

ELECTRICITY AIDS THE POULTRY RAISER

Its Use Does Away With Oil Or Other Fuels In Incubators.

By C. S. Miller.

One of the most interesting, if not the most noteworthy electrical achievement of recent years, has been the development of electrically heated and regulated devices for incubating and brooding chickens. Electric incubation has been demonstrated to be practical, economical and desirable.

In devising the electrical heating and regulating apparatus for incubation, these devices were designed for use on the electric lighting current obtainable from an ordinary incandescent lamp fixture in any residence, office building or other structure that is equipped with electric lighting or electric power and where current is supplied twenty-four hours of every day, Sunday included.

The "Electroplane" is an asbestos, metal bound, electrically heated and regulated diaphragm, designed for use in the incubators now manufactured without interfering with their present construction or principles of operation.

To install an Electroplane in an incubator, the removable top diaphragm is taken out and the Electroplane substituted. A hole is then bored through one end of the incubator, a common flexible lighting cord is inserted, connection is quickly made with a cord and plug attached to the Electroplane, the current is turned on by means of a button in the same way an electric lamp is lighted, and the machine is ready for use, heated and regulated by electricity.

The Electroplane is an electric incubator designed for the use of poultry raisers who reside in cities or villages where ordinary electric lighting current is obtainable and who do not require large hatching capacity. It is designed to hatch six dozen (72) hen eggs.

Inasmuch as no odor, gases or dirt of any kind attach to the use of the Electroplane it can be operated and will do satisfactory work in living apartments where the owner of a lamp machine would not find it desirable to run an incubator heated by kerosene oil. The Electroplane is odorless and

as free from dirt in all respects as an ordinary electric light fixture and is practically as easy to use; the operator merely turns the button and "the silent current does the rest."

An adaptable electric hover has been designed to take care of chicks after they are hatched. As the name signifies, this hover is readily adaptable to almost any location. It can be installed in an ordinary brooder, either indoor or outdoor, or can be used independently. The heater of the adaptable hover consists of an electroplate with an electric thermostat, which automatically cuts out the current whenever the temperature underneath the hover goes above the required degree, and turns on the electricity, automatically and reliably, when the temperature beneath the hover goes below the required degree.

In this hover, as in other electric incubating devices, there is no cost for operation, when the current is cut off. Brooders heated by lamps or oil stoves can be regulated so that the surplus heat is carried off, but the consumption of fuel continues, thus entailing waste. But when electricity is used the thermostat not only cuts out the current automatically and thereby stops expense when the temperature under the hover reaches the required degree, but later on, when the temperature falls below the right degree, electrical contact is made automatically by the thermostat and the current is again turned on.

The advantage of the use of electricity for incubating and brooding purposes are: Economy in use, labor included, with convenience in location of incubator and absence of fumes and gases; perfect distribution of heat in the egg chamber, and great simplicity and accuracy of regulation. On account of these important advantages it is believed that electricity will be adopted generally within the next few years for heating and regulating incubators and brooders in all cities and villages of the United States and many foreign countries where ordinary electric lighting current is obtainable.

FARMING A BIG BUSINESS

REQUIRES SPECIAL KNOWLEDGE AND LOTS OF ENERGY IF THE BEST RESULTS ARE TO BE OBTAINED.

By B. E. Larn.

The business of farming, as practiced by the modern and progressive farmer, is something altogether different from the methods in force a few years ago. Everything about the modern farm is clean, wholesome and sanitary. Pigs, cows and chickens no longer occupy the front yard, in common with the farmer's family; machinery is no longer left in the field to rust away, and the farmer and his family no longer dress shabbily. The government, agricultural colleges, trolley lines, electric lights, telephones and rural free delivery are the great agencies responsible for this change. The modern farmer, especially an irrigation farmer, must be a scientist. He must farm scientifically. He can not surrender his orchard to the pests. The law requires him to at least protect his neighbor's orchards. If he fails to comply with the law requiring him to properly spray his trees, for

instance, the county or state steps in and either does this work or chops down the trees and charges the expense thereof to the land of the indolent farmer.

