

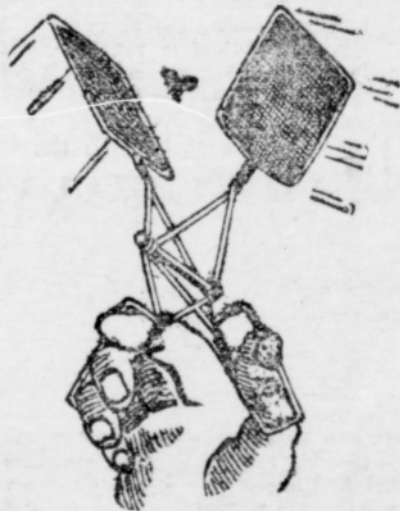
## Inventions and Appliances

### FARMING FOR PEARLS IS PROFITABLE.

A RECENT decision of the U. S. Bureau of Fisheries to start breeding pearl mussels by artificial means in the valley of the Cumberland River, opens up to the public a new and very profitable industry. Investigations conducted over a long period by the scientific staff of the bureau has demonstrated that fresh-water pearls are produced by many varieties of mussels through the action of certain small parasitic worms, which bore through the shell and set up an irritation on the flesh of the mussel. In self-defense the mussel secretes an excess of pearl-forming material and encysts the parasite, a pearl resulting. Thousands of these fresh water pearls have been carefully cut open by government investigators and within each one was found, when examined under a powerful microscope, the nucleus containing one of these little worms. Mussels breed rapidly, the eggs being cast in small packets, which after a few days break, and thousands of tiny larvae swim about, attaching themselves to the gills of fish, from which after 70 days they cast loose and sink to the bottom of the river, beginning there their life as shellfish. It is only necessary to obtain from the government a consignment of mussel eggs, distribute them in a stream well stocked with fish, and a natural mussel farm results. Then a number of mussels infected with the pearl-forming parasite must be obtained, planted in the bed of the stream, and the farm begins to be productive.

### NEW FLY SWATTER.

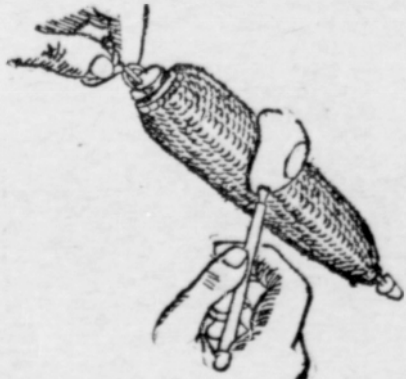
IT HAS been said there is no swatter that a clever fly cannot escape, but the one shown here, the invention of a Kansas man, is a new kind. It



works so fast that the fly, with all its eyes, cannot see the finish coming in time to dodge. All that is necessary is to wait until the fly comes along—then slap and he is a dead one.

### FOR BUTTERING CORN.

TO MAKE easier the pleasure of eating "roasting ears," the great American summer delicacy, a New York man has invented a buttering spoon. It consists of a bowl with a long handle, the bowl shaped to fit the curves of the average cob of corn and having



a perforated lid. The butter is placed in the bowl, which is run slowly along the surface of the hot corn and the butter melting, oozes through the perforations and is spread evenly over the corn.

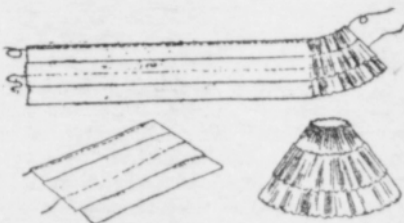
### PAPER SHADES FOR ELECTRIC-GLOBES.

THE appearance of an electric-light globe can be very prettily improved by making a shade of crepe paper of any desired color for each one. Canary-colored crepe produces a soft, mellow affect. Pale blue, yellow, red and,

in fact, all the colors can be used, making a very pleasing variety.

The body of the shade is made of a piece of paper about 5½ inches wide and 3½ feet long. The width will vary with the length of the globe to be covered, and it is best to have it full, as the edge can be trimmed even with the lower end of the globe afterward. Another piece of the same color is cut 2½ inches wide and of the same length. This piece makes the ruffle.

The smaller piece is placed on the larger centrally, and both are stitched



together with a running stitch, using a needle and cotton thread. A plain running stitch is also made ¼ of an inch from one edge of the larger strip. The material is gathered along both threads. This operation makes the material shrink in length. Wrap it around the globe, pulling the threads taut so that the ends of the paper will just meet. Tie the threads and clip off the extending ends. If the paper extends beyond the end of the globe, trim it off with the shears. Ruffle the two edges of the narrow strip and the lower edge of the larger one. This operation is simply stretching the edge of the crepe to cause it to stand out.

### A NEW RIFLE GRENADE.

THE rifle grenade has been adopted in some countries as an integral part of the soldier's equipment, and is likely to come into general use among the armies of the world. It is expected that it will to a great extent supplant the use of the bayonet and do away with the necessity for close-quarter fighting, as it will provide a means for attacking trenches and covered positions and rendering them untenable without recourse to hand-to-hand combat. The grenades can be fired singly or in volleys and the effect of volley firing with such weapons would probably be astounding. In hilly country especially, where the bringing into action of field pieces is extremely difficult, the use of the grenade will prove of incalculable benefit to the troops equipped with it.

### DEMONSTRATE VACUUM CLEANER ON MULE'S HIDE.

THE electric service company at Scranton, Pa., recently attracted and held a large crowd of people in front of its offices by demonstrating the effectiveness of a vacuum cleaner on the coal-begrimed hide of a mine mule. The animal, having probably never experienced a similar sensation before, expressed its surprise when the vacuum cleaner was put in operation by delivering a far-sounding "hee-haw." The noise soon attracted a crowd, which watched the demonstration and probably carried the news to more quarters than any other form of advertising might have done.

