

could be maintained for a greater or less quantity. Make a bath by dissolving in warm water 2 lbs of alum, 18 lbs. of cream of tartar, 1 lb of sulphuric acid, 18 lbs of starch, 6 lbs. of sulphate of indigo and 3 lbs of orchil. Immerse the wool in this bath at a temperature of 122 Fahrenheit for three-quarters of an hour. In this way the wool will get such a whitish tone that many may be satisfied with it, but the white may be made much deeper by rinsing the wool out in clean water, and then transferring it for a short time to a weak bath consisting of a solution of 1 lb. of chloride of barium. This, it is said, gives a rich satin whiteness to the wool so treated, and at the same time considerably increases its weight. It is also alleged that the wool does not lose its natural softness and is easily wrought up by the manufacturer. If the plan possesses the advantages attributed to it, the price of the chemist's used cannot be much, and some of our agricultural friends might put it to the test upon a small quantity of wool. If the plan were found successful, the baths could probably be made up as they began to diminish, and thus the expense of operating on large quantities of wool would be reduced comparatively.—*Queen's Landr.*

USES OF CARBOLIC ACID.

The *Journal of Applied Chemistry* says: In pasting wall papers, posters, &c., especially where successive layers are put on, there arises a disagreeable effluvia, which is particularly noticeable in damp weather. The cause of this is the decomposition of the paste. In close rooms it is very unwholesome, and often the cause of disease. In large manufactories, where large quantities of paste are used, it often becomes sour and offensive. Glue, also has often a disagreeable odor. If, when making paste or glue, a small quantity of carbolic acid is added, it will keep sweet and free from offensive smells. A few drops added to mucilage or ink prevents mold. In whitewashing the cellar and dairy if an ounce of carbolic acid is added to each gallon of wash, it will prevent mold and prevent the disagreeable taints often perceived in meats and milk from damp apartments.

Another great advantage in the use of carbolic acid in paste for wall paper, and in whitewash, it will drive away cockroaches and other insect pests. The cheapest and best form of carbolic acid is crystal which dissolves in water or liquefies at an excess of temperature.

THE ADULTERATIONS OF PERUVIAN GUANO, AND HOW TO DETECT THEM.—Peruvian guano is frequently largely adulterated with clay, plaster of Paris, ocher, and inferior phosphatic guanos. We have often examined Peruvian guano containing from 30 to 60 per cent of fraudulently added earthy or other useless matters. When genuine and of good quality, this kind of guano has a light brown or greyish colour. It consists of powder commingled with hard lumps, which on being broken, exhibit a light colour and crystalline appearance. A bushel of good guano weighs about 70 lbs., whilst adulterated kinds often weigh more than 100 lbs., per bushel. A rough test of the purity of the article is to burn $\frac{1}{3}$ of an ounce of the suspected

sample upon a piece of tin or iron placed on a clear fire. If the residue be not more than $\frac{1}{2}$ or an ounce, the guano is probably pure; but if the residue amounts to $\frac{1}{2}$ an ounce, the sample is either extremely inferior or grossly adulterated. Guano adulterated with ochre or clay has usually a dark brown colour, and it is much colder to the touch, and feels heavier than good Peruvian guano.—*Cassell's Technical Educator.*

RENDERING WOOD WATER-TIGHT.—Dr. Scherzer, an Austrian official at Pekin, has sent to his government some specimens of a Chinese composition called "Schioicas," which has the property of making wood and other substances perfectly water-tight. He says he has seen in Pekin, wooden chests which had been to St Petersburg and had come back uninjured, and that the Chinese use the composition also for covering straw baskets, which are afterwards employed for carrying oil long distance. Cardboard, covered with the composition, becomes as hard as wood, and most wooden buildings in Pekin have a coating of it. It consists of three parts of blood, deprived of its fibrine, four of lime and a little alum.

The *Iron Age* says:—"An American inventor has, we are informed, deposited at the General Land Office, at Washington, specimens of pig iron and tin salts for chemical and manufacturing uses, reclaimed wholly from otherwise useless scraps of tin plate."

The *Rural American* says to oil an axeltree, first wipe the spindle clean with a cloth with spirits of turpentine, and then apply a few drops of castor oil near the shoulder and end. One tea-spoonful is sufficient for the whole.

Our Country.

OUR COLD WEATHER.

The more even nature of the weather in Canada must strike old country people favorably. Considering the absurd stories about our climate which are widely circulated at home, we have a right to expect emigrants to be agreeably surprised with the reality. In a geography published in Britain, the cold of Canada is represented as being so severe that no part of the body can be exposed during winter without the certainty of being frost-bitten, and the entire person must be enveloped in furs before venturing out of doors!

In the April number of Spurgeon's *Sword and Trowel* for 1870, is an article on the distinguished missionary, Wm. Burns. In this article occurs the following language:—"In Canadian wilds it is not unusual for people to get weather-bound; and if excuses for not keeping a preaching appointment, or for not filling up one's pew, can ever be pleaded conscientiously, it is when the primitive roads, enveloped in snow-drifts, only allow the preacher or hearer to be dragged to chapel during a lull in the