One tree is now made to bear more fruit than half a dozen did a few years ago; one acre is made to produce as much as ten acres did a few years ago. Intensive cultivation of small and compact farms, with available inch of land utilisably, and the farmers and their families happy and contented, do not affect them much. They are the absolute necessities of life. The world must look to them for a living so that, after all, the farmer is indispensable.

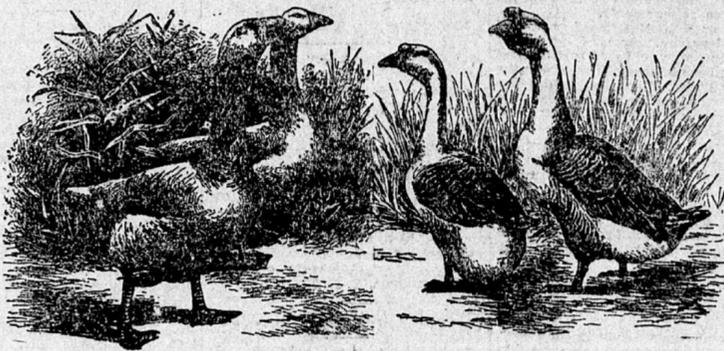
Never before has farming been carried on with such a sure scientific foundation. With soil, sunshine and water in just the proportions demanded by plant and tree, the business of

farming and fruit-growing has become an occupation suited to the educated man and woman. Scientific farming is in its heyday and intensive cultivation is making ten acres as profitable as eighty, and twenty acres as remunerative as a quarter section.

It is no uncommon thing to see at work in the fields of an irrigated farm of college training and of fine science.

With big horses and big tools, one intelligent man can now perform the work formerly requiring ten.

No salaried positions in the learned professions can ordinarily command the pay equal to the returns from a forty-acre farm under intelligent management. If the same area be put into orchard the yield is often equal to that of the president's salary of some great railway system. No wonder irrigation and scientific farming attract all young men.



PAIR OF WHITE EMBDEN GEES.

White Embden geese are considered very practical birds for farmers and pay well for their keeping. They are nice looking, of large size, tall and erect carriage, and snow-white plumage. They originally came from Embden, in Westphalia, and have been bred in this country for many years.

PAIR OF GRAY AFRICAN GEES.

Gray African geese are very profitable to keep. They grow the heaviest in the shortest space of time, and are ready for market in ten weeks, weighing at that age between 8 and 10 pounds. For table purposes they are esteemed very highly, their flesh being fine and nicely flavored.

GOOD ALL-PURPOSE FOWLS

Should Possess Egg-laying Qualities, and Mature Quickly For Market.

By W. M. Kelly.

The first thing to consider when selecting a breed is the purpose we desire them for.

There are some breeds of poultry that are adapted to but one purpose and that is laying eggs, among them being what poultrymen call the Mediterranean breeds, such as the Leghorns, Minorcas, Hamburgs and others.

These are very good breeds but what a beginner is after is a hen that will set and hatch some nice young chickens and take care of them in the best shape.

He will also want a breed that will be ideal for market, one that will mature early, have a nice clean color, be good layers, lay good-sized eggs, active enough to be good rustlers after grasshoppers and worms, be good setters and mothers, easily tamed and handled and a breed that will bear confinement well.

There are many excellent breeds of this class found among what are known as the American breeds. The Plymouth Rocks, Rhode Island Reds, the Wyandottes, and other breeds belong to this class.

The Brahmas, Cochins, Langshans and others of the large breeds of Asiatic class are not as good layers as the smaller breeds, they are more inclined to be broody and as a rule are not as good rustlers as the American breeds and for that reason I would not advise one to select one's foundation stock from that kind of breeding.

When we look the field all over there is no breed that stands pre-eminently at the head of the utility

class like the Plymouth Rocks and I do not believe that a person would go wrong if he selected stock from some good flock of that breed.

The Plymouth Rocks lay good-sized eggs that are of a nice shape and color. Of the various breeds of Rocks it is easier to breed them true to color, they dress very clean and white when killed for market.

The Buff Rocks and the Barred Rocks are excellent fowls and are fully as good in many respects as the White Rocks, but one will find it much easier to breed birds of a solid color and keep them true to type and markings than to breed the colored breeds.