### STREET CAR USED TO STRETCH WIRE FENCE.

LAND adjacent to a suburban car line, near Reno, Nev., was fenced quickly by utilizing one of the electric cars to stretch the wires, recently. The poles were placed in position, and the fencing, in sections, was then fastened to the posts, the car stretching it as needed, and the fence was completed as fast as the staples could be driven into the posts. The job was done in record time, as the car carried the material and men employed.

### CLOTHES CONSIDERED.

MODERN clothes are expensive, unhygienic, and sometimes suggestive. What an advance it would be if we could get back to the unchanging, artistic costume of the Greeks, 2000 years ago, or to that of some of the Oriental races of today, instead of constantly adopting changing styles, one more inartistic than the other. Men's clothing does not run to extremes in our age, but men burden themselves with unnecessary clothing more than do women.

## Health and Sanitation

### MENTAL WORK DURING A FAST.

IT is a curious fact that the nervous system is in certain ways independent of the rest of the body; and that instead being very fragile, our nerves are really highly resistant.

At Wesleyan University the experiment was made of putting men into cages and measuring the food, air and water that they used, and the waste products that their bodies threw off. It was found that the slightest muscular exertion had a decided effect on the relation between what the body took in and what it threw off, but that the addition of mental to muscular work made no difference at all. If a student took a written examination in the cage, he used the same energy that he would have used in going through the movements of writing and doing no thinking whatever.

Recently a similar evidence has been obtained at the Carnegie Nutrition Laboratory of Boston. A man of 40 underwent a fast of thirty-one days, during which he took absolutely nothing but water. At 5 o'clock in the afternoon of every day during the fast, as well as on the two days that preceded it and the day that followed it, the man submitted to certain tests of muscular strength and of mental power. As might have been expected, he grew physically weaker. Who would not have expected him to show a falling off in mental ability as well? Yet this man could repeat ten disconnected words, immediately after they had been pronounced to him, more correctly at the end of the fasting period than at its beginning, and he could also recall the words after longer intervals as the fasting went on. His power of attention was tested by requiring him to cross out all the A's in a printed passage, and his speed increased during the fast, while his accuracy remained as high as it had been at the beginning. When he was given a word and required to speak the first word it suggested to him, the promptness of his response increased as the fast became more prolonged. In short, he performed all the mental tests either as well or better as the fast proceeded. The improvement was probably due to the daily practice he got, but it is wonderful that the mind should work during so long a period, as well without food as with it.

### IMMUNITY FROM DISEASE.

PERFECT HEALTH is the best possible immunity from disease. Millions of germs are breathed in with every breath we take, but their injurious effect is nullified so long as the health is good. Many of the germs so taken are necessary for health, others would be disease breeders if they fell upon the proper soil. The habit of deep breathing that the blood may be purified with the oxygen thus obtained, at the same time keeping the bowels open, with such articles of diet as contribute to the manufacture of good red blood, will go a long way towards making a person immune from ordinary diseases. When an epidemic is around the persons first affected are those with debilitated blood, otherwise everybody would go down together. So little is necessary for the production of good healthy blood that there is little excuse for any person having anything else, and with such

a healthy condition there is the slightest probability of acquiring any of the diseases that are so frequent in some communities. The responsibility is largely an individual one, and if everybody exercised an intelligent supervision of his habits and his surroundings there would be practically no reason for the existence of boards of health or any other such restrictive measures.

### NEW USE FOR POTATO JUICE.

POTATO juice as a remedy for sprains, lumbago, gout, rheumatism and bruises is recommended by Dr. Heaton C. Howard of London. He cites numerous cases in his own practice in which the pain has been relieved quickly, sometimes by the first application, and the fluid that has exuded into the joint or the membranes has been absorbed within a few days.

Potato juice is used as an ointment, a liniment or a plaster. The raw potatoes are squeezed in a hydraulic press; the starch and nitrogenous matter are removed and the juice is boiled down until it is made five times as strong as when fresh; glycerine is added to preserve it.

### NATURE'S SIGNALS.

NATURE tells when the stomach is ready to digest food. Her signal is hunger—real hunger, not mere appetite. Never eat when you are not really hungry. Miss a meal, or several meals. Instead of eating, sip slowly a glass of cool water. In this way you will get real strength and health, whereas, otherwise you will become a chronic invalid, or be seized with some acute disease that under medical malpractice may readily carry you off.

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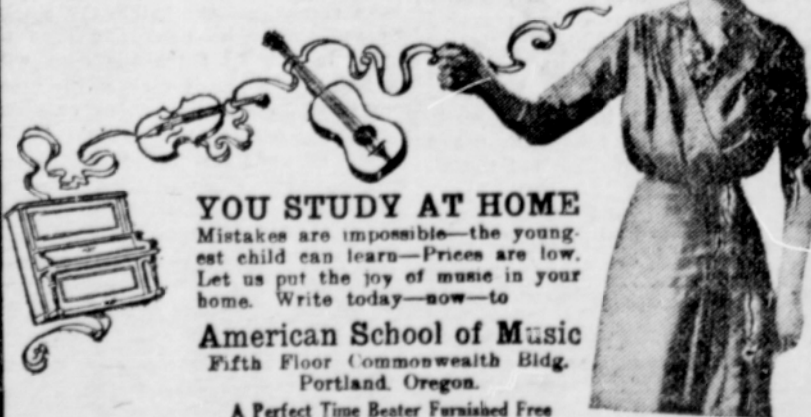
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