

Inventions and Appliances

WALKS ON WATER.

AUGUST SOMMERFELD, 62 years old, of Stanton, Mo., has invented an inflated rubber life preserver which enables him to walk in or on the water when it is properly adjusted to his body. It is made in two semi-circular sections, is very thin at the lower edge where it fits closely to the body, and widens upward and under the arms. When it is inflated it is seven inches thick and enables him to float upright in the water.

To go with this preserver are propellers which Sommerfeld fastens to his ankles, enabling him to walk in the water as well as to float. They are made of aluminum and consists of several wings, which, when he lifts his foot, fold closely against the ankle, offering no resistance. But when he pushes downward and backward with his foot the wings spread far enough to form a cup which catches the water and propels him along.

With this equipment Sommerfeld can step into the water, shoulder his gun, hunt ducks up stream or down, slipping quietly upon the birds because they do not recognize that he is a man, and when he has shot them, walk to where they float on the water and put them in his game bag. Or he can reach the best fishing places without the use of a boat.

When he is tired or hungry he turns his face down stream and drifts leisurely along while he eats his luncheon from the knapsack on his shoulder, takes a drink of his favorite brew and then smokes his after-dinner cigar. Sommerfeld recently gave practical demonstrations of his new invention at Stanton and Sullivan, Mo.

FAN OPERATES WITHOUT USE OF ELECTRICITY.

WORKING without electricity or springs, a fan has been constructed for home and office use which produces a pleasant, cool breeze, without noise and at an operating cost of one-half cent an hour. Motive power is generated by the rapid expansion of hot air. Each stroke of a small piston forces air into a cylinder where by the heat of an alcohol flame it is expanded, developing sufficient force to drive the fan blades with speed. The stand is slightly less than 1½ feet high and weighs 8 pounds. It can be moved from one position to another without trouble, and the fan, it is claimed, will run without need of repairs or danger of getting out of order.

SOAP WEED BECOMES VALUABLE.

THE SOAP WEED harvest is on in the former railroadless counties on the new Cimarron Valley line of the Santa Fe. The soap weed industry is a new thing in southwestern Kansas and is netting farmers considerable profit. St. Louis buyers ordered twenty-five car loads of the baled weed a few days ago and night shifts of men are being worked in the southwestern counties in an effort to fill the order before the wheat harvest sets in in full blast.

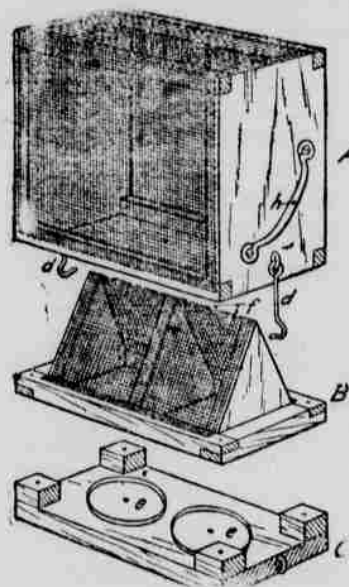
The weeds are gathered from the prairie and hauled to Hugoton, Elkhart, Satanta and Sublette, where they are baled for shipping. Haskell county is the main producer. The weed is used by eastern soap manufacturers. Its commercial value was first recognized in southwestern Kansas last year.

Homemade Fly-Trap for 20 Cents

A HOME MADE flytrap, marked "fragile," with stamps and addressed the United States Department of Agriculture by parcel post from South Carolina. A letter arriving at the same time from one of the department's farm demonstration agents explains how similar traps are being made in that section at a cost of from 10 to 20 cents, and have proved a most successful aid in the work of home sanitation throughout that section. The trap has been baited and tried out with success in the department.

Description of Trap.

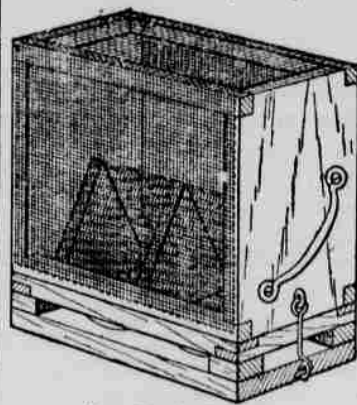
"These traps can be made any size to suit," says the department's agent, "but the most popular size in my work is 16 inches long, 12 inches high and 8 inches wide. I also make



Three Sections of Homemade Flytrap.

some as large as 24 inches long, 18 inches high and 12 inches wide. The material for these traps costs from 10 to 20 cents, and can be put together by anyone handy with tools in a short while." The trap may be baited with sour milk, a piece of banana, a fruit skin, or similar substance. This should be removed at night or it will attract ants. At the same time, the flies which have been caught should be killed by pouring hot water over the trap or leaving it immersed in water until the flies are dead.

The flytrap is made in three distinct parts (A, B and C) that may be detached from one another by unfastening the hooks (d) that hold them together at either end. The trap is unhooked in order to place the bait on the bottom section (c). The bait is placed on two pieces of tin (e) tacked to this bottom section. In the sample trap that was forwarded to the department these pieces of tin were circular tops of paint or



Trap Ready For Use.

milk cans, which can be removed by prying up with a knife.

The middle section (B) of the trap consists of a screen covered frame that resembles a small gable roof through which there are six holes (f) to let the flies into the uppermost section (A), which is merely the screened-in cage that is set down over the other two parts (B and C).