For a chicken that will grow fast and mature early I know of no breed superior to the White Rocks. They have a plump body and are attractive in the market and when full grown have the weight that makes them bring home the money that it cost to grow them.

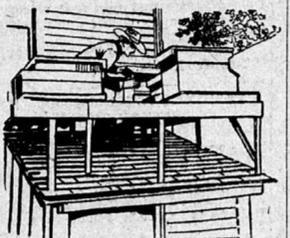
The cockerels that are to be sold in the fall make quite an important item for us to consider and the White Rocks cannot be excelled in this point.

When the hens are too old to keep for egg producing purposes it is quite an important item to have them weigh six to eight pounds.

There is an increasing demand for dressed fowls and if you have any arrangements to supply them with dressed poultry whenever ordered and get the top price for your surplus stock.

BEES ON TOP OF A WOOD-SHED

For sometime I have owned a couple of colonies of bees, but have done very little with them. We have no



ground space for them and beside we live in a double house with a neighboring house within 20 feet of us.

Though such conditions are unfavorable for beekeeping the thought of putting the bees on the roof of a woodshed occurred to me; and though the idea was laughed at, I built some framework and placed upon it my two hives with two additional.

Though the bees were just over the door as shown in the picture, the only time they gave us any trouble was after I had robbed them. Then they would be "numbrous" for a short time. I reached the hive by way of an apple tree close by, or through the window above, in which the screen was hung on a hinge.

From this roof I took about 300 pounds of honey from four hives, (quite good returns from a roof 7 feet square, ordinarily considered useless for producing anything).—Percy G. Sherman in "Gleanings in Bee-Culture."

POULTRY ITEMS

Cleanliness in every part of the poultry house, is of the utmost importance with fowls in confinement.

Onions chopped fine and mixed with the hen's food occasionally will promote health. Onions are a great poultry tonic and they are relished by fowls old and young. Our fall hatched chicks tumble over one another to get to their feed when onions are mixed with it.

Keep the males entirely separated from the hens in winter quarters, when eggs are not wanted for breeding purposes. The eggs are better in quality, and will keep longer if not fertilized, and in number are not increased by the presence of the male.

Pullets are the best layers. Old hens bring the egg record down. But of course, there are always exceptions.

The removal of nesting material, and refilling with clean dry nesting is a great help in keeping down the lice.

One of the most difficult things for a beginner in poultry raising to learn is to cull closely, and there are others besides the beginners that need to practise this necessary thing.

A film of kerosene over the drinking water, will prevent one chick's catching disease from another; also it will cure slight colds; an easy preventive, and no possible harm in it.

PROFIT IN SHEEP.

Cold weather never effects a sheep but dampness is fatal in time.

It is estimated that ten sheep can be kept where one cow can, and the risk is much less. It may be said that the sheep always carries her pocketbook with her.

If she dies, her pelt or fleece pays her funeral expenses. If she lives, her wool in the spring and her lambs in the fall pay double revenue. No other stock pays as large a percentage of clear profit on the money invested.

SWINE NOTES.

Don't select a heavy, lazy sow for a breeder. She should be mild in disposition, but possessed of sufficient energy to take exercise.

A pure bred hog will mature and come into money more quickly than a scrub and bring more money for the same weight at that.

Red clover in bloom is not good for hogs but when young it makes a fine pasture.

Neither rape nor clover alone will do for growing, fattening hogs. They must have some grain twice a day for best results.

THE FAMILY GARDEN

SUGGESTIONS REGARDING PROPER QUANTITY OF SEED TO PLANT.

People who have not made a study of gardening are some times puzzled to know how much of each kind of vegetable to plant. The following quantities will be sufficient to supply an average family, say of six persons.

Celery—One ounce of seed will produce about fifteen hundred plants.

Sweet Corn—One pint of seed for each planting. This should be planted about ten days apart.

Cucumbers—One-half ounce of seed will plant twenty-five hills.

Lettuce—One-half ounce of seed. Sow ten days apart.

Onions—Plant two rows fifteen feet long, making three plantings ten days apart.

Peas—Did anybody ever raise too many peas? Plant one quart at a planting about ten days apart.

Carrots—One ounce of seed. Cauliflower—One ounce of seed. This is another excellent vegetable which is much neglected in the average farm garden.

