

Colored Flames Add Greatly To Gaiety of Christmas Season

By ESTHER KIRMIS

I have quite a few requests for information on coloring pine cones, to give color for your fireplace during this holiday season.

A fire on the hearth is part of the decoration of the home as well as adding warmth and cheerfulness. By selecting the wood you can get many different effects.

Sometimes driftwood has soaked enough chemicals from sea water to give soft golden,

lavendar and pale blue flames. Each is a dry metallic salt and Cherry wood gives pretty flames. Applewood often burns with saffron and blue colors. Dry spruce and pine will snap and crackle and a chunk of rotting wood will often give a real fireworks display. Burning evergreens, orange peel or applewood can give special fragrance also.

To get brightly colored flames it is necessary to add chemicals in some form. Here are the chemicals and colors they produce.

Each is a dry metallic salt and needs care in handling when used in solution.

Also many are poisonous. Copper burns blue and green. This is best when used as copper chloride or copper sulphate — otherwise known as blue vitriol. The latter is especially poisonous.

Strontium burns red. This is best as strontium chloride or nitrate. Try to get "technical crystals" instead of C.P. (chemically pure). These are usually less expensive and the impurities will not matter here.

Barium burns green. Barium chloride seems best. Lithium chloride will burn with a purple flame.

Calcium chloride burns orange and sodium chloride (table salt) burns brilliant yellow. These are common salts but the colors tend to overcome other flame colors so they should be used sparingly.

These chemicals can be sprinkled on the fire dry or they can be put in, or on, burnable material. Tree cones, porous wood, rolled papers and sawdust are some of the common materials which can be treated. There are two general methods of applying the chemicals. In one the chemical is put in solution and soaked into the material; in the other it is added to a substance which will stick to the material to be burned.

Select a graniteware, glass, crockery or wooden container because many of these metallic salts are corrosive metal. Dissolve a pound of the chemical in about a gallon of water. The more concentrated the solution the more salt will soak into the

cones or other material. This much should soak more than a bushel of cones. It will take several hours of soaking for salt to penetrate cones or wood. Papers can be soaked thoroughly, dried and then tied into tight rolls for use in the fireplace.

The dry chemicals can be added to lacquer, varnish or shellac and the cones dipped into this. Sawdust or other small pieces of fuel can be sprinkled with this mixture or stirred through it. If the mixture is painted onto the fuel be sure the mixture is stirred frequently. Dry the fuel thoroughly before burning.

Melted paraffin can also be used to hold the chemical to the cones and wood. When this is

used melt the paraffin over hot, but not boiling, water. Then remove from the fire and cook before mixing the chemicals into the paraffin. Quickly dip or paint the cones or other fuel with the mixture.

Mothballs in a glass bowl of colored water can add an interesting decorative note while moving up and down in the solution.

Add about equal parts of an acid and a base to water and put mothballs in the solution.

The carbon-dioxide formed by the chemical combination in solution will collect on the mothballs causing them to rise to the surface. Here the gas escapes into the air and the mothballs sink toward the bottom for another

load of bubbles. For decoration add a little food coloring and float flowers or candles in the surface of the water.

The amount of acid and base added will depend on the size of the container. With a small bowl start with one teaspoon each of citric acid and baking soda. Add more when the reaction slows down. Concentrated white vinegar could be used in place of the citric acid. Baking soda is the easiest base to obtain in the home.

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