The handle (h), of course, is unnecessary, but will be found convenient when the trap is immersed in water to kill the flies.

The department's agents in their demonstration visits to the different farms take the flytraps with them. They interest the housewife in them, and set one up in her home to show what it can accomplish. The results of the demonstrations have been so successful that almost every farmer who sees the trap wants one, and many of them have been putting traps together in accordance with the instructions of the agent.

The traps have done much to arouse the interest of the rural population of South Carolina in fly extermination, the necessity for which is no always felt as strongly on the farm as it is in the crowded city, where these vermin make themselves more obnoxious.

Health and Sanitation

FOOD PRESERVATION.

THE RAPIDITY with which food will spoil in the summer time makes of interest all simple methods of preservation. Chemicals are not desired, though such simple things as boric acid and benzoate of soda have been much used in the past, but have been tabooed by the health authorities. There is one way which is left against which there can be no criticism, and that is by the sun. To dry articles of food on racks exposed to the sun and air, as is done in the preservation of apricots and in the manufacture of raisins, would be too slow for the preservation of foods. A simple apparatus can, however, be made by almost anyone which will do the work. The point is to get as much sunlight focused upon the article to be preserved as possible. A box made with three sides of glass which come together at the top in an apex with the fourth side of solid wood painted white and the bottom also painted white will do the work. The sun's rays reflected against the white woodwork develop sufficient heat to sterilize articles that may be placed in the box. Vegetables, or fruits, containing much water will develop considerable steam so that some arrangement must be made, like a valve at the top, to let off some of the vapor. Many of the fruits and vegetables can be completely dried in one day and will become brittle. To restore them to an eatable condition it is only necessary to soak them in water, as all of the fruit juices and nutritious properties have been retained in the drying process. Even meats, such as chicken, can be also preserved in the same way, although it may be necessary to retain them in the box for more than one day. With such a drier there is no opportunity of flies or dust or anything else to contaminate the articles being preserved, so that there is no necessity of keeping close watch upon the apparatus. The economy and convenience of such a process will be apparent to anyone. Try it and see what result you get.

TRAMPING AND THE PARCEL POST.

THERE are many people who would like to spend their summer vacation tramping about the country were it not that they have to carry too much luggage in order to have the desired clean clothing that a tramp in the dust makes desirable. Here is where the parcel post comes in for a good turn. If a pedestrian tour be laid out so as to embrace postoffices at stated times, soiled clothings can be mailed home and clean clothing mailed out. This necessitates a regular program, but that would not matter so long as the desired object be accomplished.

If a person proposes a pedestrian tour he should begin to get his walking muscles toughened up before he starts on the regular tramp, else he will find himself about the second day so lame that he will be tempted to give up the expedition. Begin a couple of weeks or more in advance with a walk of five miles, more or less—whatever can be done comfortably—and keep increasing the distance until ten or more miles can be done daily without any discomfort. This exercise may be taken without any baggage. When ten miles can be easily done then you are ready for the tramp. But it must be done easily or there will be no pleasure. The baggage that will be taken will make the first day the hardest, and it will be well not to try for ten miles, but stop when the muscles begin to feel tired. After a day or two it will be easy to increase the daily mileage, and then the real pleasure of the expedition will begin. A lunch eaten by the side of a brook and washed down with a copious draught of water will be found more refreshing and satisfying than the ordinary meal at home, while a dinner of trout broiled immediately after being caught will go as near to the right spot as anything that has ever been eaten. A sleep in the open will complete the day and make the tramping feel, if it be his first experience, as if he had never known the joy of living. A couple of weeks spent in this way has more real re-

cuperation in it for the indoor worker than anything else that can be devised. If he be interested in botany, mineralogy or "bugs," so much the better, as he will have the opportunity to get in considerable study while resting at midday or after the day's advance has been completed.

Congenial companions are wanted for such a vacation. Otherwise what is a pleasure to one will be irksome to another, and unless there be a good deal of charitableness the tramping will be likely to break into two camps—one the students and the other the pleasure seekers.

POLLUTED WATER.

EVERYONE knows and admits the necessity for pure water. When you are away from home and are not sure of the character of the water supply it would not be a bad idea to make a few simple tests. The results may prove that it was decidedly worth while to take the trouble, says the New York Sun. Here are two tests that you can make very easily:

Fill a tumbler with water, drop in a lump of white sugar, cover it with a saucer and let it stand overnight on the bricks at the side of the range, on the kitchen mantelpiece, or, in fact, anywhere the temperature will not sink below 60 degrees. If next morning the contents are clear the water is pure. If, on the other hand, the liquid is cloudy some source of contamination is indisputably proved.

The second test is to drop a few grains of permanganate of potash into a tumbler of water, cover and let it stand for an hour. If the water is still of the bright rosy color to which the chemical turned it, it is perfectly safe for drinking. If it is of a brownish color it is impure, although the impurity may be of the kind that boiling will rob of its power to harm.

TEMPERATURE BREAKS THERMOMETER.

A TEMPERATURE which amazed the doctors and broke the thermometer is recorded in the case of a girl patient in one of the city hospitals of Kiev, Russia. She is suffering from typhus fever, and her case attracted special attention when a temperature of 112 degrees Fahrenheit was recorded, bursting the thermometer. In the presence of a number of professors and students her temperature was taken with a special instrument, which showed 122 degrees, later rising to 131 degrees.

The facts are vouched for by eminent professors. According to all previous experience life at such a temperature is unknown, even impossible.

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