

How the Little Brown Hen is Helped by the Self-Regulating Incubator



WEIGHING THE BIRDS—WEIGHMASTER E. E. SMITH IN CHARGE OF THE SCALES.



GENERAL VIEW OF THE INCUBATOR SECTION AT THE TRI-CITY POULTRY SHOW.



JUDGING THE EXHIBITS—G. D. MCCLOSKEY OF AVDCA, IA., NOTING THE POINTS FOR HIS CLERK.



GARD F. AND HER MAJESTY, A PAIR OF E. B. DAY'S IMPORTED ST. BERNARDS.



SINGLE COMB BUFF ORPINGTON SHOWN BY W. HAMILTON OF PLATTSBURGH, N.Y.



WHITE CHINESE GANDER SHOWN BY E. E. SMITH OF LINCOLN, NEB.



LIGHT BRAHMA COCKEREL SHOWN BY B. KEELINE OF COUNCIL BLUFFS.

chickens would have been extinct had not an inventor brought out the incubator and made the business profitable. The only kind of poultry we would have had today would be crows and mudhens. But the incubator saved the day. It started the farmers to producing chickens for big profits and gradually they have drifted and been driven by competitors to producing blooded stock. I believe I can safely say that half the farmers in Washington county are producing pure bred chickens. If their entire flock is not of pure blood they are buying nothing but thoroughbred cockerels and gradually working toward perfect purity of strain.

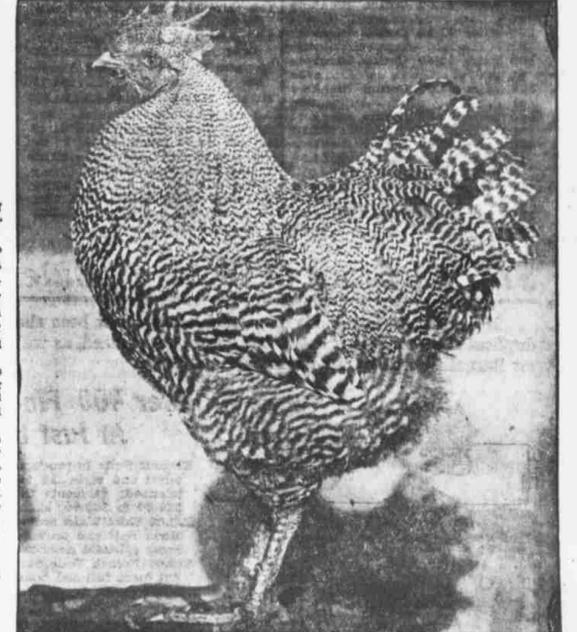
bought stock from the butcher shops and back yards. They incorporated in their flock birds of every color and size, Asiatic and Mediterranean, whose remote ancestors came from Italy, China, Russia, Japan and South Africa. The result has always been the same. The poor chickens in the flock degenerated the other chickens and ruined the new generation. The chicks were weak from birth and died like blue-bottle flies when the heavy frosts came.

breeder of thoroughbred chickens. He secures a dozen good pullets and buys a cockerel from another reliable dealer, giving him a start in the pure bred poultry business at an expenditure of less than one-fourth the outlay for the flock of tramps which tore up the neighborhood and turned up poor at market time.

Exhibitors at the poultry show said that any farmer or poultryman who proposed to go into the business for profit and produce chickens for the market from a mixed lot of "mongrel" stock would go into bankruptcy within two years.

"This has been the experience of many," said a poultryman. "I know half a dozen who have started chicken ranches and

"I wanted a Barred Plymouth Rock hen with a pure yellow beak," said Mr. Devore. "A perfect Barred Rock should have such a beak I raised over two hundred hens before I got one which was perfect, but I have one now which money would scarcely buy. Yes, she's worth a hundred to anyone, but it is worth more than that to me."



TRUSTY, THE BARRED PLYMOUTH ROCK SOLD BY F. F. DEVORE OF VALLEY, NEB., FOR \$75. THREE OF TRUSTY'S SONS WENT ALONG FOR \$25.

Progressive Events in the Field of Electricity

Development of Last Year.
EVENMENTS in the science of electricity have become so common that the world no longer wonders. The expected inventions and applications of the current to manifold uses, which would be classed as sensational a score of years ago, now attract but momentary attention, so accustomed are we to the seemingly limitless possibilities of the science.

The last year records many notable strides in electrical development. At the head of the list is the completion of Marconi's transatlantic wireless telegraph system and its use for commercial purposes. Marconi's experimental work in transatlantic communication dates from the notable day in December, 1901, when he received in Newfoundland the letter S, the appointed signal, from Cornwall, England. Encouraged by this success, Marconi commenced the erection of a powerful station at Glace Bay, Nova Scotia, where four huge braced towers were built at the corners of a square, and an elaborate system of aerial wires strung from them and led down to the sending and receiving station below them in the center of the square.

