

KANSAS FARMER

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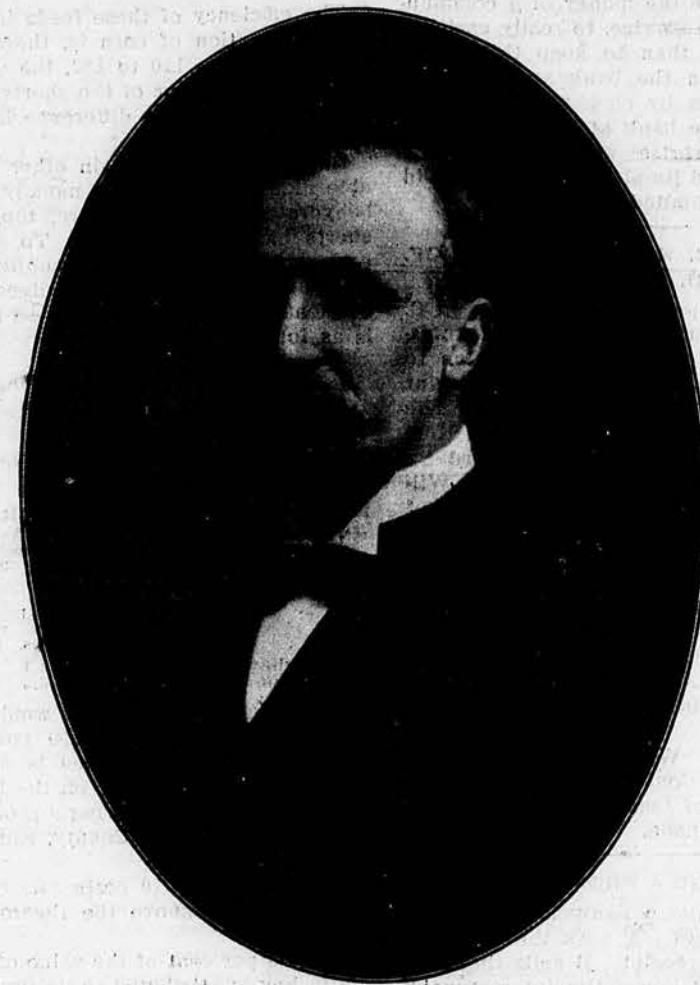
Can There Be a Large Poultry Industry

Of all industrial propositions, the poultry industry shows the best margins when figured on paper. In the ordinary run of farm production of poultry and poultry products, the money received is usually counted as clear gain. Such estimation is probably not far wrong when consideration is had of the fried chicken and fresh eggs consumed by the family, especially if these be estimated at prices which the city man pays for them. In very many cases the cash received for poultry and eggs has tided a family over a time of stringency. The writer knows of an instance in which a young married couple had large ambitions and rather limited capital. They occupied a rented farm. As the plans were forming the young wife, who was a country girl possessed of full knowledge of farm management from chickens to horses,

proposed to her husband that if he and the cows would pay the men and the rent, she and the chickens would pay for the groceries and the farm implements. The proposition was accepted. It is needless to say that the young wife made good.

These were cultured people. They have added to their culture and wealth, and the chickens are still on duty. But if the question be raised whether the production of poultry and eggs as a business may not be so enlarged as alone to support a family, the reply of the wise ones usually is that it is "too small a business." The city amateur who delights in figures will gladly show that a good hen ought to lay 150 eggs a year. A little arithmetic gives 150,000 eggs as the product of 1,000 hens. These eggs at two-thirds of present prices in Topeka would be worth \$3,000. "Now," says the amateur, "if these 1,000

(Con. on page 1368.)



Thomas Owen, Editor Poultry Department of the Kansas Farmer.

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A PROMINENT POULTRYMAN AND EDITOR.

Thomas Owen, editor of the Poultry Department of THE KANSAS FARMER, has been interested in the best for over thirty years. He is still actively engaged in the poultry industry. To see his flocks and appliances is well worth a trip to his place, a half mile west of Washburn College, Topeka.

Mr. Owen founded the Western Poultry Journal, the pioneer of its kind in the West, and published it successfully from 1889 to 1904, when he sold it to THE KANSAS FARMER, with which it was consolidated, and became the poultry editor of the consolidated papers. His work on this paper has been able, conservative, up-to-date, and reliable. None of the gush which has characterized some poultry writings ever appears either under or over the name of Thomas Owen.

Mr. Owen attended the first Kansas State Poultry Show, which was held at Wichita eighteen years ago, and has been present at every show since that time. He has been treasurer of the State Poultry Association for fifteen years and its secretary-treasurer for four of these years.

Personally Mr. Owen is a quiet, unassuming man, rather inclined to be retiring. But when it comes to a matter of information his reliability and readiness fully entitle him to his place on the editorial staff of the "old reliable" KANSAS FARMER.

If you want information that can be depended upon, ask Thomas Owen, poultry editor of THE KANSAS FARMER.

PRACTICAL COOPERATION.

The advantage that a well-patronized bank may give to a community is well illustrated in the following news item from Norton County, Kansas:

"W. R. Fisher, president of the National Bank of Norton, has organized a company for the purpose of building a large storage elevator, large enough to hold 150,000 bushels of grain.

"Work on the new building will commence just as soon as the railroad will give a lease on the desired tract of land.

"We will also sell corn and will have nine or ten carloads on track here soon at 50 cents a bushel," said Mr. Fisher.

"The idea of our big elevator is to protect the farmer who must have money against low prices. We will store his grain in this elevator and allow him 90 per cent of its value in cash. If grain goes up he may sell it at any time he desires and receive the benefit of the raise. Many farmers who need money are compelled to sacrifice their grain upon low markets, while our method enables them to borrow practically as much money on the grain as they would receive for it, and later on they get the benefit of the raise in price."

"The new corporation will have a capital stock of \$30,000 or \$40,000, and will be one of the greatest business industries established in Norton for a long time."

It is doubtless understood that the bank will cash the loans.

Experience has shown that under normal conditions a bank may loan three-fourths or more of its deposits. The financial power of the community is then multiplied by at least three. The usual estimate is that it is multiplied by four. In all cases the bank prefers depositors as borrowers. It is well understood that the bank is loaning depositors money, chiefly. The capital of the bank is the margin by which the depositors are guaranteed competent and honest handling of the business. Otherwise the bank performs the service of agent in receiving the money of depositors and placing it in possession of borrowers. For this service and for the guaranty, the bank receives the interest.

There is no better way to cooperate to make the money of a community do large service, to really enrich a community than to keep the money deposited in the bank and to transact business by checks on the bank. Without the bank at Norton, the elevator enterprise would scarcely be possible and its ability to serve would be indeed limited.

PROF. J. C. KENDALL AND PROF. D. M. WILSON.

It is announced that Prof. J. C. Kendall, Kansas State Dairy Commissioner, has resigned that position to accept the chair of dairy husbandry at the State Agricultural College. The vacancy created by Professor Kendall's resignation has been filled by calling to that place Prof. D. M. Wilson, who has occupied the position of assistant professor of dairying.

Professor Kendall was the first occupant of the newly created position of State Dairy Commissioner. His efficiency in this work was such as to commend him to the college authorities. The Agricultural College is to be congratulated on securing his services.

Professor Wilson, who becomes State Dairy Commissioner, has had an experience of four years in a like position in Canada.

CONCERNING A PROMISORY NOTE.

EDITOR KANSAS FARMER:—A gave B a note in 1900. A pays the note but fails to get receipt. B sells the note to bank and keeps the interest paid on the note. A was never notified of the sale of the note. The note was given to a Kansas bank and was sold to an Ohio bank. A has property in Ohio. Can bank attach A's property and collect the note when it is outlawed in State where given?

A SUBSCRIBER.

Marion County, Kansas.

