

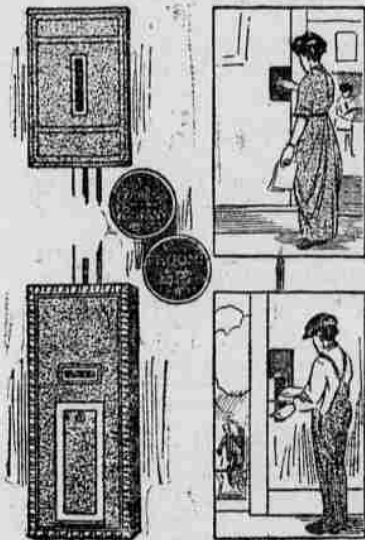
Marvels of Everyday Science

Competent Scientists Apply Their Skill to Problems of Agriculture, Houskeeping, Schools, Business and Governmental Activities.

THE HAMLET OF CLAYTON, population 220, is perhaps the smallest community in Wisconsin, having an independent central station plant generating its own electricity. The electric company has an operating force of one man, and its generating equipment consists of a 12-hp. gas engine belted to a 5-kw. direct-current dynamo. The street lighting load consists of eight incandescent lamps, and commercial lighting is given from dusk until 11 p. m. The Railroad Commission of Wisconsin reports 140 villages in Wisconsin with less than 1,000 population, having electric service utilities. Of these forty-one are of less than 500 population. The total number of electric service utilities in the state is 293. There are seventeen gas or oil engine plants and eighty-two plants operated either wholly or in part by water power. No less than seventy-eight cities and villages are supplied from municipal plants.

New System Calls Express Wagon Promptly.

Each tenant in a new office building in New York is provided with a number of small metal disks or checks, each



Units Used in Novel Call System for Expressmen.

bearing on the one side his room number, and on the reverse, the name of an express company. When he desires to have an expressman call at his office for a package, he deposits a check in a special chute in the elevator wall, and the check drops down to the first floor, where an authorized employe of the building opens the box, records the room number and notifies the proper expressman he is to call at that room. The expressman takes with him the check as evidence of his authority to receive the package.

How Far a Man Can See Distinctly.

Some interesting experiments have been made in the German army with the object of discovering at what distance the recognition of one soldier by another is reliable. For soldiers with good eyes it was found that a person seen once before could be recognized at a distance of 80 feet, while an acquaintance could be recognized at a distance of 300 feet, and an intimate friend or relative, at a distance of 500 feet. The various parts of a man's body can be distinguished and any decided movement can be detected by an expert rifleman at a distance of 300 feet. At 1,800 feet a man appears as a spot on the landscape and cannot usually be seen if he keeps still or if his dress does not contrast with the background. Sailors, hunters and farmers can usually see twice these distances, probably on account of their constant training in making out the nature of distant objects.

Fastener Holds Tongue of Shoe.

An invention by a Canadian is designed to prevent the tongue of a shoe from slipping down out of place. The contrivance consists of a ball-and-socket fastener, the ball portion being on the tongue and fitting into the socket, which in a man's shoe is part of the hook itself, while in a woman's shoe, where the eyelet is employed, a separate socket is inserted.

Pan and Rack for Drying Dishes.

A new device for drying dishes consists simply of a pan, 20 inches square, fitted with a removable wire rack to hold the dishes on edge while draining, and to keep out of the dripping rinse water. After the dishes are washed they are set on edge in the rack, scalding water is poured over them and they are allowed to dry, the idea being to



eliminate the use of the towel for drying. By this method the dishes are both cleaned and sterilized.

Electric Service.

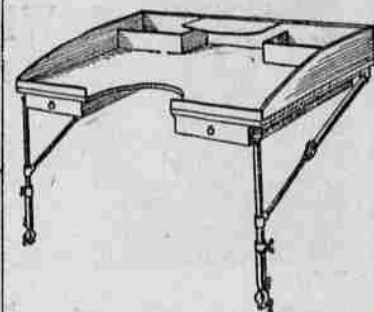
The cost of lighting at the present time averages only from 1 to 2 per cent of the cost of living and is one of the smallest items on the list of regular expenses. If it is really advisable for a state to go into business in order to reduce the cost of living there are other lines in which even a small saving, if accomplished, would amount to more than the entire cost of lighting. For instance, food amounts to 35 to 45 per cent of the cost of living, and a 5 per cent reduction in this item would be the same as the furnishing of light for nothing. Besides this, the price of food is steadily going up while the price of electric light is steadily going down, and that without any great expense to the state.

World's Largest Filter Plant.

The world's largest mechanical filtration plant is under construction at St. Louis to purify the city's water supply from the Mississippi River. The design provides for forty filter units each one of which will be capable of filtering 4,000,000 gallons daily. Each filter box measures 59x28 feet in plan and contains a 30-inch depth of fine sand and a 12-inch depth of gravel. Before entering the filters the water will pass through sedimentation basins where a coagulating chemical will be added.

