More information respecting them may be obtained by letter addressed to the patentee at Sandusky.

State Agricultural Shows, 1855.

Connecticut, at Hartford, October 9-12.
Alabama, at Montgomery, October 23-26.
Canada East, at Sherbrooke, Sept. 11-14.
Canada West, at Coburg, October 9-12.
East Tennessee, October 23-25.
Georgia, at Atlanta, Sept. 10-13.
Illinois, at Chicago, second week in October.
Indiana, at Indianapolis, October 17-19.
Kentucky, at Paris, Sept. 25-28.
Maryland, at Baltimore, last week in Oct.
Michigan, at Detroit, October 2-5.
New Hampshire, Sept. 12-14.
New Jersey, at Camden, Sept. 19-21.
New York, at Elmira, October 2-5.
North Carolina, October 16-19.
Ohio, at Columbus, Sept. 18-21.
Pennsylvania, Sept. 25-28.
Tennessee, at Nashville, first week in October.
Vermont, at Rutland, Sept. 11-13.
Virginia, at Richmond, Oct. 30 to Nov. 2.
Western Virginia, at Wheeling Island, Sept. 26-28.
Philadelphia Society for Promotion of Agriculture, at Powelton, Sept. 12-15.

The Red River raft, which has so long choked up the navigation of the Red River of Texas, Louisiana, and Arkansas, still remains undisturbed, and furnishes newspapers with occasional items respecting attempts at its removal. From the *Washington (Ark.) Telegraph*, we learn that the work is now in progress for the latter purpose, under the direction of Gov. Fuller, of the U. S. Topographical Engineers. Additional machinery and boats are also being prepared at Louisville for these operations.

New Project for Crossing the Atlantic in Three Days.

The Boston *Advertiser* states that an engineer named John Ross, residing in Montreal, has addressed a letter to the Mayor of Boston, requesting the assistance of fifteen hundred dollars to complete the invention of a new motive power which will be able to waft a ship across the Atlantic in three days. Let John Ross just publish a description of his new motive power, and if it has merit in it equal to that claimed, there are those who can easily appreciate it, and he will not be long in finding assistance. But we suspect that the news is too good to be true, and that John Ross is laboring under a delusion, or is attempting to delude others.

Water Faucet.

Mr. Tuthill, of Boston, has introduced to the public some self-closing faucets for the supply of water or other fluids; the peculiarity being that there is no drip nor waste, and also an instantaneous full stream. It is, in the truest practical sense, a self-closing contrivance, as the fluid can only run so long as the pressure of the hand is upon the valve.—[Ex.]

[An invention similar to this has been in use in our office for about ten years.]



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