The bank in Ohio can bring an action on the note asking for attachment against A's property. If this is done, it will be necessary for A to defend the suit, or judgment will be taken by default and execution will issue against the property.

If the bank bought the note after it fell due, the note was subject to all defenses, just as if it had remained in the hands of B. But if the bank bought the note before it fell due, the "innocent third party" principle prevails, and the defense that the note had been paid will scarcely protect A.

If, however, the note is outlawed by the statute of limitation in Kansas, where it was made, it is also outlawed in Ohio. The Ohio provision on this

point is contained in Section 4990 of "Bates' Annotated Ohio Statutes." It reads as follows:

"If by the laws of the State or country where the cause of action arose, the action is barred, it is also barred in this State."

Endorsements of interest payments made without authority of A will not serve to keep the note alive. The facts as to this point are for determination by the jury on the evidence presented.

If the facts can be proven to be as stated in the inquiry, A is neither morally nor legally bound to again pay the note, but if suit be brought he will, as before stated, be under the necessity of defending. To do this he will need the services of an attorney in Ohio. This attorney may be able to so present the facts to the bank as to prevent the bringing of a suit.

ALFALFA OR SHORTS IN BALANCING CORN IN RATION FOR HOGS.

EDITOR KANSAS FARMER:—I am feeding a bunch of eighty-five head of shoats weighing about one hundred pounds. Can I balance the ration (I am feeding all corn) by adding alfalfa hay, and which will be cheaper, alfalfa hay at \$8 per ton or shorts at \$1.10 per hundredweight? C. F. CRETZ.

Mitchell County, Kansas.

The digestible protein in 100 pounds of the feeds mentioned average as follows:

Alfalfa hay, lbs.	11.0
Wheat shorts, lbs.	12.2

The efficiency of these feeds in balancing a ration of corn is, therefore, theoretically as 110 to 122, the difference being in favor of the shorts, provided there were no difference in the price.

But these feeds contain other valuable digestible nutrients, namely, carbohydrates and fats. Here, too, the shorts has the advantage. To get a comprehensive view of the subject let it be noted that the average digestible nutrients in 100 pounds of these feeds is as follows:

	Protein lbs.	Carbohydrates lbs.	Fats lbs.	Total digestible lbs.
Alfalfa hay	11.0	39.6	1.2	51.8
Wheat shorts	12.2	50.0	3.8	66.0

In a computation recently made by the writer, based on average New York prices for standard feeds, it was estimated that the values of these constituents in cents would be about as follows:

	Value of protein lbs.	Val. of carbohydrate lbs.	Val. of fats lbs.	Total val. pr. 100 lbs.
Alfalfa hay	37.5	30.5	2.1	70.1
Wheat shorts	41.6	38.5	6.6	86.7

Alfalfa hay at \$8 per ton would be valued at 40 cents per 100 pounds. But, theoretically, this feed is worth 70.1 cents per 100 pounds on the basis of New York prices, leaving a profit of 30.1 cents at Mitchell County, Kansas, prices.

But shorts at \$1.10 costs 23.3 cents per 100 pounds above the theoretical valuation.

Now, 53 per cent of the value of the alfalfa hay is attributed to its protein, while only 48 per cent of the value of the shorts is attributed to its protein.

On theoretical considerations, then, at the prices stated, the alfalfa is the more economical feed both on account of the sum of the nutrients and as a means of balancing a ration of corn.

Practically the difference in favor of the alfalfa when fed to hogs may be less than that shown by the computation. Hay seems an unnatural feed for the hog, while shorts can scarcely be improved upon in its adaptation to his needs.

The difference in price is, however, so greatly in favor of the alfalfa, and this, with the well-known success of this clover as a promoter of the production of pork, would incline the writer to rely largely on the combination of corn and alfalfa in the case of this correspondent.

Changing conditions bring out new treatments of subjects of books. This is evidenced in three volumes recently issued by Doubleday, Page & Co., of New York. These are entitled respect-

ively, "How to Make a Vegetable Garden," "How to Plan Home Grounds," and "How to Build a Home." The treatment is from the point of view of the dweller in the city who is considering removal to the country. The thought of many who have been in the grind of city life and labor is turned towards a home in the country. Their ideas of country conditions are of the amateur order, but they will interest and amuse, and possibly instruct the veteran farmer and his family.

WHO HAS GRANARY PLANS?

EDITOR KANSAS FARMER:—Could you recommend to me a book that has plans for building granaries, with dump and elevator attachment? I intend to build a new granary with all the labor-saving devices that are practical.

Has sweet clover the same bacteria as alfalfa? Is it good for hay and for green manuring.

HENRY A. SCHAEPT.

Ellsworth County, Kansas.

Granaries having various labor-saving appliances have been constructed, but, so far as the writer remembers, no book of plans for such construction has been published. There are plenty of designs for grain elevators, both great and small, with labor-saving devices, but these do not meet the requirements of the farm granary. If readers who have given attention to this subject will send sketches and descriptions to THE KANSAS FARMER, we will try to present the best for consideration of the "family."

Sweet clover is said to have the same nitrogen-gathering bacteria that do so much good to alfalfa. Sweet clover at the stage when it ought to be cut for hay has a very large content of water. It, therefore, produces much less hay than an equal showing of alfalfa. It is valuable for green manuring, but here, too, it is less valuable than alfalfa.

SPEAK UP, SHEEPMEN!

EDITOR KANSAS FARMER:—I appreciate your valuable paper, the information on general farming, stock-raising, feeding, etc., but I have failed to see any article on sheep-raising and feeding for market. Are there no sheep raised in Kansas, or isn't it as profitable as the raising of horses, cattle, and hogs? Let us hear from some of the sheepmen.

I would like to have the address of some good sheep journals.

B. F. BUCKWALTER.

Harvey County, Kansas.

In view of the unexcelled natural advantages which Kansas possesses for the sheep-raiser it is hard to understand the comparatively small interest in sheep husbandry. Perhaps a little agitation may bring out valuable information. Let the sheep's friends be heard from through the columns of THE KANSAS FARMER.

The American Sheep Breeder, and the Shepherd's Criterion, both published in Chicago, are excellent journals.

A MINOR'S NOTE.

EDITOR KANSAS FARMER:—A minor buys some property and pays cash for a part of it and gives a note, with good security, for the balance. If this minor becomes of age when the note comes due can he be forced to pay the note?

A SUBSCRIBER.

Kingman County, Kansas.

The general rule of law is that whoever deals with a minor, does so at his peril. The minor may repudiate his contract at any time before, and within a reasonable time after, becoming of age, but the adult is bound as firmly as if he had dealt with an adult. On repudiating a contract the minor must make restitution to the other party of so much as the minor possesses of the property or money he received as shall then be in his possession or under his control.

Nearly one-half of the exports from the United States goes to British territory and nearly one-third of the imports is drawn from British territory. By this term, British territory, is

meant the United Kingdom and all of its colonies and dependencies in various parts of the world. The total value of merchandise exported to British territory in the ten months ending with October, 1907, as shown by a statement just completed by the Bureau of Statistics of the Department of Commerce and Labor, is 698 million dollars, forming, in round terms, 46 per cent of the total exports of the period under consideration. The total value of merchandise imported from British territory during the same period was 386 millions, or 31½ per cent of the total imports. Two years earlier, in 1905, the ten-months' figures showed exports to all British territory valued at 583 millions, forming, in round terms, 46 per cent of the total exports, while the imports from all British territory were 289 millions, forming, in round terms, 29½ per cent of the total imports.

A groceryman in Kansas City, Kans., had drawn \$500 from the bank, which fact was apparently known, or at least suspected by robbers. Last Saturday night the man and his wife were murdered, such money as could be found was taken and the culprits escaped. When the murders and robberies chargeable to the withdrawal of money from banks for the purpose of hoarding shall have been compiled, the loss of life and money will stand out large in comparison with what would have happened had the money been left in bank.

