

PUZZLE PICTURE.



FIND PRINCE HENRY.

AMERICAN SPONGE CULTURE.

Interesting Account of the Labors of the United States Fish Commission in That Direction.

During the past winter the United States fish commission continued in Florida waters certain experiments which were begun last year in the propagation of sponges. Though it is as yet too early to be confident of results, the success thus far obtained has been very gratifying. That sponges of commercial varieties can be planted and grown by artificial means seems to be proved, and it only remains to ascertain whether the work can be made profitable on a large scale.

Reckless fishing has seriously diminished the supply of sponges along the shores of Florida, and it is of urgent importance that something be done to increase the crop, says the Philadelphia Saturday Evening Post. The process of artificial culture is simple enough, pieces about the size of one's thumb being cut from living sponges and attached with wires to boards, poles or pieces of rock in water only a few feet deep. The cutting is done on a wet board with a knife or a fine saw, care being taken to retain the outer skin as far as possible and to avoid injury to the animal. So rapidly do the cuttings grow that within from two to five years they are large enough for market.

The fish commission steamer Fish Hawk has been ordered south to continue the experiments which are being conducted in Biscayne bay and on the shores of Sugarloaf Key. Ordinarily the cuttings are made from deformed sponges that have little market value, but they assume symmetrical shape during growth. Quiet water, a firm bottom, and the absence of muddy sediment are essential conditions. Enemies there are few to guard against, though some hermit crabs are said to eat sponges.

Of course, the sponge commerce is in reality only the skeleton of the sponge animal. The living creature is covered with a thin, slimy skin, perforated by numerous canals which run through it. Through these canals currents of water are constantly kept flowing by means of little hairlike appendages which line them, and in this way the minute organisms on which the sponge feeds are supplied. A sponge combines both sexes, and the young are simply thrown out into the water. They swim about for awhile, and after a few hours settle down, attaching themselves to some suitable surface and beginning to grow.

It is a notable fact that the fishery for sponges is confined to a single state of the union, Florida, though the product is more generally employed and has a wider range of usefulness than any other commercial article yielded by American waters. There is scarcely a civilized habitation in the country in which the sponge is not in daily use.

It is a curious fact that the three most important American species—"sheepswool," "yellow" and "glove"

—seem to be pretty much the same as the leading Mediterranean sponges, which go under the names of "horse," "bath" and "zimocca." Though for general purposes there is no better sponge than the Florida sheepswool, some of the foreign sponges, such as those used in surgical practice, are more delicate and bring much higher prices—occasionally as much as \$50 a pound.

The possibility of transplanting to our own waters some of the best of the foreign sponges has been seriously suggested. It is thought that a small colony of them, properly cared for and used for propagation, might form a beginning from which a valuable industry could be developed. One difficulty in the way of this kind of submarine agriculture, if such a term may be applied to the planting and reaping of an animal crop, is that the sponge fishermen in Florida are much opposed to it. They fear the absorption of the business by capitalists.

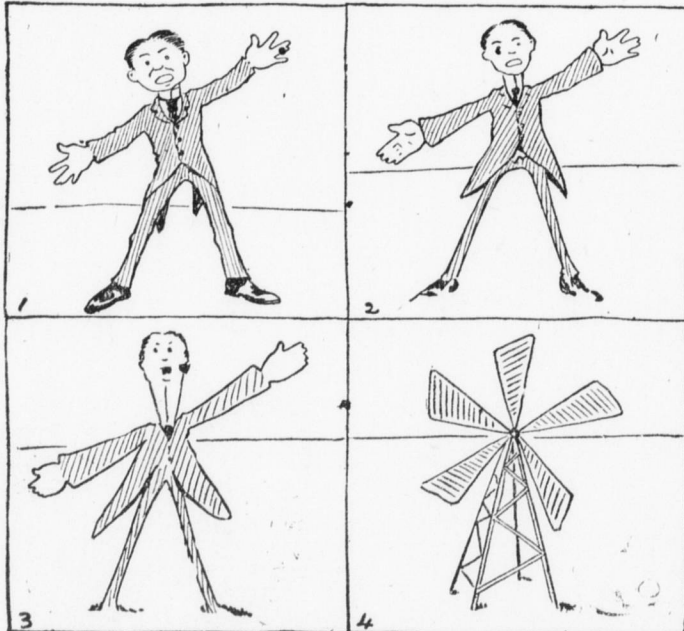
Meanwhile, the Florida sponge fishery is being rapidly destroyed by overfishing and lack of protection. An incidental cause of trouble is the so-called "black water," which comes about once in a decade and destroys the sponges, causing immense numbers of them to float up to the surface of the sea. Some think that this poisonous water is due to submarine volcanic disturbance, but the question is in dispute. In 1878 there was a plague of this kind so disastrous that all the sponging grounds from Cedar Keys southward to 49 miles north of Key West were ruined.

