

Late Inventions and Appliances

GUARDING PAPER FOR MONEY.

IN constructing the new building for the United States Bureau of Engraving and Printing in Washington, provision has been made for recreation space for the employes on the roof, where it is planned to provide comfortable seats, luncheon tables, etc., as well as space for promenades and games.

These provisions are necessitated because of the rule prohibiting employes from leaving the building or even entering the public parts of it between their arrival at work in the morning and their departure in the evening. This rule is only one of the many precautions the Government employs to prevent the theft or accidental loss, not only of paper money, which is manufactured at the bureau, but also of the special bank paper upon which money is printed.

This paper is so valuable that the plain white sheets are counted, re-counted, checked, sealed and accounted for just as if they were money. Without a scratch or line upon its white surface, the very possession of a single sheet of this paper renders one liable to a fine of \$5000, or to imprisonment for five years, or to both fine and imprisonment.

Made in but one mill, at Dalton, Mass., by a secret process, and under the strict supervision of Government inspectors throughout the entire process of manufacture, every precaution is adopted to prevent a single sheet from falling into the hands of unauthorized persons, who might use it illegally.

Until impressed by the engravings that convert them into money, these sheets are simply high-grade bond paper. Nothing but pure linen rags is used in its manufacture, and these rags are fresh, new and undyed. They are clippings from linen used in the manufacture of shirts, collars, lingerie, and such articles. Being pure white, no bleaching is necessary, and the fibers are spared the action of strong chemicals.

The rags are washed in flowing warm water until every trace of starch, size and filler is removed. They are then placed in a steam cooker, or digester, where they are boiled for a long time, and then pounded or beaten until they are reduced to a pulp. This pulp is then stored in filters from which the water drains off. From this pile of long-fiber pulp a sufficient amount is taken for the day's work, put in grinding machines, where, mixed with pure water, the pulp is reduced to a uniform consistency of 90 per cent water to 10 per cent fiber.

Thus far the manufacture of bank-note paper follows the accepted methods for the manufacture of any high-grade bond paper. At this point, however, begin the secret manipulations which increase its wearing qualities and incorporate the silk fibers, red and blue, which are characteristic of American paper money. The method by which these fibers are incorporated into the texture of the paper is one of the most carefully guarded secrets, known only to a very few trusted and bonded employes of the manufacturer and the Government officials in charge of the work. There are two stripes, or bands, of silk fiber, so placed in the pulp, at some stage of the process of manufacture, that all bank notes cut from the sheet will contain an approximately equal number of these distinctive markings, so disposed as to fall principally on the portions of the note not covered by engraving.

In their finished condition, the sheets, which are 8 1/4 by 13 1/2 inches in size, just large enough for four bills to be printed upon one sheet, are counted by employes of the mill and then a check count is taken by a force of counters of the Treasury Department located at the mill. A thousand sheets are then counted, checked and placed in a package which is sealed with the Government seal, which is not broken until the package is delivered to the Bureau of Engraving and Printing, when the paper is again counted before any work is done upon it.

Clay Workers to Meet.

A conference of brick, tile and other clay workers of Oregon will be held during O. A. C. Farmers' Week, February 1 to 7. Dean Parks, head of the School of Mines, thinks that the importance of the clay products in construction, drainage and other lines justifies a more rapid and economical development of clay products industries.

People with very little energy will quite easily accept for the truth notions which some of us find it impossible to believe.

EMERGENCY AUTO CONTROL.

A DEVICE for stopping an automobile, which can be operated by a passenger in emergencies, such as the fainting or sudden disability of the chauffeur, has been patented by an English inventor. The invention permits the quick stoppage of the car, whether it is going forward or backward, without interfering, however, with the ordinary management of the automobile under normal conditions. Two friction wheels, which are normally held apart by a spring, may be shifted by a push button or by a lever so as to engage the rear wheel and drive a gearing, winding up a chain which pulls the brake. The mechanism is contained in a small case bolted to the frame of the car.

Substitute for Cement.

The following is recommended as a substitute for cement: Make a mixture of slaked lime, linseed oil and cotton fiber, kneading well together to a stiff dough. This should be allowed to set before being exposed.

SELECTING NURSERY STOCK.

BY W. A. LUZADER.

It ought to be the aim of every man with enough ground room to justify it, to plant some useful kinds of fruit trees. In an astonishingly short time they will begin to bear, and if the selection is carefully planned an abundance of wholesome, nutritious fruit is almost always at hand to supply the family table. At least one-half of our diet should be fruit, and the family that is deprived of this luxury is to be pitied.

Young fruit trees are very much like young live stock—they need care and attention; good husbandry, as it were, and no husbandman can expect a bountiful harvest if proper attention is not put forth in caring for the trees. The writer once heard a gray-haired man, who years before had carefully planted the luxuriant fruit trees about his premises, refer to them as "his children" and it was his delight to invite a friend to partake of the luscious fruits of his industry of former years.

There should be at least a tree or two of most of the standard varieties, the fruits of which mature in succession as the season advances, so that each meal may have its varieties of fruit in various forms.

Do not buy diseased trees, buy dependable stock from a dependable nursery; one with a reputation, even if the stock costs a little more than they can be bought for elsewhere. Pay the price for good stock; it will pay big dividends in the end.

The writer not long ago had the good pleasure of visiting a large nursery and carefully noted the care exercised in the grading and selecting of stock. Not a tree that was not healthy and of good form was allowed to pass the inspectors. All trees that did not come up to a high standard of development were discarded and consigned to the brush heap, as food for the flames. Every person who intends to set out some trees should know this nursery. It is the Oregon Nursery Company, Oreno, Or.

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Total.....			490,823

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