It should not be forgotten that the annual meeting of the Kansas State Horticultural Society will be held in the Supreme Court room in the State House at Topeka, on Thursday, Friday, and Saturday, December 26, 27, and 28. It will be good to be there.

Miscellany

The Trans-Mississippi Congress.

The Trans-Mississippi Congress, which met at Muskogee last week, has been aptly called the "Peoples' Forum" and is composed of representatives of Western States who meet together to discuss and forward the interests of the States and Territories west of the Mississippi. The congress started eighteen years ago when Kansas called such a meeting to aid in securing a deep water harbor at Galveston for the benefit of Western grain interests, then at the mercy of the long rail haul to the East. The congress has been held regularly every year since with growing interest and importance.

The freedom of discussion, earnestness of purpose and avoidance of everything of a political or religious nature, attracts many of the ablest men in the country. There were in attendance, the governors of Oklahoma and Hawaii, ex-governors of Missouri, Kansas, Colorado, and New Mexico, two ex-Secretaries of the Interior, Noble (under Harrison), Francis (under Cleveland), three United States Senators, Stone, Owen, and Gore, the head of the Mormon church, Apostle Smith, and delegates from twenty States and Territories, including Alaska, from Hawaii and from the Philippines. The chief of the reclamation work of the Government was present, also the president of the California Board of Trade, and Tom Walsh, the famous Colorado miner who is said to be the wealthiest individual operator in the world, together with several congressmen.

The feature of the convention was the endorsement of the proposed deep water way from Chicago to the Gulf, which was cordially endorsed after a prolonged discussion. A resolution, introduced by D. R. Francis of Missouri, endorsing the President in his steps to lighten the financial troubles by the issuance of bonds, brought about a strenuous debate that was very exciting and not altogether free from bitterness and personalities. Senator Owen of Oklahoma was for the measure and Senator Gore, his colleague, was against it, both men being

Democrats; Owen won out handily, and the President was endorsed.

Twenty years ago when the writer was at Caney, Kans., on business for the Missouri Pacific Railway, he was marooned overnight and found the tedium of the wait greatly relieved by a chance acquaintance met at the hotel—Robert L. Owen, a young Cherokee Indian, fresh from college where he had graduated with high honors, and then being intent on establishing a home on some fine hay and corn land he owned just south of Caney in the Cherokee country. Last June Senator Owen was in Manhattan to pay a call on an aged and very dear friend of his mother's, so a renewal of the acquaintance of twenty years before occurred, the writer being there for the commencement exercises of the college. The two spent the better part of a Sunday strolling about the college grounds, talking of the early days and especially did Senator Owen go over the economic and political condition of his beloved State and country. The enthusiastic, reserved youth had grown and broadened into the quiet, broad-minded, and dignified man of affairs, whose intense interests in a cause fanned anew the zeal of youth, with great sacrifice to oratory and immense gains in convincing power. When the writer went to Muskogee as a delegate he wanted something at the hands of the congress and when he laid the matter before Senator Owen he found a sympathetic and powerful ally.

When in Washington in 1906 the writer visited the Department of Agriculture and spent an afternoon with the bureau having the work in charge, trying to get one of the fifteen demonstration farms provided for by Congress established in Harper County; but failed. The Congress therefore went before the Trans-Mississippi Congress asking that they, in behalf of the West, request Congress to establish and maintain through their land grant colleges and an experimental farm in every congressional district where practicable, and directing the land grant colleges to establish and maintain demonstration farms in every county where the county would furnish the ground and do the work. The colleges to furnish the superintendence, the seeds, plants, and trees, the products to belong to the county for sale to its people or use in public institutions. Lands for the experimental farms to be furnished without cost unless the Government owned suitable lands and all farms to be easily accessible by railways. The work carried on experimentally and in demonstration to be along the lines of the major interests of the community served, with minor experiments in promising novelties. All work to be plainly marked with scientific and common names and a short description of the experiment or demonstration under way, that visitors might understand what was being done. A bulletin of results to be issued at least annually. Through the able advocacy of the Senator Owen the measure was passed, the only change of consequence being in the wording of the introductory clause to permit the general Government to establish such stations on its own initiative. As the land grant colleges have started in this work of studying and demonstrating to meet local conditions it is hardly to be supposed there will be a duplication of work but that rather it will be handled when authorized, if it is, through the established channels, the colleges.

Probably no measure has ever been adopted by the Trans-Mississippi Congress which stands for such direct and material benefit of the Western farmer and at so small a cost. Kansas prints twenty thousand bulletins every month of experimental work done. Probably one farmer in ten in Harper County gets these bulletins, and not one in ten of those getting them get much good out of them owing to the soil and climate differences noted, and in part because of the necessarily scientific nature of the publication. With a demonstration farm in Harper County every ambitious farmer could drive through it two or three times a year

and see for himself what was being done and how it was done. If furnished the bushels and dollars figures at tax paying time with his tax receipt, he would know exactly what he could do and how he could do it and what profit it would bring him at harvest. We trust every congressman and the senators from Kansas and from the West, will do all in their power to enact the resolution adopted at Muskogee into law.—W. E. Blackburn in Anthony, Kansas, Republican; November 29, 1907.

The National Grange Meeting.

EDITOR KANSAS FARMER:—The National Grange is now in session at Hartford, Conn. Thirty States are present by State masters who ably represent the 900,000 grangers in this country.

By the reports of the State masters the order is in a flourishing condition and making a steady growth all over the land. Maine perhaps is the foremost State in Grange matters, with 57,000 members, about a million dollars invested in halls and store buildings, and large amounts invested in stores. It shows that the Maine people do something besides raising big crops of potatoes.

The Hartford Courant has this to say of our own State master:

"From the plains of Kansas come Mr. and Mrs. George Black, as the delegates of the State. The interests of the corn belt are in safe hands, for both Mr. and Mrs. Black are highly honored in that State. For twenty-six years he has been the secretary of the State Grange but this is his first year as master, and consequently his first attendance as delegate to the National gathering. That he will take high rank goes without saying, for he is widely known as an organizer. Co-operation is his hobby and along these lines he has done effective service in the West. His home in Olathe is the seat of the only Grange bank in the world, and the Patrons' Co-Operative Bank is one of the strongest financial institutions in Kansas. That he will be a striking figure here is assured."

The thirty-sixth annual session of the Kansas State Grange will be held at Lawrence, December 10-11-12. With a reduced railroad fare there should be the largest attendance in this State for years. The historic city is a worthy place to hold our annual meeting. Jacob Badsy has charge of the arrangements and assures us some good speakers at the reception. The Eldridge House will be headquarters. The early associations of this house with Kansas history is well known to all old-time Kansas people, and it is a place well worthy for Kansas Patrons to meet and deliberate and perhaps write some history for the future.

Subordinate granges are requested to send the names and addresses of delegates to State Secretary A. L. Hunt, Olathe, Kans.

Topeka, Shawnee County, Patrons will extend an invitation to the State Grange to hold its next session at Topeka.

The officers and executive board extend to all brethren an earnest invitation to meet with us at Lawrence. Put aside business for a few days and let us reason together. GRANGER.

Too Much Wall-Street Control.