The Florida sponge fishery yields about 300,000 pounds of sponges every year. More than seven-eighths of the business is carried on at Key West, where the sponges are prepared for market by permitting them to rot in the sun; then, after being washed clean, they are sold at auction. The sheepswool sponge, for most purposes, has no superior anywhere, being more durable than the best Mediterranean sponges, though somewhat coarser. It grows to good commercial size in one year.

White Mice for Submarines. Gasoline is, it appears, the fuel most suitable for submarines; but human sensations give no more warning when its collected fumes are becoming dangerous. White mice, however, are said to be extremely sensitive to this poison, and perish incontinently before human beings begin to suffer the slightest ill effects. So in all submarines of the future cages full of white mice are to be kept on the floor, whence the heavy emanations gradually rise, and it will always be some one's duty to go around and see how the mice are getting on.—Country Life.

Knew What Work Was. The Tramp—Could you tell me, sir, how I can find work? Billyuns—Sure; buy an automobile and try to keep it in running order!—Baltimore Herald.

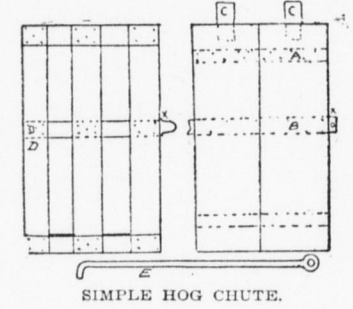
THE EVOLUTION OF AN ORATOR.



PORTABLE HOG CHUTE.

It Can Be Carried Around Easily and Adjusts Itself Readily to Any Height of Wagon.

To make chute to load hogs into farm wagon, make bottom out of one inch oak plank, 32 inches wide; eight feet long, with two cross pieces marked a at each end, ten inches from the end of 2x4; one cross piece 2x4 in middle marked b three inches wider than bottom, with hole two inches from edge of bottom, with two iron dogs at one end to rest on bottom of wagon box marked c. The sides should be made same length, 30 inches high with three battens of 1x4 or 1x6 inch plank, batten of same dimensions with a wagon body strap riveted on middle batten, with thumb nut on the end. Set on side of bottom and screw up nut, and you have a truss that will hold any weight. An eye bolt marked d through bottom at d and then a hook (e) with eye on



SIMPLE HOG CHUTE.

one-half inch rod connected to eye on one side, and hook on the other to hook in an eye-bolt on the other side, keeps the sides from being pressed apart. If desired the bottom can be made the same width and length of wagon-box, which when taken down makes a good cover for box or rack for hauling hogs. I consider a hog chute an indispensable device on a well arranged farm, and this one is superior to any I have seen, the majority being so clumsy and heavy that it takes two or three men to move them. But this one can be taken on the wagon where needed; then it adjusts itself to any height of wagon or any place.—W. B. Osborn, in Agricultural Epitomist.

IDEAL FEED FOR HOGS.

Skim Milk, Mixed with Ground or Whole Grain, Produces Most Satisfactory Results.

I regard skim milk as a valuable part of the hog ration, worth at least 30 cents per hundred pounds, when mixed with grain either whole or ground, writes J. H. Crowley in the Kansas Farmer.

That is, if a dollar's worth of feed be used for hogs, 30 cents' worth, or 100 pounds of skim milk, would make the ration more valuable than if the whole dollar was used for grain with only water instead of skim milk. This skim milk keeps the hog healthy, and, therefore, thrifty, preventing constipation and its attending evils, especially swine plague or hog cholera, the dread of all farmers raising hogs. In fact, I cannot recall a case of hog cholera or other disease among hogs where skim milk formed a good part of the hog ration. I have in mind notably the case of one of our station partners who recently sold a nice, thrifty hog on this market weighing some 400 pounds, fed and raised wholly on skim milk from this station, which shows that we can make porkers equal to the best grain-fed and more healthy than those fed on grain alone. If this result of feeding skim milk can be obtained in one instance why can it not be obtained in many and by any farmer.