Bed Desk for an Invalid.

An adjustable desk or table for an invalid or convalescent can be made as shown in the sketch. The arrangement



of the top may be in this or any other manner to suit the maker. The length of the desk should be the same as the width of the bed. Two vertical standards made of two pieces of tubing, one telescoping in the other, are used as the supports. Clamps are attached to the upper ends of the larger, or outside tubes for use in holding the desk at the height set. A brace, also made of two telescoping tubes, is used at each end to adjust the rear part of the desk to a comfortable height for the user. Thumb nuts are used to clamp the desk to the bed.

Concrete Telegraph Poles.

Reinforced concrete telegraph poles along the Pennsylvania Railroad in the vicinity of the New Jersey entrance to the Hudson tunnels proved during the blizzard of March 2 their superiority over the ordinary kind of wooden poles. So severe a load did the ice-coated wires impose upon the concrete poles that the wooden crossarms on some of them were broken; the concrete poles themselves, however, remained intact. Many of the wooden poles, however, were entirely demolished.

Health and Sanitation

BY A PHYSICIAN.

THOSE who have little time for exercise and are compelled to live chiefly within doors must endeavor to obtain—or should have obtained for them as far as possible by employers—by way of compensation, a regular supply of fresh air without draughts, an atmosphere as free from dust and other impurities as can be obtained, with a good supply of light and some artificial warmth when needed.

These necessities granted, cereal foods, such as well made bread in variety and vegetable produce, including fruits, should form a fair portion of the diet consumed, with the addition of eggs and milk if no meat is taken, except in the form of soup, and little other animal food than fish, fowl and game.

On such a dietary, and without alcoholic stimulants, thousands of such workers may enjoy, with very little exercise, far better health and more strength than at present they experience on meat and heavy puddings, beer, baker's bread and cheese.

CREOSOTE is an excellent means of combating chronic constipation without exercising any purgative action, properly so called. The creosote should not be prescribed in pills, capsules, or alcoholic solutions, but pure and in drops. The effective dose is about seven or eight drops taken twice daily, immediately after breakfast and after dinner, in a glass of milk, beer, wine and water, or pure water.

To begin with, one drop of creosote is administered, and that amount increased by one drop daily until the desired effect is obtained. In this way the necessary dose is determined for each case individually. This treatment has to be continued for some time—some months, in fact—and not only overcomes the chronic constipation, but at the same time restores the appetite and braces up the system.

THOUGH smoking cigarettes is really harmful for boys, they smoke not because they are basically bad, but in imitation of their elders. It is the parents' duty to prove to the boy that smoking may prevent his becoming an athlete and that it will affect his chest expansion and muscular development. See to it that he distinguishes the real from the cheap sport and desires to imitate the right kind of elder fellow.

MY CHILDREN never carry umbrellas, writes a friend. Instead each one is provided with a rainproof hood, which when not needed is buttoned into an inside pocket of the overcoat.

If rain comes on the hood is button-

ed on to the buttons sewed under the collar of the coat. When the collar is turned up and the hood drawn over the head the little one is as cozy as possible and takes no harm from the rain.

The hood can be quickly dried afterward. I find it a far better plan than providing umbrellas, which are always getting damaged.

TO PIECE of advice the physician can give will bear more frequent repetition than the pithy sentence, "Breathe deeply." It is a perfectly simple rule of health, yet it is constantly broken.

SPRINKLE chloride of lime, crude oil or kerosene over contents of vaults past when occasion induced the primal

There are two ways to learn to breathe. If our powers of self discipline are poor, as is the case with most insufficient breathers, it is a good plan to join a gymnasium or calisthenic class and learn to use the lungs as a baby learns to use its feet and hands. But remember that lessons in breathing will do no good if the scholar thinks he is absolved from his task except when he is in the class.

A simple method for those who have not time or opportunity to attend a gymnasium is to turn life's daily routine into a continuous discipline in breathing. If the poor breather takes the trouble to watch himself carefully he will find that when he is engaged upon any work that calls for close attention he does not even breathe as deeply as usual; he almost invariably holds his breath. Thus the blood current is vitiated when it ought to be cleansed, and the worker exhausts himself, not so much by his labors as by his neglect.

Draw in deep drafts of air every time you take a breath, and every little while stop everything else and fill your lungs a few times with breaths that test their capacity. You will be surprised to see the improvement that it will make in your general condition.

or garbage boxes. Keep garbage receptacles and open vaults tightly covered, dark and clean daily.

Sprinkle chloride of lime or liquor cresolis compositus over manure piles and other refuse. Keep manure screened if possible. It should be removed at least once a week, and where it cannot, should be boxed in air-tight receptacles.

Pour kerosene into the drains. Clean cuspidors every day. Keep a 5 per cent solution of carbolic acid in them. Don't allow dirt to accumulate in corners, behind doors, back of radiators, under stoves, etc. Allow no decaying matter of any sort to accumulate on or near your premises.

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