With the tendency to do business in the large way, there has been a corresponding tendency to center the control of business in New York. The amalgamation of railroads into large systems has brought the control of transportation into Wall Street. The oil business, the sugar business, the steel business, the tobacco business, and a great many other leading industries are practically controlled from offices located in the financial district of New York City. The chief insurance companies of the country, with their assets reaching into the hundreds of millions of dollars, have their headquarters in that same financial district. The great insurance companies, railroad companies, and industrial companies are now controlled by a set of men who also control the great banks and trust companies of New

York City. It is easy to see, therefore, when one stops to reflect, how anything that tends to throw distrust upon the management of one of these sets of interests must affect other sets of interests in the public mind. The insurance investigations in New York played their part in awakening distrust, whether well-founded or ill-founded. Certain railroad investigations also had similar effects. Disclosures in the recent investigation of street railroad interests in New York City had also their measure of influence in arousing a feeling of distrust. This distrust played its part in keeping investors away from Wall Street, and thus the actual shortage of capital was increased by artificial causes. The companies that were extending telephone systems and other facilities could no longer market their bonds, and so they ceased to buy supplies, especially copper. Then followed the sensational drop in the market price of copper, causing a collapse in the market for copper-mining stocks and affecting very directly certain banks and trust companies which had been supporting copper interests. It is needless to follow the ramifications that ensue. When all sorts of enterprises seem prosperous and their shares have a high quotation in the stock market, the banks and trust companies are in danger of assuming that there can be no end to flush times, and that these stocks are all safe security for loans of money. And there is a special danger that the officers of banks and trust companies will take this roseate view—if it happens, as is the case in New York, that the same set of men are acting as the promoters of industrial and mining enterprises, and as the directors in such companies, who are also the directors and officers of the banks and trust companies. Under such circumstances, when an industrial collapse or two occurs, there is almost sure to be disclosed some weak point in a bank or trust company. This is just what happened in New York.—From "The Progress of the World," in the American Review of Reviews for December.

When the Fuel Supply Gives Out.

Since coal is about to vanish, can not man secure continued existence on this planet by means of electricity? Civilization will either change or end with coal. Every running stream can be lined with generators; the electric energy can be used by millions. It can be stored in batteries for use on ships, if the cells can be made light enough. But to have running water, forests must be planted everywhere, and without delay. Windmills can help turn dynamos.

Tide and wave motors can also be chained to servitude in turning armatures when all the coal disappears. It is said that energy enough from the center of energy, the sun, falls on the deck of a ship to run the engines. This all goes to waste now. Let Arrhelius, Thomson and Edison at once come to the rescue, grasp solar energy, change it to commercial electricity, store it by day and use in the night side of Nature and relieve coming intolerable conditions.—Edgar L. Larkin in The Balance for December.

Big Cotton Crop.

The Crop Reporting Board of the Bureau of Statistics of the Department of Agriculture, from the reports of the correspondents and agents of the Bureau, estimates that the total production of cotton in the United States for the year 1907-8 will amount to 5,581,968,000 pounds (not including linters), equivalent to 11,678,000 bales of 500 pounds, gross weight.

The estimated production in 500-pound bales, by States, is as follows:

Virginia	14,000
North Carolina	604,000
South Carolina	1,091,000
Georgia	1,891,000
Florida	64,000
Alabama	1,216,000
Mississippi	1,536,000
Louisiana	712,000
Texas	2,490,000
Arkansas	796,000
Tennessee	298,000
Missouri	40,000
Oklahoma	919,000
United States	11,678,000

THEY KEEP DOWN PRICES.

The International Harvester Company
Has Effected a Big Saving in
Farm Machinery.

WILLIAM E. CURTIS IN CHICAGO RECORD-
HERALD.

Continuing my interview with C. S. Funk, general manager of the International Harvester Company, I asked why the companies had combined if there was no intention to prevent competition or to increase prices or to control the trade.

"What was the object of the consolidation?"

"It was intended to increase the dividends of the stockholders and lower prices for the consumer by reducing the expense of manufacturing and selling agricultural machinery.

"What were the actual consequences?"

"The great advance in the cost of labor and material at the time of the consolidation," said Mr. Funk, "has never been offset by the saving in expenses. As our prices are the same as before the consolidation, it follows that the earnings have been less than was expected, and that accounts for the small dividends. It is evident that the consolidation, by which the company was enabled to practise some very necessary economies, prevented a great increase in the price of our machines, repairs and twine to the farmer. Had our consolidation not been affected, the old companies would long ago have been compelled to advance their prices, thus affecting the farmer very greatly. In my judgment the farmer during the year 1904-5-6 would have been paying at least 25 per cent more for his machinery and repairs. The statement can easily be substantiated that the farmer is to-day buying better machines at a less price than would have been possible if the consolidation had not been affected.

"For some time prior to the consolidation in August, 1902, about 65 per cent of the harvesting machinery sold in the United States was manufactured by the McCormick and the Deering companies. The remainder of the business was divided among a number of smaller companies. The combined facilities of all those engaged in the business very considerably exceeded the demands of the market, and each manufacturer was making a strenuous effort to increase his proportion of the aggregate sales, and to sustain his position in the trade. In this pressure for increased business many unbusinesslike and wasteful methods had been resorted to. Every important manufacturer of harvesting machinery was required to maintain selling agents and stocks of completed machines and repair parts in several thousand cities and villages, and to keep in the field an army of canvassers and experts, whose energies were largely devoted to neutralizing the efforts of their opponents.

"This required an amount of working capital entirely out of proportion to the volume of the business, and an excessive cost of marketing the manufactured products. The agency trade was demoralized because in many of the smaller cities and villages there were more local dealers than the locality could support. And the multiplicity of canvassers resulted in undue pressure upon the farmer to purchase harvesting machinery and in unbusinesslike terms of credit—all of which were to the disadvantage of both the farmer and the manufacturer.

"The waste resulting from these conditions the manufacturers found themselves entirely unable to overcome. It was accordingly apparent that serious loss to all and financial disaster to many would ensue unless there were either a radical change in methods, with the consequent reduction in selling expenses, or a decided increase in prices. The latter alternative those most deeply interested in the business were anxious to avoid.

"Since the consolidation it has been the constant effort of the company to increase the profits of its business by

reducing the cost of manufacturing and selling its machinery rather than by increasing prices. Large expenditures have been made to improve factory facilities and reduce manufacturing costs. The company has also, at large expense, greatly increased its facilities for producing its own raw materials, such as iron, steel, ore, lumber, coal, and flax.

"When it was found that the removal of pressure upon the farmers to buy harvesting machinery beyond their needs had resulted in a substantial reduction in the sales of harvesting machinery, so that the company's manufacturing facilities were not fully employed, the policy was pursued of developing a foreign business and of taking up the manufacture of new lines of agricultural machinery, such as wagons, manure spreaders, gasoline engines, small automobiles, separators, etc., so that the volume of business could be maintained and the working force in its factories and in the field assured steady employment. This policy has resulted in adding new lines of business exceeding in volume the decrease in the harvester business.

"As a consequence, we are now making and selling a much smaller number of grain binders than the consolidated companies did before the combination. On the other hand, there has been a large increase in the output of mowers, hayrakes, cornbinders and other machinery manufactured by us. The company has not realized its hopes respecting the reduction in the expense of production because of the increased cost of both labor and materials, and, while the manufacturers of almost all other machinery sold to farmers have advanced their prices to cover this increase, the International Harvester Company has endeavored to meet it by reducing the cost of manufacture and sales."

"What are the profits of your company?"

"Three per cent the first year and 4 per cent annually ever since, while the total earnings available for surplus and dividends have averaged less than 6 per cent per annum. We are building a steel mill at South Chicago; we are developing our iron mines; we are acquiring and developing coal properties and timber lands and building railroads to make them accessible, and we are making expensive experiments with flax twine, so as to be entirely independent of all outside concerns. By producing our own raw material we hope to be able to reduce the cost of our machines considerably, protect ourselves from financial and labor disturbances, and from fluctuations in prices, corners in the material markets and other embarrassments."

"Has your company done anything to prevent competition or restrain trade?"