Green Cut Bone for Hens.

For laying hens there is nothing equal to green cut bone. My Buff Rocks are wonderful egg machines. I have not yet seen their equal. I feed cut bone every day (if I have it) right from the cutter, for old and young fowls. In winter mix it with cut clover soaked over night, and for grain feed wheat, or oats with occasionally a little corn. In summer the fowls have free range and get plenty of grass and in winter get all the cut clover they will eat. The wheat is fed in scratching shed a foot deep with leaves. At this season farmers and poultrymen have pullets which they wish to lay. A bone cutter would be a profitable investment. The cut bone is just what the poultry need. It is cheap and saves feeding so much grain.—Commercial Poultry.

How to Ring Rooting Hogs. The farmer should ring the hogs' noses when he finds them rooting where he does not want them to root. Then his temper is about right to do the work promptly and well. We have a light rack, just large enough to hold common-sized hogs. The top is open and the sides and ends are made of round, upright sticks, the size of fork handles. Both ends open by sliding up. We place this rack in a narrow doorway at the stable and let a hog in. Then we pull his nose up with a slip noose rope and put a ring in the nose. We let the hog pass out at the other end of the rack. It is narrow, so the hog cannot turn in it. Have a small ring at the end of the rope making the slip noose to make it close and open easily.—Farmers' Voice.

CORN DIET FOR HENS.

Many Poultrymen Advocate It, Although Grain Is Not by Any Means an Ideal Ration.

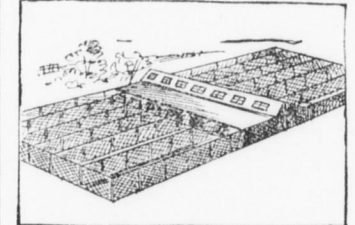
One reason why farmers do not realize more from their poultry, I believe, is because they make corn the main diet. Corn is considered by them to be the cheapest feed and the handiest to feed, for, by throwing it out on the ear, the hens are given more or less exercise in picking it off, hence the owner is saved the labor of scattering the grain in the litter for the fowls to scratch out. But I have little faith in this plan of exercising and feeding fowls, says V. M. Couch in the Poultry Monthly. With a good many farmers corn is probably a cheap food, but even this depends somewhat upon the season of the year, the climate and whether the hens have free range or not. In cold weather corn may be fed quite liberally to laying stock without injury, and also to fowls having farm range, but when given in the way that many feed it, by spreading it on the ground before the hens three times a day, all they will eat, I believe that it is expensive hen feed. Very many attribute the increase of eggs to corn, when, in fact, the corn has produced eggs more by keeping the hens warm than through the supply of egg elements afforded.

Eggs cannot be made to any great extent by corn alone, or for a long time, for the reason that a hen fed nothing but corn will be unable to supply the mineral elements of the eggs, and while she may be eating largely of corn find sufficient nitrogen for an egg, she will sooner or later become excessively fat from too much carbon. A very economical and good feed for winter egg production is a mixture of clover, cut in half-inch lengths and scalded, with corn meal and bran. This is a very complete ration on all the elements necessary for eggs. It supplies bulky food, promotes digestion, affords a variety and costs less than any other food that I have been able to get. When a hen leaves corn for other feed, it means that she wants something not fully supplied by corn. Without exception, the best results may be had from a varied diet, and while a hen may do very well on corn, she will do better on a variety. It is not an easy matter to make up a perfectly balanced ration for a laying hen. While she is producing eggs she will use a vast amount of raw material, but if she stops laying a corn diet will soon ruin her. A concentrated food for hens should be avoided. Milk added daily to other food assists largely in supplying many needed elements not easily obtained from other sources. Clover, vegetables, milk, meat and corn or wheat are better than any single article.

LARGE POULTRY PLANT.

Double House Facing South, with Two Rows of Roomy Pens for Birds of All Ages.

