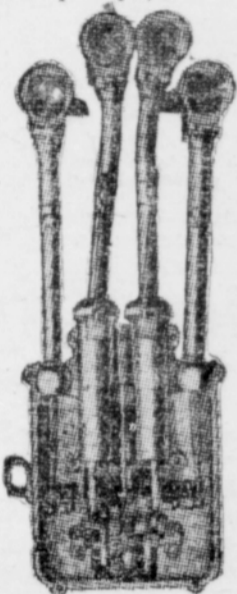


Inventions and Appliances

NEW MILKING MACHINE.

A NEW milking machine, significantly called "Manus" (the hand), has recently been successfully tried out in Sweden and is now in use on several dairy farms. As may be seen in the illustration, the apparatus really does bear some resemblance to a hand, and the machine, working on the pressure principle, does its work in



a similar manner to hand milking. The four fingers are operated by gears and cams which give them in pairs an alternating motion, forward and back, and they are also jointed to give them an up-and-down motion to exert pressure on the udder, regulated by adjustable springs. The apparatus is fastened to the cow by two belts, and power is transmitted to it by a flexible shaft through a friction disk, driven by a line shaft along the stalls.

MOTORCYCLE SHIELD.

THE combination wind shield and mud guard for motorcyclists is a recent invention which promises to be popular with cyclists who travel in all kinds of weather, and mail carriers, delivery men, etc., who want to go about regardless of rain or snow. The shield, which is in the shape of a "V," is adjustable, making it possible to get the maximum amount of use from the device regardless of which way the wind is blowing. At the same time it protects the leg of the driver from weather both overhead and under tire, keeping off rain and mud splashes.

USE CEMENT IN SETTING POSTS.

WOODEN POSTS of any kind, if set in the ordinary way, are inclined to work loose, and sometimes begin to rot in a short time. Both these troubles can be avoided if cement is used in their setting.

Make the hole as for an ordinary setting, but instead of filling in with the dirt, pour soft cement around the post until the hole is full. This makes a firmer setting for the post, and is protection against rotting.

CAMP STOVES.

THE CAMP stoves illustrated are different forms of the same idea.

Both can be taken apart and laid flat for packing. Iron rods, $\frac{1}{2}$ inch in diameter, are used for the legs. They are sharpened at the lower end so that they may be easily driven into the ground. The rods of the one shown in the first illustration are bent in the form of a hook at the upper end, and two pieces of light tire iron, with holes



Camp-Stove Top, Either Solid or Pierced, Supported on Rods at the Corners.

in either end, are hung on these hooks. Across these supports are laid other pieces of the tire iron. In the other stove, the rods have a large head and are slipped through holes in the four corners of the piece of heavy sheet iron used for the top. A cotter is slipped through a hole in each rod just below the top, to hold the latter in place.

THE SEESAW TRICK.

THIS is not exactly a new discovery, but there are many who have never made the interesting experiment. Take two heated pins and stick them into the center of a candle at right angles to the wick, which should be left exposed at both ends. Then rest the pins on the edges of two glasses and trim the candle to balance.

Light the wicks. Light the wicks, and beyond the flames at each end by means of a piece of wire fasten two little figures with their joints hinged.

Now as the candle begins to melt, a drop of grease will fall from one end, and that end of the candle will rise a little above the other. Then a drop will fall from the opposite end and a gentle oscillation will begin, which gradually increases in speed until the little figures at the end will perform the most surprising antics at their game of seesaw.

NEW WAY TO RING CHIMES.

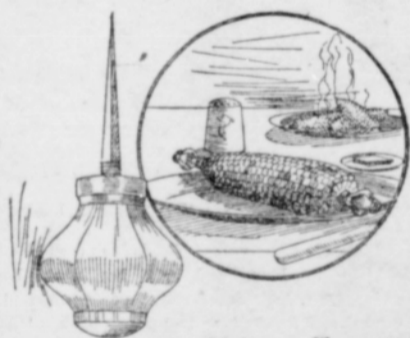
THE GREAT BELLS in the church towers are now being rung by electricity, a device having been invented by means of which the pressing of a button in the sacristy starts the chimes. The bells continue to ring until stopped by the pressure of a second button.