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Peppers—One-half ounce of seed. Radishes—Sow one-half ounce every three weeks.

Rhubarb—One dozen roots will last a family a life time.

Spinach—Sow two ounces of seed in drills.

Squash—One ounce of seed will plant about twenty hills.

Turnips—One ounce of seed sown broadcast will produce a big crop. Sow thinly and do not be afraid to thin out after the plants come up.

Amateur gardeners often make the mistake of planting vegetables too close together. Plants having large foliage such as tomatoes, peas and beans should be given plenty of room in order that the sunshine may reach all parts.

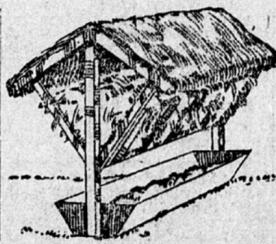
A COVERED FEED-RACK

The picture will show how to make one of the most serviceable buildings about the barnyard.

A covered feed-rack for winter feeding of corn fodder or any variety of hay or grains. It answers also for shade during the summer and shelter for the manure deposited under it—"A three in one shot."

The center posts should be 8 or 10 inches square and 12 or 14 feet long. Set these in the ground 2 1/2 or 3 feet in a straight row 6 feet apart.

A plate is placed upon the row of posts and a pair of rafters as shown in the picture is fastened to each post.



A sheeting of common plank is nailed on upon which a roof of straw or old hay is placed.

Strips are nailed to the rafter braces to which slats are nailed, forming the racks.

A feed trough for grains, mill feed, and roots is built on each side.

This also catches the loose hay or corn which falls through, and the stock gets it cleaned up instead of tramping it under foot.

A rack like this will cost about \$10, for one 16 or 18 feet long, and will save many times its cost in one season.

REST THE HORSE'S FEET.

Every farm horse should, if possible, be allowed to go without his shoes at least two or three months every year. In fact, it is hardly necessary to shoe a horse on the farm unless he is to go on the hard roads or work on the hard soil where he is required to do much heavy pulling.

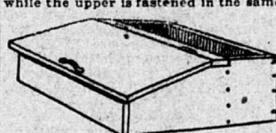
Without shoes a horse's hoofs will grow out, regain its natural shape which is always more or less changed by continuous shoeing.

Many city horses with hoofs bound and cracked and otherwise injured, have been taken to a farm, their shoes pulled off and turned out to pasture and thoroughly cured within six months. In fact, the farmers around the large cities used to find in this class of animal a cheap supply, many of which turned out to be first class horses, showing that all that was needed was rest on Mother Earth without their shoes.

Sweet oil is a safe medicine to administer to animals. It never injures, but is valuable in choking, bloating, inflammation or constipation of the stomach or bowels.

A GOOD COAL-BOX.

This box is constructed of heavy three-quarter-inch lumber, preferably hard wood. The joints may be dovetailed, but as this is one of the most difficult procedures, the amateur would better content himself with the following box construction: The lower lid is hinged to a 2-inch crosspiece, while the upper is fastened in the same



way to the back piece. There are no partitions in the box, the two lids merely facilitating the filling and emptying of the bin. The bottom slopes downward from the front to the rear. The hinge and the handles may be purchased from a hardware dealer. For hardwood construction, screws are to be used throughout instead of nails.—W. Widenhofer.

If we only loved ourselves as we love our neighbors some of us would feel mighty cheap.

GEORGIA'S BIG FORESTS.

The state of Georgia contains thirty-eight million acres, more than twenty-six million of which are forests, embracing in varying quantities practically all of the trees indigenous to the eastern states.

The chief hard woods of Georgia are the oak, the hickory, the ash, the dogwood, the black gum, and the persimmon, and these are found chiefly in the mountains, along the banks of streams, and in the marshes and swamps. The chief soft woods of the state are the long and short-leaved pine, the poplar and the cypress. Of all Georgia's commercial timber, the pine is by far the most important.

With over a thousand sawmills in active operation, with an army of fifteen to twenty thousand men in constant service, with an annual timber cut of from eight hundred million to a billion and a quarter feet, and an approximate annual value of from fifteen to twenty million dollars, lumbering is second only to cotton among the native industries of Georgia.