The plan portrayed is shown in response to a request from H. T. P., of Salford, Ont., who wishes to build a house 25 by 70 feet with two rows of pens facing the south. The house is



MODEL POULTRY PLANT.

in successful use by a Del poultryman. It is 27 feet wide, including three-foot passageway, and 70 feet long, divided into six pens with corresponding yards. The windows in the slanting fronts admit the winter sun to all the pens. The cost is less than for the same number of pens in a single row, while the care



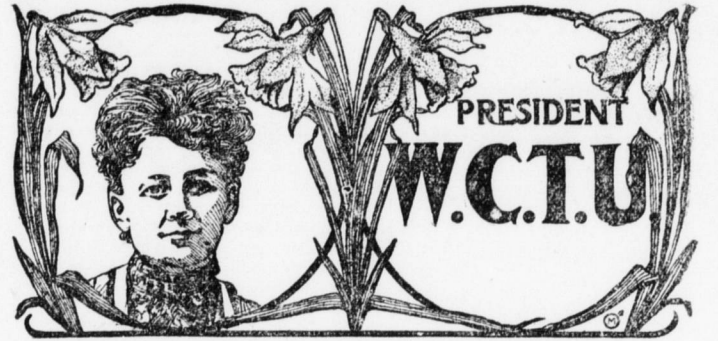
of the poultry is simplified. The plan shows the important dimensions. The roots, r, are separated from the nests, n, by the droppings board, d. The food and water dishes, ff, open into the passageway.—G. B. Fiske, in Farm and Home.

Reforesting Waste Regions.

There is much land that will not be again valuable for generations except to the state. In the reforesting of lands the adjacent property is often as greatly benefited as the area in forest. The state can thus derive a larger revenue from the work than can any private individual. The state can afford to reforest land even if the annual direct income from the reforested area be only one per cent., for the people of the state reap other benefits from it. No private individual can afford to invest money with so slight annual returns.—Farmers' Review.

Fresh Vegetables for Hens.

Hens deprived of green foods will not lay as well as when their needs in this direction are attended to. All the turnips, beets, carrots and roots of all kinds, large and small, should be saved and given them. These vegetables and herbs are good for poultry, cows and hogs. They are a good substitute for green food for hens. Peelings of potatoes, turnips and vegetables of all kinds, including apple peelings, should be saved for the poultry. Cut up fine and boiled and mixed with mash feed for the fowls, this furnishes them a splendid food. Such savings will be worth a dollar a bushel in winter and will do the hens more good than they could do the hogs if fed to them.—Eastern Shore Farmer.



Mrs. Francis Podmore, President W. C. T. U., Saranac Lake, New York, Owes Her Health to Lydia E. Pinkham's Vegetable Compound. Read Her Letter.

"DEAR MRS. PINKHAM:—For several years after my last child was born I felt a peculiar weakness, such as I never had experienced before, with severe pains in the ovaries and frequent headaches.

"I tried the doctor's medicines and found it money worse than wasted. A friend who had been cured through the use of Lydia E. Pinkham's Vegetable Compound advised me to try it. I did so, also your Sanative Wash, and I must say I never experienced such relief before. Within six weeks I was like another woman. I felt young and strong and happy once more.

"This is several years ago, but Lydia E. Pinkham's Vegetable Compound is my only medicine. If I ever feel bad or tired a few doses brings instant relief."—MRS. FRANCIS PODMORE.

\$5000 FORFEIT IF THE ABOVE LETTER IS NOT GENUINE.

When women are troubled with irregular, suppressed or painful menstruation, weakness, leucorrhœa, displacement or ulceration of the womb, that bearing-down feeling, inflammation of the ovaries, backache, bloating (or flatulence), general debility, indigestion, and nervous prostration, or are beset with such symptoms as dizziness, faintness, lassitude, excitability, irritability, nervousness, sleeplessness, melancholy, "all-gone" and "want-to-be-left-alone" feelings, blues and hopelessness, they should remember there is one tried and true remedy, Lydia E. Pinkham's Vegetable Compound at once removes such troubles. Refuse to buy any other medicine, for you need the best.

ALABASTINE THE ONLY DURABLE WALL COATING. Advertisement for Alabastine wall coating, featuring an illustration of a woman and child, and text describing its benefits over other wall treatments.

Homeseekers' Excursions California. Advertisement for excursions to California, mentioning routes and prices.

Great Southwest. \$33 from Chicago, \$30 from St. Louis, \$25 from Kansas City. Advertisement for travel services to the Southwest.

One Fare plus \$2 Round Trip. Advertisement for round-trip travel offers.

FREE. Advertisement for a free offer, possibly related to the 'Piles' advertisement.

PILES ANAKESIS. Advertisement for a medical treatment for piles, including contact information for the manufacturer.