For more than two years, says a New York writer, Mr. Robischung, the inventor of the device, has been working on the model of this invention. The idea was first suggested by the rector of the Holy Redeemer Church, who is regarded as an expert in applied science.

The five bells weigh almost six tons. The inventor first tried the experiment of ringing a bell weighing from 20 to 30 pounds.

A GREEN-CORN HOLDER.

NEAT and attractive green-corn holders for table use can be made of small-sized glass drawer knobs, having a bolt $\frac{1}{2}$ inch in length. The bolt head is cut off with a hacksaw, and its body is filed to make four sides running to a taper, leaving



The Glass Knobs Make a Clean and Sanitary Holder for the Ear of Corn.

enough threads to secure it in the knob. The threads are smeared with white lead, then it is screwed into the knob and sufficient time allowed for the lead to set before using it.

A pair of knobs are required for each ear of corn served. The square bolt end will hold the ear securely while the kernels are eaten from the cob.

TO REMOVE MOULD.

WHEN DAMPNESS in a cellar or basement becomes objectionable it may be removed by anhydrous calcium chloride. One pound of the salt is sufficient for a large cellar. It may be placed in old tin cans. The moisture absorbed from the air collects in the cans. This, however, is not poured away, but is evaporated on a strong fire, and may be used again.

Unslacked lime is best suited to exterminate mould. It is blown, in the shape of a fine powder, into the crevices and on the walls, which must be damp.

"RATTLE" TO FOOL SOLDIERS.

A MACHINE has been invented for imitating the noise of an aeroplane engine, with the object of alarming hostile troops. The Servian and Montenegrin soldiers used a rattle during the Balkan war to imitate machine gun fire.

Mildew on articles of clothing may be removed by soaking the articles in buttermilk.

Health and Sanitation

STOREROOM IN THE HOME.

THE STOREROOM for food may be the tiny closet of the flat dweller in a city or the cellar of the village or farm house. In the last case it often has a commercial as well as a household value, since it keeps fruits and vegetables in good condition until marketed, as well as until they are needed for the home table; but in any case, it should be dry, clean and regularly aired. It may be well to describe a cellar that is badly built and carelessly kept, in order to see what should be exactly opposite conditions.

A Disease-Breeding Cellar.

Such a cellar may be dug in wet ground, without sufficient drainage of the subsoil; it may even be in contact with open sewers or drains which have been proved in certain cases to contain specific organisms capable of producing disease. In many cases the cellar built against an earth wall is not protected from dampness by a layer of moisture-proof cement, and the water may stand in drops on its surface. Again, it may be dug to such an extent below the surface of the ground that the windows are wholly inadequate for lighting and ventilation.

It may have an earthen floor, or one of badly matched boards impossible to keep clean. It will probably have a musty odor, proof positive that mold plants are there and ready to attack any fruit and vegetables stored on its shelves or in its dirty bins. If, in addition to this faulty construction, the cellar is badly kept, bits of rotting fruit and vegetables being left about, not only will these conditions favor the spoiling of food, but they may prove injurious to the health of the family living above stairs.

A Cellar for Health.

A cellar that meets modern requirements must be dug in ground that is well-drained, either naturally or by artificial means. It must be remembered that a cellar is not, first of all, a storeroom. It is an essential part of a well-planned house, especially necessary in our northern states, in helping to keep an equable temperature, and if its walls and floors are what they should be it prevents dampness and ground air from rising into the house.

If the house is set close to the ground the cellar windows must be wide enough to compensate for their lack of height, and must be set opposite each other in order to insure good draft. A method that is sometimes used is to dig out a space in front of a window, making a little area which, laid in either brick or stone, may be whitewashed and reflect light into the cellar; it also allows of sinking the cellar windows deeper and obtaining better ventilation.

Cement and Whitewash Necessary.

