

## Economies in House Painting

Recent Improvements have Cheapened Materials—But Decorators Have Hindered their Extended Use

Much real progress has been made within the last decade in improving materials for painting, but the prejudice of painters against new substances has prevented the public from getting the full benefit from them. Most of the knights of the brush still cling tenaciously to a mixture of white-lead, linseed oil, turpentine, and patent driers. This makes a good point for certain purposes, but, in some respects, a much better paper can be made by using other materials.

### White Spirit vs Turpentine

What is known as white spirit seems to be in every respect equal to American turpentine for most purposes, and costs considerably less than half the price, but the prejudice already referred to compels many manufacturers to send it out mixed with a little genuine turpentine, solely to give it the characteristic odour.

Lead has three serious defects: it is poisonous, it is very susceptible to the action of sulphur—a great disadvantage in a smoky atmosphere—and it has a tendency to chalk when used in certain situations, particularly on the seashore. The pigments which may be used instead of lead are all zinc compounds, and are non-poisonous. By far the most important is zinc oxide, which is not affected by sulphur, and is suitable for use by the seashore, where lead fails. When properly mixed, it has quite as good body as lead, but will be ruined when mixed with patent driers. Zinc manganese or cobalt driers, zinc liquid form must be used.

### Zinc Paints for Interiors

A second zinc product, lithopone or zinc sulphide, is very suitable for interior work. However opinion may differ as to the durability of zinc compounds when exposed to the weather, their non-poisonous character makes them much superior to white lead for interiors.

Most water paints are made on a base of lithopone. They are produced in many beautiful colours and give ample facilities for producing an artistic effect, especially when there are many pictures to be hung and a plain background is advisable. They give excellent and most economical results as undercoats for oil paints.

The old-fashioned paint removers are rapidly giving way to a class of paint-softeners made from acetone, alcohol, and other substances, which do not injure the hands of the operatives. Moreover, the work requires no treatment after the paint has been scraped off.

## Butter-Making Processes

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germs get into the milk at the time it is drawn from the cows or afterwards. Milk in the udder is practically germ free. There need be no fear of these harmful bacteria in milk if cleanliness is practised and if the two safest and best means to check their growth are used, viz., extreme heat and cold.

### Pasteurization of Cream

Pasteurization of cream has become justly popular. While it does not remove all the ills which are apt to befall cream, it does prevent the following services:

1. Drives off bad odours, especially those due to feed.
2. Destroys most of the bacteria, leaving a clean seed bed for the added culture to work in.
3. Produces uniformity of flavour from day to day.
4. Makes the cream easier to churn.
5. Adds to the keeping qualities of the cream and butter.

The process of pasteurization is a simple one. To pasteurize cream, place the container in a vessel of hot water. Stir the cream occasionally and bring it to a temperature of 175° F. Leave it covered at that temperature for twenty minutes. It will cool very little if lifted out of the water. Then cool rapidly to 60° F. Pasteurized cream remains sweet for several days. "Starter" must be added to it if ripened cream is desired for churning.

### Directions for Churning

With right conditions, a temperature which brings butter in from 20 to 30 minutes, is the correct one. A range of temperatures from 54° to 58° F. for summer, and from 56° to 64° F. for winter, meets usual conditions.

When necessary, add just sufficient butter colouring of a reliable brand to give the butter a clear yellow tint.

The greater the speed and the farther the drop of the cream inside the churn, the greater will be the force applied to the fat globules, and the more quickly they will merge together and form butter.

When the butter is the size of wheat grain, it is sufficiently gathered. The buttermilk may then be drawn.

### Washing and Salting

Temper the wash water in winter, having it from 50° to 56° F., according to the condition of the butter and the temperature of the room. In hot weather, the wash should be as cold as possible. As a rule, good butter should be washed but once. The more butter is washed the more it is robbed of its flavour.

The salting of butter depends on personal taste and the amount of salt used should be determined by the consumer, rather than by the producer. If the butter is for

immediate use, three-quarters of an ounce per pound of butter is usually sufficient.

