

## With Dyed Garments

The frontier housewife was something of a pioneer chemist. Her mother had taught her the rudiments of herbal medicine, had tutored her in the complexities of tanning, and had instructed her in the mysteries of vegetable and chemical dyes. But of all the talents which the emigrant woman was expected to master, the art of dyeing was the most fascinating. From earliest colonial times indigo had stood for color in drab cabins and fustic had transformed dull homespun into yellow garments. Many a linsey-woolsey suit took its characteristic shade of brown from the walnut or from the root of the birch tree.

As the daughters of the Old Dominion moved along the waterways and the forest trails leading to the trans-Mississippi West, they brought with them — as did the women from New England, York State, and Pennsylvania — skilled knowledge of colors. They came with dyed garments, exemplifying the sixty-third chapter of Isaiah. Their chemistry was much like themselves — practical, tried and true, and tested in the stern school of adversity. Tucked securely in some odd corner of flatboat or wagon were packets of dye



stuffs. When a new home had been established, the women at once began their accustomed duties of carding and spinning, weaving and dyeing.

Even in Iowa, fringe of the frontier, the art of coloring was practised generally. To dye well was no romantic task. It meant knowledge of mordants, acquaintance with cloth textures, and some botanical lore. It meant long hours over steaming kettles and muscle-straining periods of dipping and wringing.

To understand mordants, of course, was to know the real secret of dyeing. Iowa homemakers knew that some dye stuffs would not unite directly with the cloth to be colored. A unifying "substance" had to be combined with the cloth before the material was dipped into a solution containing the color. Intermediate substances with which cloth was first treated were called in the picturesque language of the nineteenth century "mordants". It was frequently said that the most important part of dyeing was the choice and application of mordants. Upon a careful selection of these rested the success of the entire process.

One of the more generally known mordants throughout Iowa in the early period was "alumine" which was used either in a state of common alum or as acetite of alumine. The latter was prepared quite simply by pouring acetite of lead into



a solution of alum. Common alum as a mordant was used primarily with woolen fabrics, and acetite of alumine was selected for use with cotton and linen. Both alum and acetite of lead were relatively easy to secure in Iowa during the late forties and early fifties. General stores and pharmacies, for example, in Burlington stocked a plentiful supply. Much of this stock came up the Mississippi River and some of it was purchased from Cincinnati supply houses.

Individual taste, early experience, and training, of course, determined selection from a wide range of mordants. Nitromuriate was popular, as were red oxide of iron, an infusion made from sumach, common in Iowa, and, in some instances, sal ammoniac.

The most popular colors and the easiest to impart to fabrics were the blues, reds, and yellows. Compound colors, made by mixing two simple ones, were none too common in the average home. Greens, olives, lavender grays, cinnamon fawns, although attractive, usually were beyond the capabilities of the average woman. But the simple hues were easy.

The coloring matter used for imparting the various shades of red was derived from orchil, madder, carthamus, kermes, or cochineal. Madder or orchil was used for coarse woolen cloths.



Fine cloth was dyed almost exclusively with cochineal.

If the Iowa homemaker wished to give woollens one of the many shades of blue, she went about the dyeing in a businesslike manner. First, she dissolved one part of indigo in four parts of concentrated sulphuric acid. To this solution she added, as her second step, one part of dry carbonate of potash. The entire mixture then was diluted with eight times its weight of water. Meanwhile, she had boiled the cloth for an hour in a solution composed of five parts of alum and three parts of tartar for every thirty-two parts of cloth. After this boiling, the cloth was plunged into the previously prepared mixture of indigo, sulphuric acid, and potash, and was boiled until the wished-for shade of blue was attained. Indigo was especially satisfactory as it was the only blue dye which could be applied directly to the cloth without first subjecting the textile to a mordant.