"We have done a good deal to increase competition and to remove restraint in trade, and we have stopped practices that were ruinous to all concerned. Each company formerly kept an army of agents in the field, not only to sell its machines but to prevent farmers from buying machines of other companies. Those agents were paid good salaries and expenses, which cost the companies engaged in this rivalry hundreds of thousands of dollars a year. This same rivalry made a great deal of unnecessary advertising, which has since been reduced to reasonable amounts. The saving in the advertising bills alone has been at least \$150,000 a year to each company, but I can not give you any accurate estimate of the saving in salaries. Nothing has been saved in commissions. The profits of local agents are the same as before the consolidation. Their incomes are entirely dependent upon the volume of business transacted by them. We furnish them all the machines they can sell at a given price fixed by contract for a year or some other stated period, and their compensation is the difference between that figure and the price for which they sell the machines. As we have not sold so many machines since the consolidation as were sold before, the in-

comes of the agents have been diminished in a corresponding ratio.

"The competition in the home market," continued Mr. Funk, "has compelled the company to seek customers in Europe, South America, Africa, and Australia, where, by the energy and industry of its agents, it has doubled the exports of harvesting machinery from the United States within the last four years, which it could not have done but for the increased capital and facilities made available by the consolidation. In our foreign trade we sell for higher prices and make larger profits than at home. Indeed, in no other country do the farmers get their machinery so cheaply as in the United States.

"The International Harvester Company is educating the farmers of the world in American methods of agriculture. We have a large number of agents living in Siberia to-day with their families, teaching mujiks how to grow wheat and harvest it. We have similar missionaries in South Africa and South America and in every country of the world. Some of our missionaries have gone as far as water and rail would carry them, and have then crossed the mountains with their machinery on the backs of mules to show the natives how to plow the soil and plant and gather their crops with American machinery. We have at least 1,000 such missionaries in the foreign field educating the world at the expense of the International Harvester Company to use American machinery and to create a market for American merchandise.

"We have spent a million and a half dollars to promote the cultivation of raw material for twine in this country. The manufacturers of the United States pay \$17,000,000 a year for imported fiber, which we believe to be unnecessary, and we are trying to find a substitute which if we are successful, will transfer \$10,000,000 a year from the pockets of foreigners to those of the American farmers. We believe that flax straw, which has heretofore been a waste product, may be utilized as a substitute for the fibers of Yucatan and Manila, and our company paid to American farmers \$619,000 last year and \$990,000 this year to back that opinion."

"One of the objections to the trusts has been a fear that the elimination of rivalry would arrest invention; that the manufacturers would stick to their old patterns without making improvements," I suggested.

"That is a great mistake," said Mr. Funk. "If you will inquire at the patent office you will learn that more patents have been applied for and granted to the so-called trusts than before the consolidation. In our case we keep a staff of 150 experts continually engaged in working out suggestions for improvements in our agricultural machinery; trying to perfect our present types of machines and to develop new types with a view to economy and to make the work of the farmer easier."

Farmers' National Congress.

ANNUAL ADDRESS OF JOHN M. STAHL,
PRESIDENT, AT THE 27TH ANNUAL
SESSION AT OKLAHOMA CITY, OCTOBER 18, 1907.

Ladies and Gentlemen of the Farmers' National Congress: A year ago I congratulated you, and through you the farmers of these United States, on great material prosperity. The year now drawing to a close has been marked by unusual seasonal vicissitudes. In some localities heavy crop losses have resulted from insects or unseasonable or violent weather. Yet it is now certain that on account of higher prices the farmers of these United States will receive for this year's product of their capital and labor almost or quite one billion dollars more than they received for the 1906 product. I can again congratulate you on great material prosperity, and can again assert, with all the more emphasis, that in all history no class in any other class in this country in all the world has ever produced wealth as rapidly, or in such truly

enormous measure, as the farmers of these United States.

NEW WEALTH, HONESTLY CREATED.

But, my friends, I would not, I could not, congratulate you on continued material prosperity if your wealth had been gained by the essentially dishonest, and—for this let us be truly thankful—now coming to be recognized as dishonorable methods, employed by some conspicuous captains of high finance, stock manipulators, monopolists, buyers of city councils, bribers of legislators, not hesitating even to attempt to soil the judicial ermine with their sneaking fingers, foul and filthy with corruption and downright treason. Our wealth is clean! The more than six billion dollars that we this year add to the world's wealth are honest dollars. Not one of them needs spell dishonesty or injury or oppression or corruption. Every one of them means that much more to feed and clothe mankind, that much more for comfort and happiness, that much more to lift up and adorn the world. Oh, let us be thankful that when we prosper we do not, that we may prosper, impoverish the unwary, betray friends, use monopoly to oppress the masses, or force tens and hundreds of thousands of good girls to work for wages that simply compel them to sell their virtue to keep from them starvation and nakedness. Our wealth is made in close co-partnership with the Almighty Being that "planted a garden eastward in Eden" and took "man and put him into the garden to dress it and to keep it." Our wealth is made by working in harmony with the laws and forces of nature, nature that has for its servant the sun and for its handmaidens the dews and rains. Our wealth is wealth created, a gain; wealth where that much wealth did not exist before. Our wealth is not a shadowy representation made by the engraver and printer, nor is it so much added to our possessions by taking just that much from some one else. But it is the inert rock, the lifeless clay and mold, transformed into grains and flesh to feed the Nations, into grass and trees and flowers to beautify the earth. Truly, blessed is the man that grows rich with such riches, and of a surety that man is the American farmer.

THE FARMER'S EDUCATION.

But we have yet better reason for congratulation than much wealth and that clean wealth. Never before was any considerable class, likely never before was any class whatever, of any Nation, being as thoroughly, widely, and well educated as are the farmers of this country. I say educated, having in mind that not all education must be obtained in schools or even in books, and that some of the best educated men have attended schools but little and colleges not at all. I sometimes wonder if we farmers appreciate, if we ever stop to consider, the many agencies generous governments, National and State, have provided for our education. The farmers are the only class to have a representative in the president's cabinet. But that representation is unimportant compared with the secretary of agriculture's headship of one of the very greatest education institutions and organizations the world has ever seen. The National Department of Agriculture commands the researches of the best investigators, the services of the most eminent scientists, and from all lands it gathers information, and this information and the knowledge gained by its own investigators, it sends out to farmers in millions of pamphlets every year. No other class has such provision for its education in its special work. We have some fifty experiment stations and some fifty colleges, highly equipped, liberally supplied with funds by both Nation and States, devoted to our education. No other class have such provision. We have, it is safe to say, each year more than one thousand agricultural fairs, for our education. No other class has anything approaching this. We have more than 350 periodicals specifically devoted to the farm. We have each year nearly 3,500 farmers' institutes. No other class has such

provision for its education. I repeat that never before, in any country, has such liberal, lavish provision been made for the education of any class; and certainly never before has any other considerable class possessed such general information combined with so much technical knowledge, such capacity to reason with so many tracts from which to reason to wise judgment. That is why we make so much wealth, and it is greater and better than the wealth we make. The little girl said that salt is the stuff that makes potatoes taste bad when you do not put it on them. She might have added that money is the thing and unhappy when he hasn't got it. No one knows that better than your speaker. But in knowledge and culture, rather than in money, is power and satisfaction and happiness. Let us rejoice that we have, but even more that we know. A fool may easily lose his money, but knowledge, with the ability to put it to good use—and that is education—is of all things the greatest producer of wealth and happiness, and also of the public good.

MORALITY AND RELIGION IN THE COUNTRY.

But we have yet higher grounds for congratulation. It has indeed long been noted that morality is of the country rather than the city, that true religion and godliness find their most favorable conditions, not in the streets, but in the fields. In our country homes is found the simple, sweet old faith. In them the Bible may not be subjected to the higher criticism, but it is read and revered. Our pulpits may not voice learned and elegant essays, but from them is preached the gospel of clean, honest living. We may not have the high-priced, operatic choirs, but we sing the old hymns that through long years of association with times of exultation or times of sorrow, fire the spirit or soothe and comfort the soul. Heaven is yet a reality, and hell has not been desulphurized into a health resort of equable and salubrious climate. Above all for thankfulness is that we are yet taught that happiness and honor are to be found in sober, orderly, and godly lives; and that our very work is an aid to sobriety, temperance, and morality; that our surroundings are healthful to body, mind, and soul; and that while in many of our cities there are a score of saloons for each school and Sunday school, out in the country, among the farms, thank God the schools and Sunday schools are many and the saloons are few!