Butter should be worked just enough to expel the excessive moisture and to thoroughly distribute the salt. Any portion not reached by the salt will be light in colour.—K.M.F.

## Costs in Farm Poultry Keeping

What Does it Cost You to Feed and Keep your Poultry? Some Actual Costs Determined by Experiment—Farm and Town Poultry

Recently, some valuable investigations have been carried on in Ohio with regard to profits in poultry keeping. The best results came from a farm flock of 96 fowls, which gave a net profit for the year above feed and labour of \$237.37, or \$2.47 each; the lowest results were from a town-flock of 30 fowls, which gave a net loss of \$27.90, or a loss of 93 cents each. Out of twelve town flocks four showed a loss, while of eighteen farm flocks, every one showed a profit, ranging from 14½ cents to \$2.47 per fowl.

The average number of eggs laid by each hen on farms was 71 as compared with 70 in the town flocks. The profits, therefore, with farm flocks did not arise from the difference in egg production, but rather from the lower cost of feed and labour and from the methods of management. The cost of feed for twelve town flocks and one commercial flock averaged 97 cents per fowl yearly, as compared with an average of 61 cents on 18 farms.

The great difference in favour of the farm flocks is attributed to a number of causes, such as the use of the gleanings from harvest fields, orchard and garden, waste products—like cabbages and beets from the storehouse—the use of extensive pasture, weed seeds and insects, dairy by-products, and the lower price of grain consumed by hens of the farms. The labour cost on farms and in towns averaged 28 cents and 60 cents respectively—another great difference in favour of the farms.

It was also learned that, in both town and country, the small flocks gave greater profits than large ones; that fowls with unlimited range did better than those partly or wholly confined; that, to compete successfully with farm flocks, the town poultryman must keep high-producing hens and sell at a higher price; that a poultry system which requires the keeping of fowls confined or which necessitates a large amount of personal supervision, has no place on a general farm; and that a better system of marketing eggs and poultry is needed—one that will encourage the production of a high-grade product carefully and expeditiously transported to the consumer.

## Railway Fires in Forest Reserves

A New Law—Railways under Construction Must Take Precautions Against Fire

An amendment to the Dominion Forest Reserves and Parks Act provides that "When a railway within a forest reserve is being constructed or operated by a company not under the jurisdiction of the Board of Railway Commissioners for Canada, the Minister of the Interior may require such company to establish and maintain an efficient and competent staff of fire rangers, equipped with such appliances for fighting fire or preventing fire from spreading as the said Minister deems proper, and to provide such rangers with proper and suitable equipment to enable them to move from place to place along the line of railway."

"The said Minister may require such company to maintain an efficient patrol of the line of railway and other lands in the vicinity thereof to which fire may spread, and, generally, may define the duties of such company, and of the said fire rangers, in respect thereof."

"For the purpose of fighting and extinguishing fire, the said fire rangers may follow fires which spread from the railway, to, over and upon any lands to which they may spread."

"The said Minister may require such company to make returns of the names of fire rangers in its employ in the performance of the said duties, and of the places or areas in which they are engaged."

The above amendment is similar to the provision in the Railway Act, applying to lines subject to the jurisdiction of the Railway Commission. Too much care can not be taken to prevent forest fires, and the action voluntarily taken by railway companies in the past has been far from adequate.

## Stamping Out a Smallpox Plague

The most striking example of the preventive effects of vaccination, which perhaps has occurred in any country, certainly in modern times, is that of the Philippine Islands. Prior to 1903, some 6,000 deaths each year were due to smallpox. In that year the United States authorities, believing in its efficacy, introduced the practice and their officers performed the enormous number of 3,094,635 vaccinations, this effectually stamping out this horrible plague.

This is but a modern instance of an old and sound scientific practice, which, unfortunately, today is being neglected by parents, municipal authorities and governments. Such neglect has entailed heavy loss upon many communities; we should be wise before it is too late.—C. A. H.