

The seeds have been employed as a remedy for drunkenness, and they are said to abate the drink crave.

By virtue of the alkaloids, caffeine and theobromine, contained in kola, it must act as a cardiac tonic, improving both the force and rhythm of the heart.

The kola nut is slightly bitter and astringent, and its reputed value in digestive disturbances and diarrhoea may be based on these properties.

*Phosphates.*—Of all inorganic compounds these seem perhaps of the greatest importance in animal tissues. They are found in considerable quantity in the human body wherever active cell growth is going on. They must be ranked among the most valuable and necessary foods. Their acknowledged value in disorders of the nutritive system of children, and also in convalescence from acute as well as wasting diseases, in all of which rapid growth and tissue development is taking place, is good ground for the practical inference that they are intimately concerned in nutrition generally, and especially in the recuperation of parts worn out by disease. The recovery from prolonged and severe exertion also may very probably be assisted by them. The compounds of the meta-, pyro-, and hypo-phosphates in which the element phosphorus is loosely combined, seem much more efficacious than the ordinary salt.

According to Ashburton Thompson, repeated doses of phosphates improve the appetite, increase the rate of the circulation, sharpen the mental faculties, increase the muscular power, and give a sensation of well-being.

*Creatin and Hypoxanthin.*—These substances are said in small doses to have the power of increasing muscular work, and to cause the muscle to recover rapidly after exertion. Creatin particularly is said to have this power to a great extent. Glycogen is also classed with these substances, and is said to have great power of increasing muscular capability.

In practice, however, we all recognise a difference in the action of the popular mixtures—tea, coffee, cocoa, etc. In many persons tea will stimulate, and in a few it exercises a marked action on the kidneys and bladder. Coffee, again, will keep some people awake, while tea does not have the same effect with them. With some individuals it acts as a mild aperient. Coca does not seem to have any decided action on the digestive organs or kidneys.

We find, therefore, that the reputation for sustaining the strength, appeasing hunger, and temporarily increasing the physical powers which coca, kola, coffee, and tea have in the respective parts of the world in which they are indigenous is borne out by experiment. Moreover, there seems a probability that physiological science will shortly be able to provide a satisfactory explanation of the practical value of these substances.

—*Knowledge.*

#### HINTS TO WOODWORKERS.

There is no doubt but the proprietors of many wood-working establishments make a mistake in overestimating the value of the machinery composing their plant, says the *Timberman*. In taking an account of stock at the close of the year, a fictitious value is often given to the machinery in their mill. The original cost of the various machines, together with the cost of keeping them in repair is generally put down among the assets which enter into their balance sheets. After a few years they find that, notwithstanding they are using the same stock and employing the same class of labor, yet their neighbor in the same line of business is able to undersell them in the same market. The reason is very obvious; while they are spending large sums of money every year in keeping up their

old machines, they lose sight of one important fact, that although some of the machines may be kept in first-class order, in fact, practically as good as they were when first purchased, yet at their best they have depreciated in value from the fact that they are not capable of turning out the same quantity and quality of work as some of the new and later improved machines which have come into the market and should have superseded them.

Their neighbor, who is able to put the same class of work into the market at a less price, has pursued a different policy. As soon as he finds that a machine is becoming old and is superseded by one that will do more and better work in the same time, he loses no time in useless repairs upon the old machine, but replaces it at once with the new one, and by this means his plant never becomes old. It is unreasonable to suppose in this age of improvement and competition in every branch of business, that the machinery purchased to-day with all its improvements will in every case be able to meet the requirements five or ten years hence. Taking the planing machine for example, the best machines that were in the market ten or twelve years ago were thought to be as near perfect as possible, but compare the amount of work turned out by them as well as the price obtained for planing, with the amount of work turned out by the planer of the present time, and the present price of planing, and it will be evident to any one that the old planers at the present prices would not turn out work enough to pay expenses.

What is true of planing mills is also true of sawmills, sash and poor factories and every other branch of wood-working where machinery is used. The article of furniture is a striking illustration of this fact. It does not require a very old person to remember the time when nearly all of the furniture was made by hand, and to furnish a house in a respectable manner required a small fortune. Then the village cabinet-maker, who in most cases was the undertaker also, was one of the most important personages in the town. The young couple when married must apply to him for the necessary furniture to commence housekeeping, and when baby was born, the cabinet-maker must furnish him a crib, and when death closed the earthly career of one of their number, he was called upon for a casket and to assist in committing his body to the bosom of mother earth. So it would appear in those days that no one in the village could be married, born, or die without his assistance.

But now all is changed. The furniture manufacturer or dealer makes this his speciality, and the cheap and elegant furniture that is now within the reach of persons of very limited means, is the result of improved and special machinery that was unknown at that time. Furniture manufacturers are fully aware of this fact, and, as a rule, avail themselves of the latest and most improved machinery for that purpose. In visiting the several factories, not only for the manufacture of furniture but every other class of wood-working, it would seem that perfection was nearly or quite arrived at in the construction of the various machines in use, but there is no doubt but ten years hence in visiting these same factories other and more improved machines, that are not now thought of, will be met with that will facilitate the work and still have a tendency to further reduce the cost of production.

A first-class plant then should never be allowed to become old, but should be supplied with new and improved machines from time to time, as fast as the old ones begin to depreciate in quantity and quality of work. In this way only can the manufacturer expect to maintain his place in the front ranks of his business.