SOME PROBLEMS.

But the very grounds of our congratulations suggest something very different. Our wealth and our means of education alike suggest problems for our serious consideration.

This year some farmers could not grow crops, some had their crops destroyed. To some 1907 has brought no lessening of their burden of debt, to others no means to give some hoped-for comforts and pleasures to the faithful wife or better educational opportunities to a child. There is an uneven distribution of wealth due to misfortune rather than injustice; and there is an uneven distribution of wealth due to unfair, unjust conditions created by law or by the defiance of law.

As there are, and apparently must be, inequalities in opportunity, ability, and ambition, there must be, and always will be, inequalities in acquisition and possession. But that is all the more reason to be alert that the strong do not make or use or defy the laws of the land to multiply and increase these inequalities.

For humanity there is a ceaseless, unending conflict—the strong against the weak, the rich against the poor, the few against the many. This conflict has its origin in the very nature of man. It has taken and will take different forms. Its participants may have different names. But always in essence it is the same. From the days of Babylon, Egypt, Persia, Greece, and Rome it has been made plain that Nations decay and fall or live and prosper as the few rich and

strong gain or the many gather strength out of weakness and gain and hold just laws and fair conditions. Good citizenship, as well as regard for our interests as farmers, will lead us to inquire into some of the ways and means of giving, as far as may be, each and all righteous laws, fair conditions, and full and free opportunity. Eternal vigilance is yet the price of liberty.

TRANSPORTATION AND MONOPOLY.

Our industrial and commercial systems have become very complex. It would seem that this is essential to, and a very part of human progress. In our complex industrial and commercial systems, transportation has become of very great importance. It makes an unmake. Unjust advantages in transportation have been the greatest aids in creating the worst monopolies. These same advantages have been used to ruin many honest men and to injure communities. The laws should be so amended as to make easy and certain the imprisonment of those guilty of either giving or receiving secret, special rates from any common carrier. Guilty men, assessed fines that stockholders or the public really pay, are not punished. Special, secret rates in transportation will stop—and not before—when those that give and those that receive those rates will not satisfy verdicts by drawing checks to pay fines, while seated in luxurious offices, but will reflect upon their deeds behind grated windows and well-barred doors.

In all the history of special rates and rebates, there has not been an instance of a farmer being the beneficiary. Farm products pay rates too high to even up for rates too low on the products of powerful corporations.

WATER TRANSPORTATION.

But such laws as I have indicated are not the best remedies. I repeat what I said a year ago, that "our best safeguards against extortionate rates of transportation, more effective than any laws we may enact, are the lakes and rivers that God has given us with a most generous hand." This congress should take the most emphatic action in favor of the fullest development of water routes of transportation. For this there is now the further reason furnished by the confessed inability of the railroads to handle the freight offered them. We must be forceful and insistent if we have our water routes developed. Railway interests are powerful in the National Congress. The last session of Congress refused to appropriate one dollar towards a deep inland waterway to the Gulf of Mexico, but it made an initial appropriation of one million dollars to make the so-called harbor of Cold Springs Inlet, New Jersey, 25 feet deep—a harbor without one dollar of commerce, but where the Pennsylvania railway is seeking to make a great ocean resort for the rich, to its advantage. The rivers and harbors appropriation bills are most cunningly devised to aid railways while doing the least possible for competitive water transportation.

POSTAL TELEGRAPHS.

If we had a postal telegraph, as almost all other civilized Nations have, we could, as shown by their experience, have a much better service at one-half the present rate, and to the profit of the National treasury; and the service could not only be so low priced, but would be so convenient to the farmer, that he would soon be using it extensively in his business. And while the telegraph is being added to the postoffice department—likely before—we should have postal savings banks; and, above all, a parcels post, not only equalling, but surpassing that enjoyed by other civilized Nations. Nothing furnishes more striking examples of iniquities, or real, downright robbery of the people, than the express companies. The remedy is plain, but it will be hard to get. We must be emphatic, we must be insistent, if we get it, but we will get parcels post.

TARIFF.

Two things, transportation and tariff, one or the other, sometimes both,

HOLIDAY GIFTS

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are nearly altogether responsible for the harmful trusts. We can discuss this in a broad, non-partisan way. Thus your president believes in import duties to secure a large part of the necessary National revenues and duties so adjusted as to encourage and build up new industries for the production of those things best for us to produce for ourselves. Hence he can be accused of partisan prejudice when he repeats what he said a year ago, that he does not believe that "our foreign markets for farm products, already sadly restricted, should be yet further narrowed and the price of our products be depressed in order to continue a ridiculous measure of tariff protection to certain industries that have not only a monopoly control of our home market, but have secured an extensive foreign trade by selling to foreigners at less prices than those charged our own people." In the purchase of American-made machinery or anything else, the dollar of the American farmer or manufacturer should go as far as the dollar of a Jap, Syrian, or Turk. The present tariff abounds in ridiculous inconsistencies. Take, for example, borax, that is so generally used for cleansing and in cleansing compounds. All the borax used in the United States is mined in California and Nevada—by odds the most productive mines in the world. These mines were owned by the Pacific Coast Borax Co. This company had a duty of 5 cents a pound put on borax in the Dingley tariff and then, with this duty as a large asset, it sold its property to the Consolidated Borax Works, Limited, a British corporation. This corporation supplies both the United States and British markets. It sells to the Britishers for two and one-fourth cents per pound. To us it adds the five cents duty. Thus for our own borax, mined in our own country, we are charged by this British corporation three times what it charges the Britishers. This British trust has paid an annual dividend of sixteen and one-half per cent since its formation. These dividends, got by robbing our own people by means of our own tariff, are not even paid to some of our own people to be spent in this country, but are paid to Britishers to be spent in Britain. A tariff that contains such features should be relieved of them. And if its friends won't revise it, I fear that the people will see to it that its enemies do. This Farmers' National Congress should declare emphatically for reciprocity and for the enlargement of the foreign market for our farm products. We need not sacrifice a tariff that may protect infant industries, nor need we have one that protects monopoly and international highway robbery. In his masterly address before this congress at Richmond, the lamented Adams of Wisconsin quoted as follows from the evidence given before the Merchant Marine Commission: "Mr. James C. Wallace, president of the American Shipbuilding Company, said: 'Recently the United States Steel Corporation sold abroad 100,000 tons of steel plate. They delivered it at Belfast at \$24 a ton. That would mean, with ocean rates as they are, \$22 a ton at tide water. They are charging us today, at Pittsburgh, \$32 a ton.'" No wonder our shipbuilders can not compete with the British. For the material that enters nearly altogether into the construction of the modern vessel they are charged, by our own people, one-half more than their British competitors. This congress has heartily condemned the ship subsidy steal, and should condemn it at this session. That steal is not dead. If we are not careful, it will yet slip through Con-

gress. But what our shipbuilders need is not alms, but justice. There is no need, there is no justification, duty on borax or for such a duty on steel that a powerful trust has a monopoly of the home market and can charge our shipbuilders a half more than they charge the British. McKinley was right at Buffalo. Let us reciprocate. Let us trade the duty on borax and some of it on steel for wider, easier markets for the products of our farms.

SPECIAL RATES AND RAILROAD PASSES.

