

Science Siftings

By 'Volt'

The deepest gold mine in the world is the New Chum Railway Mine, Victoria, in which a reef has been discovered at a depth of 4224ft. The discovery is considered of considerable importance, inasmuch as it is an evidence of gold at greater depths than was generally supposed to be the case.

Pure Milk.

Milk as it leaves the cow (writes 'Medicus' in the 'Argus') contains no germs of any kind. It is not only sterile, but has probably a slight bactericidal effect. All germs are introduced after the milk has been exposed to the air. The question that public health authorities are endeavoring to solve is how to keep milk as nearly as possible in its original condition until it reaches the consumer. At first, various processes of heating the milk were advocated, from pasteurisation (which was introduced by Pasteur, and consists of heating the milk to a certain point) to sterilisation, in which milk is boiled or exposed to temperatures higher than boiling point. Subsequent observation has revealed that the first process is unreliable and the second undesirable, since sterilisation considerably alters the nutritive property of milk. At the present time the three requisites are generally admitted to consist in clean handling, rapid cooling of the milk to 40deg. Fah. immediately after being milked, and quick transit.

The Guinea.

It is among things generally known that the guinea obtained its name from the gold from which it was made having been brought from the Guinea Coast by the African company of traders. The first notice of this gold was in 1649, during the Commonwealth of England, when on the 14th of April of that year the Parliament referred to the Council of State a paper presented to the House concerning the coinage of gold brought in a ship lately come from 'Guiny' for the better advancing of trade. But it was in the reign of Charles II. that the name was first given to this coin. It is among things not generally known that when the guinea was originally coined the intention was to make it current as a twenty-shilling piece; but, from an error, or rather a series of errors, in calculating the exact proportions of the value of gold and silver, it never circulated for that value. Sir Isaac Newton, in his time, fixed the true value of the guinea, in relation to silver, at 20s 8d, and by his advice the Crown proclaimed that for the future it should be current at 21s.

Coal Tar Products.

When coal gas was first introduced as an illuminant for large towns the tar which is condensed from the gas was looked upon as a nuisance. However, chemists discovered that coal tar was an exceedingly complicated compound and lent itself admirably to the production of a great number of useful chemicals. So we find to-day that all the various brilliant and beautiful dyes employed for coloring various kinds of fabrics are produced from this substance.

Coal tar also furnishes the basis for several kinds of medicines, such as trional, sulphonal, and so on. Saccharine, which is a substitute for sugar, is also made from coal tar. Carboic acid (phenol), the most important and best known antiseptic and disinfectant, is a product of coal tar. Benzol, a clear and colorless liquid resembling alcohol to some extent, is another distillate which is employed for removing grease spots.

Then we have naphthaline, a substance which to some extent resembles camphor, and is employed, like camphor, to protect woollen fabrics from moths.

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J. W. IRWIN N.Z. Representative,
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The Home

By Maureen

To Brighten Copper Kettles.

To brighten copper kettles use lemons from which you have squeezed the juice for cookery. Dip the cut side of the lemon into lichen salt, and rub the metal till clean; then rinse in clean water, and polish with a leather. A whole, freshly-cut lemon may be necessary to clean a neglected copper kettle, but enough juice will generally be found in the squeezed fruit for the ordinary cleaning.

To Preserve Eggs.

Now that eggs are plentiful and cheap the thrifty housewife should put some by for the winter. There are many preparations on the market for preserving eggs—some of which are good and some are not. The best preservatives fail through the neglect or carelessness of the person responsible for putting down the eggs. These should be collected regularly every day, carefully washed when earth or any foreign matter adheres to them, and the shells should be perfectly sound. I have used for some years a home-made mixture which cannot be excelled by any scientific preparation in the market—a method which had been used by our grandmothers in Ireland scores of years ago. I have just finished using eggs which were placed in it last October, nearly eleven months ago, and they have come out as fresh as if they had been in it only a few weeks, in a word you could scarcely distinguish them when cooked from eggs fresh from the nest. Another thing in favor of the recipe is that eggs preserved according to it can be boiled or fried, or used in any way that fresh eggs can be used. Here is the method:—Put 2½lb of fresh lime, 6oz of common salt, and 1oz of saltpetre in a vessel—an empty kerosene tin with the top removed will do as well as any other—and pour on the mixture three gallons of boiling water. Stir well, and when cold add ½oz of cream of tartar. This should be allowed to stand for about 10 days, and stirred occasionally, when it will be fit for use. This quantity will preserve about 12 dozen eggs, and will not cost more than three or four pence. There should be at least an inch of fluid over the top of the last eggs put in. This method is cheap and effective, and will give complete satisfaction if the directions are carefully carried out.

Refreshing Sleep.

The best sleep is the dreamless sleep. It is the most restful. It permits the sleeper to awake feeling the most refreshed. 'To dream or not to dream' has been the soliloquy of many a person lying down to sleep, and usually it is with the fervent hope that there may be no dreams. To prevent them take care of the circulation.

Another fundamental principle to be observed is to have the room well ventilated and well aired. There can be no healthful, restful sleep in a close room into which no currents of fresh air find their way. A drawn, weary-looking face sometimes is an evidence of an inclination to keep the windows tightly closed in the sleeping room.

The centre of the nervous system is the back, and therefore it is not advisable to lie with the full weight of the body on the spinal column. One should lie with the whole body relaxed, the legs outstretched, and the trunk of the body slightly on one side. That is the best sleeping position. It is best calculated to produce sound, refreshing sleep.

Sleep has a curative effect, and some physicians have gone so far as to say that the turning point usually is reached in a disease when the patient is sleeping, and that a heavy sleep is all that is required many times to give the sufferer the first step on the road to health. People who have heart trouble are known to sleep with the arms over the head. In this attitude the lungs are supposed to be lifted and the breathing cavity made larger, but it is not advisable nor is it well to sleep on the left side, so that the weight of all the organs of the body falls towards the heart.

Maureen

The Right Rev. Dr. Kelly, Bishop of Geraldton, was given a send-off and presented with a purse of sovereigns by his friends and admirers at the Cue (W.A.) Convent school, prior to his departure for Sydney to attend the Third Plenary Council.