A sky blue usually was achieved in silk by mixing together six parts of bran, six of indigo, six of potash, and one of madder and then boiling until the proper shade developed. Cotton and linen, however, were treated differently. In this case, the mixture was composed of one part of indigo, one of green sulphate of iron, and two parts of



quicklime. The relative ease of handling indigo induced many women to prefer the various shades of blue to the more-difficult-to-prepare reds and crimsons. Yellow also was more complicated than blue.

The essential coloring matter for yellow, however, was not difficult to procure in Iowa. Weld, fustic, and quercitron bark were carried as staple items in drug stores and general merchandise establishments. Sometimes, the physician kept a small supply of dye stuffs. It was not too uncommon, indeed, to find a jar of indigo next to a laudanum bottle and a box of quercitron associating with unrefined quinine.

Yellow, of course, demanded a mordant before any further step was taken. Cloth, therefore, was always first soaked in alumine. If a bright orange or golden yellow was desired, oxide of tin was used as the mordant. After the cloth had been thoroughly impregnated with the mordant, it was plunged, without being rinsed, into a bath of warm water containing sufficient quercitron bark, weld, or fustic to lend the desired shade.

As walnut was indigenous to Iowa, it was relatively easy to find ample ingredients to concoct a brownish dye. Walnut peels or even the green covering of the nut readily yielded their coloring matter to water. To secure the best results, the



woman half filled a cask with walnut peels, then covered them with water, and let them stand for about a year. By that time the water had assumed a dark hue. As in the case of indigo, no mordant was necessary for use with walnut. Wool cloth was steeped directly in the decoction until the wished-for color was attained. The intensity of the shade was proportional to the strength of the solution.

To what extent the dyeing of cloth took place in the Iowa home during the State's early period is difficult to determine. That many thrifty housewives did some dyeing cannot be doubted. Shops would not have stocked alum, madder, cochineal, and the other mordants and dyes had there been no demand. And the minute instructions printed in many home guides used throughout the State point to an interest in coloring. In addition, many women who emigrated to Iowa had been trained in the art. As time went on and as retail establishments carried larger stocks of commercially dyed yard goods, the need for home dyeing undoubtedly decreased. But even then it is not improbable that some women when remodeling garments took the opportunity to alter color as well as design.

The elementary chemistry imparted by a knowledge of dyeing stimulated interest in allied fields.



For example, a well-known method for dyeing hair black called for a pint of the liquor of pickled herrings. With this was mixed half a pound of lamp black and two ounces of the rust of iron. After boiling for twenty minutes, the preparation was strained and then rubbed well into the roots of the hair. The home manufacture of perfumes, soaps, and tooth pastes was practised also.

One of the earliest hair oils, for example, was prepared by mixing half a pint of oil of sweet almonds with half a pint of olive oil. It was perfumed with attar of roses or, according to individual taste, with essence of orange flowers, or with extract of jasmine. A "fine perfume" could be made with an ounce of ground cassia upon which were poured three ounces of warm oil of cloves. French Hungary Water came almost entirely from the garden of herbs which hundreds of lowans tilled. This perfume was concocted from the young leaves of rosemary, lavender, thyme, and sage. These were infused in odorless spirits of wine and allowed to remain for a month. Colored with alkanet, a simple and familiar preparation, the liquid was drawn off into smaller bottles and was ready for use.

Tooth powder, said an 1854 volume of household hints, could be made easily at home. Half an ounce of powdered orris root, half an ounce of



prepared chalk, and a little dutch pink to lend color were all that was needed. Mixed together, they made an excellent cleansing powder. One of the oldest hand lotions was made quite simply by mixing together a pint of rosewater and an ounce of sweet almond oil to which were added ten drops of oil of tartar.

Although the primitive conditions existing on the Iowa frontier were, in many instances, disagreeable and crude, compensating factors did exist. The imparting of color to cloth must have served as a release from the humdrum and monotony of daily chores. And the compounding of simple perfumes must have brought not only memories of easier days in girlhood homes, but also must have carried promise of better things to come. The coarseness of the frontier could not exist too long when women found time to dye and to prepare cosmetics.

PHILIP D. JORDAN