

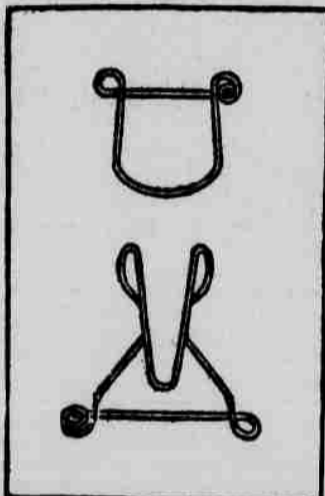
MARVELS OF EVERYDAY SCIENCE

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

THERE is a new bottle stopper which is ideal. It could not be described as an automatic cork, and yet it almost amounts to this. There is a cork, or, rather stopper, arrangement of nickel that has a rubber socket cap. This claps down over the mouth of the bottle from which the original cork has been removed. The stopper fits firmly, for the reason its supporting mechanism is fitted to the neck of the bottle by means of an easily adjusted collar that will fit any size bottle. By pressing a lever at the side the stopper is instantly released.

New Hook and Eye.

A new kind of hook and eye that has some distinct points of difference from the other types has been designed by a Pennsylvania woman. The chief feature of the new article is that except in places where there is great strain it is not necessary to sew either part fast to the clothing. Both hook and eye are equipped with safety pin devices by which they are attached to waist or skirt, and it requires a very short time to affix them.

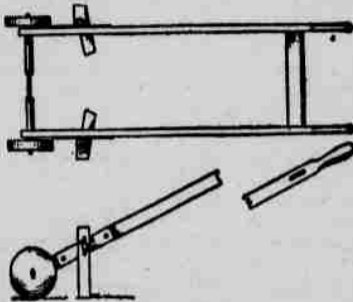


Furthermore, if the positions are not exactly right they can be easily and speedily adjusted without the bother of ripping thread and sewing it over again. If there is too much strain on the pins a few turns of thread will make the parts secure. The throat

of the hook is unusually deep and protects it from being easily disengaged, while a hump, after the style of many modern hooks and eyes, retains the eye in its adjusted position on the hook.

A Garden Cultivator

The cultivator can be constructed of ordinary materials found about any farm, but the stock can be purchased



and the amount required does not make the cost very great. The width of the cultivator will depend on the width of the planted rows of seeds. The wheels and handles are wood, the axle is a 1/2-inch steel rod with 1/2-inch holes drilled near each end for cotters. Two washers are used on each side of a wheel. A piece of 1/2-inch pipe is placed on the axle to keep the handles apart at the lower end, and a tenoned crossbar, mortised in the upper part of the handles, separates them in a like manner.

The blades are made of suitable steel, bent as shown and sharpened on the edge where they touch the ground. The upper ends of the blades are slotted and fastened to the handles with a bolt having a thumb nut.

Fire Insurance Patrol.

In Paris the fire insurance patrols are an important factor in the salvage of goods, both from fire and smoke and from damage by water. Their wagons are equipped as are the American apparatus, with tarpaulins, fire axes and such protective implements, but, in addition, they carry a portable electric searchlight, with a long insulated cable, receiving current from a motor-driven dynamo on the wagon. In penetrating remote interior rooms,

when gas or electric lighting is cut off by the fire, this portable light is of great value in spreading the tarpaulins, removing goods, rescuing injured firemen or similar work.

Phosphorescent Ink Used in Printing.

Printers' ink containing a radium preparation has been manufactured in Germany, by means of which newspapers can be printed that can be read in the dark without other illumination that that contained in the ink itself. The so-called radium colors produce light in tints of green, violet, blue, red, and yellow. The inventor claims that these colors will retain their phosphorescent qualities for 10 to 12 years, may be used for signs, wall decorations, illuminating stairways, as well as for painting ships, boats and aeroplanes. All sorts of materials have been treated with the preparation.

Self-Feathering Oar.

Joseph Schmidt of Chicago has invented a new type of oar which is meant to open itself by the natural movement of the oar back and forth, without any twisting of the wrist. On moving forward through the water the blade boards fold down flat, but on shoving it back against the water the blades open up and catch the water, giving the leverage for forcing the boat forward.