Nearly all the railroads refused to make a special rate for this session. They gave as a reason the two cents a mile legislation. Now I want to say to the railways that if they abolished their passes, which are most often given for dishonest purposes, as the consideration in petty bribery, and made everybody pay, they could make two cents a mile their basic rate, grant special rates of one fare for the round trip to such gatherings as this, and yet make handsome dividends on honest capitalization. No public official, high or low, should ever have a pass from any railway; and passes to others too often hide special rates. If the representatives of the farmers of these United States can not be granted a reduced rate to their national Congress, while thousands of public officials ride free, then we should, by ringing resolution, call on all farmers never to vote for any man for office that will not sign a written pledge not to take a railway pass for himself or any one else. Every time a railway gives a public official a pass there is a transaction between two parties, not exactly honest, ready to profit at the expense of the public.

NATIONAL AND STATE GOOD ROADS.

The National Department of Agriculture recently issued a bulletin on the highways of the United States. No one was surprised that it showed our roads to be far from what they should be. We know that well enough. But some of the city dailies proceeded to have spasms about our roads. They both pitied and abused the stingy, short-sighted farmers. Now we appreciate good roads. We want good roads. But we can not afford and do not propose to pay all the cost. We have been doing some figuring and some hard thinking. When you reason the matter out you will see that to ask farmers to bear all the cost of good roads is just as unreasonable as to say that farmers should bear all the expense of building and maintaining railways, interurban lines, and canals. Public highways are for all and not for farmers only. All should contribute to their cost. This congress was the first National agricultural organization to adopt a resolution in favor of road improvement. It did that in 1892. It was the first National agricultural organization to adopt a resolution in favor of State aid in road-making. That was in 1898. Surely it will not take any backward step. Surely it will join hands with the National range for State and National aid in road-making. And furthermore, it will insist that the roads be for the safe use of the public and not for the abuse of a few that because they happen to own automobiles, are none the less hoodlums, criminals, and degenerates. In justice it should be said that these hoodlums and degenerates are only a small percentage of the owners of automobiles.

PROPER EDUCATION OF CHILDREN.

While it is proper for us to consider transportation, tariff, and such things, nevertheless we should remember that fortune probably depends more on the individual than on conditions. The man with the best land is not always the one with the best farm. Nothing can exceed in importance what we

(Continued on page 1387.)

Field Notes

LIVE STOCK REPRESENTATIVES.

J. W. Johnson.....Kansas and Nebraska
L. K. Lewis.....Kansas and Oklahoma
Geo. E. Cole.....Missouri and Iowa

This is the season of the year when chickens are troubled with the roup. Every poultry-raiser knows how hard it is to get anything to relieve this ailment. Any of our readers who are having any trouble with roup in their flocks should send 50 cents to The Agricultural Remedy Company, Topeka, Kans., for a box of Snow's Roup Remedy, which is guaranteed to cure the dreaded malady.

We are in receipt of the Barteldes Seed Company's 1908 catalogue—one of the gems of the trade. This old seed house is located at Lawrence, Kans., and is well rooted in the confidence of the Western trade. This is a 100-page booklet, beautifully illustrated, and full of the things you want to know. It is for everybody. "Western seeds for Western planters" is the principle upon which this great seed house has built up its splendid success. They are helping others while helping themselves. Write for this catalogue and you will thank us for calling your attention to it. Read about their Kansas-grown alfalfa seed on page 8 of catalogue. It is worth dollars to you.

McLaughlin Brothers, with headquarters at Columbus and Kansas City, have just returned home from the last great show of the year with their famous show herd and write THE KANSAS FARMER as follows: "Our horses arrived home all well and in good condition, from the International. Our French Coach horses were as successful as our Percherons, winning every possible prize, including championship and reserve championship. Five of our Percherons won first prize as the best group and five of our French Coach stallions won first prize as the best group. As an evidence of our victory, we brought home with us, from Chicago, altogether thirty-eight international ribbons."

We call special attention to the new advertisement of J. F. Stadt, Route 3, Ottawa, Kans., who is offering a very choice lot of boar pigs sired by Long Wonder 21867 and Nelson's Model 22095. These pigs are very large and growthy, the March pigs weighing from 200 to 250 pounds. They are not fat but are good length, heavy-boned fellows with neat heads and strong backs. Mr. Stadt proposes to close these pigs out in as short a time as possible and offers proper inducements for quick buyers. Long Wonder, the sire of a number of these pigs, was a famous prize and sweepstakes winner at leading Nebraska fairs last year, and attracted much attention at the American Royal where he topped the sale. He was also the champion hog at the American Royal in 1905, and was especially selected to cross on the Nelson's Model get.

T. F. Guthrie, the irrepressible breeder and owner of Guthrie Ranch Berkshires, Strong City, Kans., has just returned from a visit to the most noted herds in America, and sends THE KANSAS FARMER the following notable utterances:

"Nowhere did I see the quality and excellence that is to be found in my own herd. I visited one herd which has been in existence for about thirty-five years and from which was sold more animals than any other one herd last year. I do not understand just how they made such a record without they did a wonderful amount of advertising and sold almost entirely on mail orders. Then I visited another herd belonging to a millionaire who is the richest hog man in the world. I found a very large herd there, with concrete pens, etc., and everything was as expensive as could be. He had some very fine animals, but at the same time he had an awful lot of very poor stuff. I noticed about the same thing in every herd that I visited; that is, that while there were some very superior animals in the herd, there was a very large per cent of very poor stuff. In this respect, the Kansas herd is way ahead of anything I have seen. My herd has a quality and a standard of excellence that is found in almost every animal, while in these other herds there were too many animals which amounted to nothing individually and yet were retained in the herd because their dams, sires, or grandsires were out of a certain dam, or some other pedigree foolishness."

"The Guthrie herd has been selected, reserved, and added to from time to time, with the first idea always the individuality, and after that to get as good a pedigree as possible. A visitor at the Guthrie herd is always shown the individual excellence of the animals and told the pedigree afterwards. In the herds that I visited, I was told the pedigree first and as a rule it was not considered necessary to say anything about the individuality. The Guthrie herd is not the largest herd in the world by any means, but for quality and individual excellence, it is the

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CANCEROL has proved its merits in the treatment of cancer. It is not in an experimental stage. Records of undisputed cures of cancer in nearly every part of the body are contained in Dr. Leach's new 100-page book. This book also tells the cause of cancer and instructs in the care of the patient; tells what to do in case of bleeding, pain, odor, etc. A valuable guide in the treatment of any case. A copy of this valuable book free to those interested. Address, Dr. L. W. LEACH, Box 125, Indianapolis, Ind.

finest herd in America, and Kansas has every reason to be proud that they own such a herd."

Kansas Still Leads.

With her largest number of registered Galloways, and now since G. E. Clark, Topeka, Kans., has purchased Campfollower 3d of Steppford (8437), for which he paid \$2,075, being the highest price ever paid for a Galloway in this country or Scotland, she adds to her history the highest-priced, and the largest animal of the breed, as Campfollower's weight is 2,576 pounds, and he is considered by breeders of Scotland, as being the best bull of the breed that has ever left there for the States.