The disruptive voltages between spherical electrodes at distances greater than normal conditions it is about 2,500 volts per millimetre. The dielectric strength of other gases can be found in a similar way experimentally. In the case of oils the dielectric strength can be ascertained by noting the disruptive voltages between spherical electrodes immersed in them, provided the distance apart is greater than 4.06 of a centimetre, but in finding the dielectric strength of solids it is advisable when possible to embed the spherical electrodes in the material under test. In the case of acetone the dielectric strength of the electric stresses is very difficult. Most insulating materials are composed of organic matter and are not quite isotropic, and the effect of applying an excessive pressure to a cable for a considerable time is often to carbonize part of the dielectric and to weaken it permanently.

Lighting Pines on a Cold Morning.
Ever since the principles of "bright living and right thinking" permeated into the brain of man the one obstacle to the attainment of the ideal has been the problem of lighting the morning fire in regions where Old Decca deposits himself. People possessed of sufficient means to dispense with stoves and line their homes with radiators warranted to radiate comfort in the early morning hours have solved the problem to their satisfaction. But the millions still starved by the electric stove, a sure thing winner, is leaping to the fore, mocking the Coal trust and searing its grip. It lacks only an automatic means of starting to work to make it the gem of winter homes. And the clockwork attachment is about to be supplied by Prof. Harmon W. Morse of

the chemical laboratory of Johns Hopkins university. The professor has invented an electric stove with a clockwork mechanism which the heat may be turned on at any hour without personal attention. The device also operates to turn the heat off at any time required. It is the professor's aim to do away with the necessity for early rising, so far as furnace tending is concerned. He believes that by installing one of his electric stoves in place of a furnace the head of the household may be as late as his business permits, secure in the knowledge the house is being kept at the proper temperature without any effort on his part.

Electricity in Kitchens.
Housewives can make electricity serve them in many ways without installing an expensive equipment, says The Delinestor for January. The electric range, that must have special wiring, is costly. But other devices are within easier reach. They are operated simply by attaching the connection to the electric light socket, from which the ordinary bulb is temporarily removed for the purpose. Among these conveniences is the electric station maintained at the proper temperature while moving over the ironing-board in action; the electric stovetop; set of teakettle chafing dish and coffee percolator which will merrily cook on the breakfast table the second course while you are eating the first; and the electric heating pad of sardines that takes the place of the hot water bottle. Any of these work at a cost of about 2 cents an hour. Beyond them there is so much that may be done by electricity that it sounds like a story of hot Indian magic.

YEARS ago a famous rooster is said to have remarked: "Aw, what's the use? An egg yesterday, a feather duster and a chicken sandwich tomorrow." But since those days the lot of the rooster and his family has improved. His life story is more than simply a trip from some hidden hen's nest to the griddle. Like the lot of man, the chicken with good ancestry, a firm determination to become something in the world and win place among the millions, may become a pampered pet, a show bird worth \$1,000 and never see the griddle nor the chopping block. New and then a chicken with poor ancestry may "trickle with his evil star" and be recognized by poultry breeders.

the long aisles at the annual disturbance. Hundreds of country visitors enjoyed the company of the chicken "60," and many went home determined to produce more and better chickens and get some ribbons at the Omaha poultry show in not more than two more years.

Some of the chickens boasted of being hatched by their "mothers," and come into the world to peep from beneath a feathered breast upon the interior of a modern poultry house, but most of the fine birds attested the success of artificial incubation, and boasted of pipping the shell in a steam-heated St. Louis flat, falling through the floor only to light on a piece of warm sheepskin with two inches of wool. Then they looked out on the domestic scenery of a neat kitchen or saw the large supply of canned fruit in a cemented cellar, instead of peeping at haymow rafters, and they heard the voices of children long before they ever heard a calf calling for help.

And so it goes. In days gone by the chicken which brought \$10 was a neighborhood wonder, but out over the prairie of Nebraska there are hundreds of poultrymen raising stock which will bring them prices almost beyond belief, some \$20 or \$25 and others will produce a bird or two during the year which will bring \$20 to \$25.

perfection in self-regulating machines. Statistics presented at a Massachusetts convention of poultry fanciers in 1886 recorded an experiment of James Rankin, and took out 183 ducks. During the spring of 1886 he produced over 3,000 ducks, and Massachusetts avowed to the fact that coffee and beans were far less profitable than ducks.