The woven wire fence makes hog pasturing easy compared with the old fashioned rail fence.

CARE OF PIGEONS.

If pigeons are crowded into a small space, and the proper attention to cleanliness is lacking, do not expect good results.

A beginner should start with only a few pairs at first and see how he likes the business before buying a large number of birds.

As pigeons grow older, molting becomes a greater ordeal, so much so that old birds have at times great difficulty in either shedding or renewing their feathers, especially the larger feathers of the wings and tail.

A pair of pigeons should be as near the same size as possible.

There is a great deal more trouble in raising and selling breeding stock than there is in marketing squabs.

Rheumatism is pretty sure to show itself if pigeons are allowed to sleep in an open window or in a draft.

Poor judgment is more often displayed in the purchase of breeding stock than it is in the erection of buildings.

Warmth and dryness are essential to a healthy molt.

Ring-worm on cattle may be cured, by washing once a day with a five per cent solution of carbolic acid, until healed.

BOYS' AND GIRLS' AGRICULTURAL CLUBS.

Within recent years a new method of agricultural education has been devised in the form of boys' and girls' clubs. Such clubs have various objects, but usually they provide for prize contests among the members. Corn growing contests are probably the most common among the boys, although many other crops have been tried, while the girls compete in bread making or sewing, or even test their skill against the boys in gardening.

According to the U. S. Department of Agriculture, 395 counties in 23 States have such clubs. New York has about 75,000 members; Nebraska, 25,000, and other States smaller numbers. One county in Pennsylvania has 2,000 members. In most cases these clubs are organized under the auspices of some State authority, such as the commissioner of agriculture, the superintendent of public instruction, the agricultural college, or a society, like the State Corn Growers' Association of Delaware. But in many cases the county superintendent takes the initiative, while in many other cases the rural teachers arrange contests among their own pupils.

There are many light-weight roofing materials advertised, any of which, when properly put on and cared for, will give good service.

The frame work need not be so heavy where the stuff to be housed rests on the ground floor.—J. W. G.

TO DOUBLE CROP YIELDS

Prof. B. C. Buffum, of Worland, Wyoming, who is a pioneer in the science of seed breeding, hopes that scientific methods and patience in farming will double the crop yields.

Prof. Buffum is a leader among the few men who are devoting their entire attention to improving farm products in a practical way. He is the author of "Arid Agriculture," and has been in agricultural work for more than twenty years.

The ideas of Prof. Buffum and similar workers mark a reversal of the old plan of using unmarketable stuff for seed. Under the new system the farmer uses the best seed that the practical scientist can furnish. The value of this plan has been demonstrated by the progress made with corn and other grains.

Speaking of alfalfa improvement during a recent visit to Chicago, the Professor said:

"Alfalfa is the basis of western

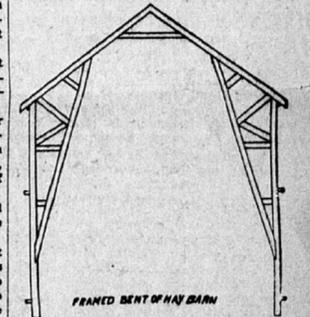
agriculture, yet it has never been pedigreed or improved by scientific breeding. Like 'Topsy,' it 'just grew.' It is a mongrel plant, with probably the greatest value of any mongrel on earth. I now have in my breeding gardens seventy varieties and strains of alfalfa, including those raised from seed from every part of the world where the plant is grown, in addition to my own hybrids. The method pursued in improving alfalfa is to make crosses and hybrids between all of these varieties and then select the one that shows the best quality, combined with the greatest productiveness. This last season I had two hybrids that grew to a height of three feet in ninety days from the date of planting the seed. Any one who has grown alfalfa can appreciate the significance of these figures. By fixing some type of this sort I can put into the hands of the farmers improvements that greatly will increase the yield.

Each bent should be framed and put together before it is raised. The plates should be nailed or bolted to the top of posts so they will answer for top rail ties as well as a support for the center rafters.

The center and lower nail ties for the siding should be of the same thickness as the plates. The roof may be of any suitable material at hand.

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FRAMED BENT OF HAY BARN