The walls and floors of the cellar should be constructed of cement to keep out moisture, and the walls and ceilings should be whitewashed twice a year. Even if a cellar is kept very clean, the earthy smell of vegetables that arises from it when it is well stocked is not agreeable—another reason for good ventilation and frequent airing. A separate room may be partitioned off from the cellar in one corner for storage purposes.

This can then be kept darker than one would wish to keep the rest of the cellar. Such a room must, of course, be aired now and then. In this storage room should be placed a movable safe with wire netting sides and a swinging shelf; and broad shelves should be built high enough so that barrels may be stored under them.

Tiles for Floor and Walls.

The writer once saw in Holland a cellar that met every possible requirement of hygiene. The floors and side walls were of closely matched tiles laid in cement, making it as tight as a dish and as easily cleaned. It was not large, but its wall space was so utilized that it furnished ample storage facilities for a large restaurant.

HEALTH OF THE FARM.

MEDICAL MEN tell us that the farm is the healthiest abode of man. They base their assertions chiefly on the pure air and exercise that char-

acterize the outdoor rural life, yet through ignorance or indifference the home and life on the farm may be quite the opposite of healthful.

As a rule, little or no attention is given to the ventilation of the home. The foul air, stagnant with every variety of disease germ, is breathed and rebreathed, and if by chance a window remains open, it is hastily closed for fear the inmates may "catch cold." This is especially true during the winter season. In summer the humidity of the atmosphere will readily cause doors and windows to remain wide open. A good ventilating system is very essential to the health of the farmer and his family, especially the wife and daughters, who are deprived of the healthful outdoor work of the men and boys. If there is a fireplace in the home, it should not be closed, as the foul air of the room will escape through this opening. Provision should also be made for the entrance of fresh air. The bedroom should receive special attention in ventilation.

Another, and a very great enemy of health, is personal uncleanness. The mistaken idea exists among some farmers that neatness and cleanliness give them too much of a "city air." There are persons living today who have not taken a bath since they discarded the garments of infancy. The face and hands of this class are the only parts of the body that are suffered to come in contact with soap and water, and the face at least only on rare occasions. Soiled clothes are worn without change till nothing but the patient skill and needle of the mother or wife will save them from the ragman's cart.

If there is anyone that needs a bath at least once a day, and especially in summer (and we all do), it is the farmer. He works out in the hot sun all day, perspires freely, and the dust of the fields clings to his moist clothes; but it does not stop there—it penetrates to the skin and clogs up the millions of tiny pores of the body, causing diseases. Some people cannot afford an elaborate system of bath fixtures, but an ordinary hand-basin will fill the requirements of a bath tub if necessary. "Cleanliness is next to Godliness."

It is strange that a man upon whom all the nation depends for its food supply should consent to "stuff" his stomach with such indigestible matter as some farmers eat. Probably the most conspicuous of this class are fried ham, fried potatoes and eggs prepared in like manner. These form very appetizing dishes, and are all right in their way as long as they don't find an egress into the stomach. Why not substitute fruit, vegetables and the like. Potatoes and eggs, when properly prepared, are very nourishing, but frying renders food unwholesome and is even less economical than boiling or stewing. Why not keep some of the milk that is sent to the creamery. It can also be converted into butter and cheese. If the food we take into our bodies is unhealthful, can we expect to be healthy?

Of exercise, little need be said for most farmers, have more than necessary. A careful observance of the laws of nature will decrease the doctor bill, provide us with health and happiness and eventually may serve to plant within the hearts of our boys and girls a greater love for the healthful life of the farm as compared to that of the city.

TAN AN EVIDENCE OF HEALTH.

THE TANNED face is an indication of health. If one has failed to acquire this brown after having spent his vacation in the open air, exposed to the sun and wind, then there is something wrong with the health. The dark pigmentation in the skin is the result of the sun burning the hemoglobin, or red blood stuff, out of the tissue units and depositing them in the upper layers of the skin. The depth of brown that may be acquired is the measure of one's vitality, and a failure to acquire a good color is proof that one should look to his health. During the present summer vacation season, just keep this in mind, and note what the index tells regarding your physical condition.

To freshen lemons which have become hardened, soak them for a short time in hot water.