Tester for Electric Lamp.

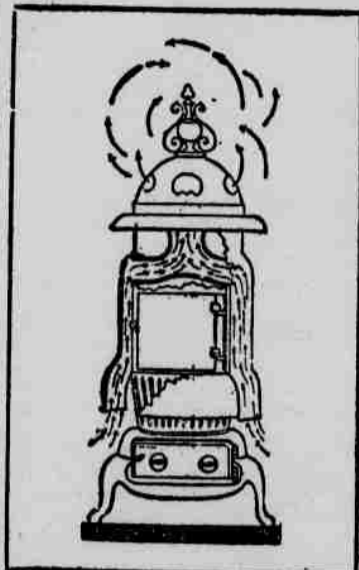
Where a large number of incandescent lamps are used a great deal of time is consumed in turning the lamps into and out of an ordinary socket for testing the filaments to see that they are not broken. The following device eliminates the disadvantages of the threaded socket and effects a great saving in time.

The device consists simply of an ordinary porcelain lamp socket, that has had the inner screw shell removed and the threads hammered out on a piece of five-eighth inch pipe and then replaced. The inside diameter of the shell after it is hammered out should be large enough to permit the threaded base of the lamp to slip into it. Lamps may be rapidly tested by sliding them into this socket and there is no more likelihood of a short

being produced on the line than there was before the socket was changed.

Stove Using Hot Air Pipes.

The heating stove shown in the illustration in a manner combines the advantages both of the ordinary stove, due to radiation, and of the furnace, due to the circulation of heated air.



Air is drawn from the room into pipes on both sides of the stove, is heated to a high temperature and is then discharged from the top of the stove either into the room in which the stove is located or into pipes leading to the upper floor.

Light From Indoor Bicycle.

A French inventor has devised a plan for using his wife's surplus energy to make light. The invention consists of a sort of "home trainer," of the bicycle order, such as are used in gymnasiums, and a small dynamo and storage battery are connected up with it. This machine has a 12-volt, 25-ampere storage battery, and will furnish light enough for a good-sized home. There is no reason why anyone should not get up a home lighting plant of this sort for himself, as the apparatus is not at all complicated.

Health and Sanitation

BY A PHYSICIAN

BREAD is the chief of the force foods. These include potatoes, dry beans, corn, rice, breakfast foods and cereals, in fact, every product of the grains. This great class of food supplies the body with fuel both to do muscular work and to maintain bodily warmth, and hence the necessity for this class of food is quite apparent. No one can enjoy even a moderate degree of vigor and energy without his daily portion of force food, and for the most part this is taken in the form of bread.

While a certain amount of bread is necessary to the welfare of the body, an excess of it is a decided detriment. Today overeating on bread and similar foods is far more common than overeating on any or all other classes of food. In fact, it has become the universal habit. With the advent of labor-saving machinery and steam-heated houses, offices and factories the people are doing less manual labor and they are less exposed to the elements. They need far less force food. But, except in occasional instances, there is no decrease in the intake of force food. The man that sits at the desk eats as much bread as the one that works hard out of doors.

In occasional instances the excess of bread is digested and does harm either by overworking the organs and tissues in burning it up, or by burdening the body with useless fat. Usually, however, the excess of bread remains undigested in the bowels, where it ferments and fills the bowels with gases and poisons. This fermentation is frequently a cause for chronic disorders of the stomach and bowels. These poisons, formed in the bowels from undigested, unused breads, quickly find their way into the blood where they have an effect upon every part of the body. Through the constant poisoning of the body is laid the basis for many chronic diseases, including hardening of the arteries. Furthermore, as a result of

the constant poisoning, the natural defenses of the body are lowered and the way is opened for various acute diseases.

DANGERS that often lurk in the hair of house cats and dogs is emphasized by an English physician who makes an official report of serious consequences that followed the practice of a child in a prominent family who was permitted to fondle a cat. The report follows:

"A calf had some skin disease. The family cat contracted it from the calf. The cat infected the child, who used to carry the cat about and play with it. The child is recovering under treatment, but is suffering from a severe skin disease; and I quote this case as a warning to those who are in the habit of letting dogs and cats be carried about or fondled by children. The practice is certainly not free from danger of infection with nasty diseases, and not only skin diseases as in the case just cited."

SULPHUR is a good, safe corrective for blistered lips, and glycerin and borax should be applied locally. Give the child so afflicted half a teaspoonful of flowers of sulphur in a dessert-spoonful of molasses before breakfast. It is an old fashioned remedy, but most effective. Mix half an ounce of borax with two ounces of glycerin and smear on the tongue and lips where blistered.

THE rules of health for the hair, so far as we know them, are few and brief. Brush the hair thoroughly at least once a day, but let the scalp alone. Let the brushing be thorough and preferably with two brushes, which you may use as if you were currying a race horse to get him into show condition. Keep the hair thoroughly clean in this way, and the scalp will largely take care of itself.

Wash the hair as often as may be needed for cleanliness, which, as a rule, for men will be once a week, and

for women about half as often. Avoid using too strong soaps, strong alkalis, such as ammonia and soda, and too hot water, as all these take out much of the natural lubricant, or oil, of the hair and leave it dry and harsh.

THERE is no safe and sane easy way to get thin if you are fat. It takes good hard physical exercise and plenty of it, refraining from rich foods and from long sleeping hours.

COLDS and chills, however slight, must not be neglected. "Only a cold," we say and try to still anxiety, but it must be remembered that bronchitis and pneumonia frequently follow close on the footsteps of an apparently simple cold.

At the first sign of a chill give the little one an aperient, then put him in a warm bath with a tablespoonful of mustard in it. Next wrap him warmly in a blanket and give a hot breakfastcupful of nourishing broth; then pop him into a warm bed. If the temperature is normal and there is no sore throat you need not worry. Baby will probably be himself again in the morning.

Children who are susceptible to colds need cod liver oil. The following is a good way to give it them: Thoroughly beat two new laid eggs, add half a teaspoonful of cod liver oil, stir well, then mix in the same quantity of honey. Add slowly, stirring all the time, the juice of half a lemon. Give the little ones a teaspoonful or two night and morning during the treacherous winds. It will strengthen the constitution, soothe the chest and keep the cold out, and this is a grand recommendation—it is a nutritive food, not a medicine.

Farmers Hurt by Tariff

Tuesday's dailies announce the news that the steamer Empress of Russia brought over 6,792,360 Chinese eggs for consignment to different points in the United States. When the Republican tariff of 5 cents a dozen was in force these dirty Chinese eggs could not be brought here to compete with our home produce. But this is how the new tariff is benefiting the poultryman and the farmers.—Island County Times.

tryman and the farmers.—Island County Times.

50,000 Acres of Level Valley Land For Sale in Harney Valley, Harney County, Oregon, At Prices Ranging From \$20.00 to \$30.00 Per Acre

Terms, ten per cent cash and the balance in nine equal annual payments, payable on or before maturity, with interest at six per cent. Deep and productive soil, no rock, no gravel. Yields magnificent crops of wheat, barley, rye, oats, flax, field peas, field roots, alfalfa, meadow grasses, fruits and garden truck. Excellent and abundant water at from ten to fifteen feet.

An unsurpassed opportunity for those looking for a home. Lack of railroad transportation has up to the present time kept this great valley from being largely brought under cultivation; however, the Oregon & Eastern Railway Company is now engaged in constructing a line into the valley, and the road will be completed in the very near future.

For booklet containing further information, address

OREGON & WESTERN COLONIZATION CO.,
268 Stark St., Portland, Ore.

A course in Bookkeeping, Short-hand, Telegraphy at the BEHNKE-WALKER, a school of the highest class, is an insurance policy against want.

We not only prepare young men for business careers, and young women to be stenographers and secretaries, but place them in good positions as soon as competent, with the leading business firms of Portland and the Northwest. Send for catalog.

Behnke Walker
BUSINESS COLLEGE
Portland, Oregon.