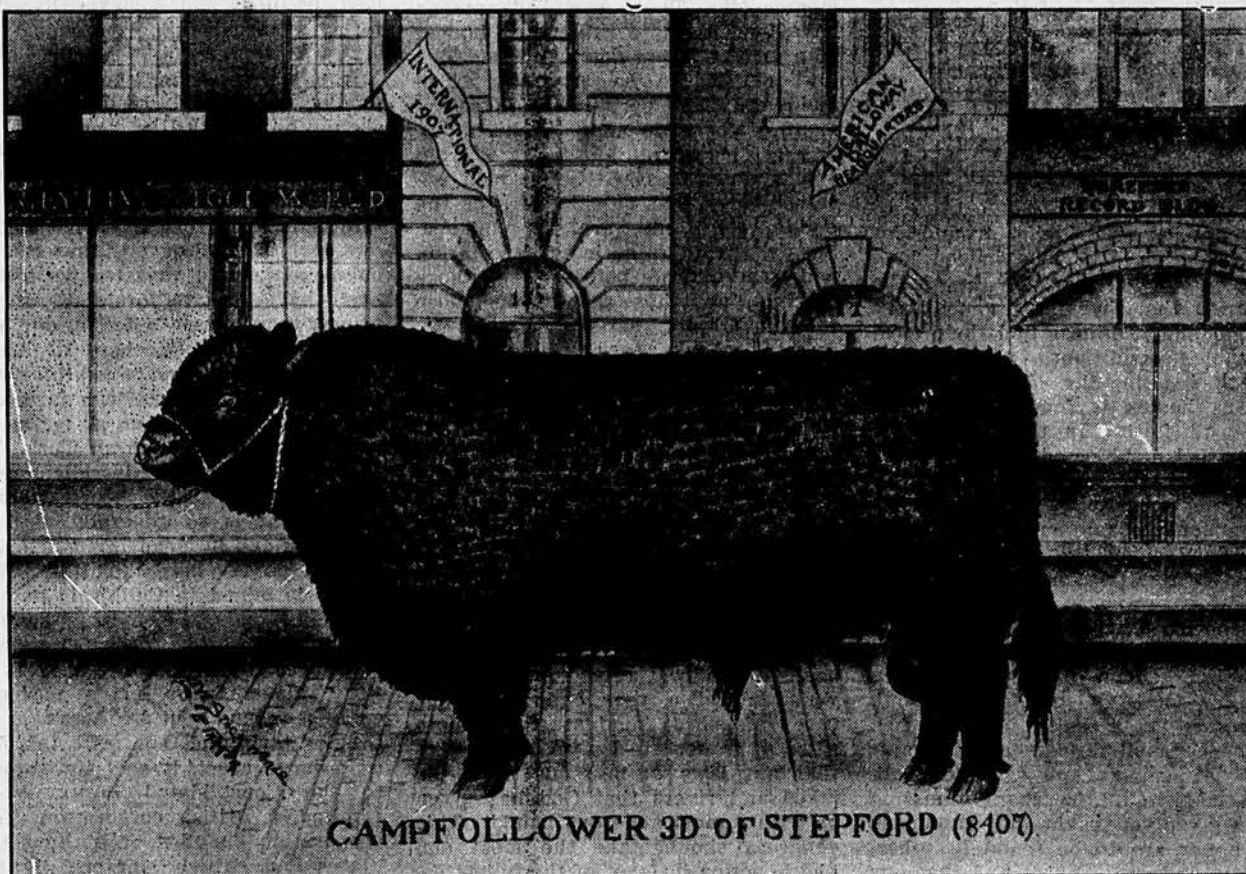
This renowned bull combines substance with quality in a remarkable, probably an unprecedented degree. With his immense size he is as smooth and symmetrical as could be desired. Campfollower's show-yard career has been a brilliant one. He made his debut at the great show of bulls at Castle-Douglas, by carrying off the first prize in the younger class, and was also awarded the champion prize in the open yearling class comprising

and legs, is smooth and has a head that needs but little fixing. More pigs have come out and made a great show as yearlings. Mr. Colwell will also use Top Notcher's Model, a grandson of Tip Top Notcher, on a few sows where the cross is thought to be good. With these three boars in service Mr. Colwell has put his herd up a round or two on the ladder and our readers will find this one of the good opportunities to get bred sows at private treaty. When writing kindly mention THE KANSAS FARMER.

Jamestown Exposition Awards.

Announcement has just been made by the awarding jury of the Jamestown Exposition that the International Harvester Company of America has been awarded several medals and diplomas. This company was awarded a diploma of a bronze medal for the installation of their exhibit in the States Exhibit Palace. Their exhibit included the display of modern farm implements and harvesting machines.

This company was awarded the diploma of a gold medal for their auto buggy, hay-tedder, manure-spreader, feed-mill, corn-sheller, new Betten-



CAMPFOLLOWER 3D OF STEPPFORD (8407)

upwards of 100 competitors. In 1905 he carried everything before him at all the exhibitions in Galloway, including medals and cups, he being the best Galloway of either sex. In 1906 he was first at the Castle-Douglas, open show. Dumfries and Kirkcudbright and the Highland Society's exhibition at Peebles. First in the aged class, medal as the best bull, and the coveted President's Medal as the best animal of the breed were awarded to him. His breeding qualities are on par with his personal merits as he is the sire of not a few prize takers. He also has a full sister, "Lady Scot of Steppford," that has won repeatedly first in class and champion in Scotland and America, including the World's Fair. Mr. Clark purchased Campfollower 3d to Steppford (8407) to head his herd of over 200 registered Galloways. Campfollower will be assisted by Lost Boy of Platte 12633 and Meadow Lawn Medalist 28750, the latter being a bull that Mr. Clark purchased last fall after he has taken everything at all the leading shows. This puts Mr. Clark with the best of the breed to head his large herd of cows which are sired by twenty-six different bulls, many of which represent the best herds and families in America and Scotland. Parties wanting something nice to head a herd of registered cows or a bull to top a herd of grade cows that will raise him market-toppers should not fail to investigate G. E. Clark's herd at Topeka, Kans. Look up Mr. Clark's ad elsewhere in this paper and write him your wants stating you saw his ad in THE KANSAS FARMER.

G. W. Colwell Offers Duroc Bred Sows.

With this issue Mr. G. W. Colwell, of Summerfield, Kans., is starting his advertisement of Durocs, offering bred sows. The sows that are being offered are rich in the blood of such sires as Nebraska Wonder, Buddy K. 4th, Big Chief's Son, Kruger and Banker's Wonder. Mr. Colwell has daughters and granddaughters of these boars; some are spring gilts, others are fall gilts and spring yearling sows. To breed on these Mr. Colwell has secured Big Chief's Special 68213, a Thomas-bred boar got by Big Chief's Son, a grandson of Ohio Chief and out of Crimson Queen, the daughter of Crimson Wonder, that raised the \$500 special gilt sold in Mr. C. E. Pratt's 1906 sale. Big Chief's Special has the requirements of a herd-header. He is smooth, has size and is a promising fellow. Secret Prince 68211, a boar of Mr. Colwell's own breeding, is also being used. He was got by Pawnee Chief, one of the good sons of Nebraska Wonder. Mr. Chester Thomas's great breeding boar, His dam, Irene 2d, was got by A. B. Top Notcher, a son of Top Notcher. In this youngster Mr. Colwell has a promising boar. He is one of those wide-backed fellows, with good, sound feet

dorf steel wagon and reversible disk-harrow, and a silver medal for gasoline engines and cream-harvesters.

The awarding of the above medals to the International line is conclusive evidence of the general excellence of their product, and indicates that the standard of merit which has characterized their product in the past is being faithfully maintained. Those who have visited this exhibit have spoken very well of its general excellence.

Harris's New Herd Boars.

The Ralph Harris farm recently purchased two splendid boars, Kansas Advancer 67427 and Crimson Advancer 67425, to place at the head of the farm herd.

These boars are sired by Advancer 28773, a winner over his full brother, Proud Advance, in 1905. He was first in aged class at Iowa State fair in 1905 and in 1906. He and his get won 16 prizes at Iowa State fair 1906. In 1907 he sired winning boars at Iowa State fair, at Minnesota, Nebraska, and at Sioux City.

Kansas Advancer has as neat a head and as prominent eyes as ever were given to a boar. He is smooth, of fine quality, with fine back, body, and the best of good feet. He shows splendid action and carriage, indicative of a strong masculine nature.

Crimson Advancer, out of Fair Wonder 2d, out of Fair Wonder, she by great Crimson Wonder, is a boar of most excellent merit, with fine ears, nicely set, and with wide open eyes. He is as smooth as his half brother, with a slightly better body and spring of ribs. There is no fault discernable in his makeup, and he, as well as his half brother, has outstanding individuality. The breeding is as good as is found in the herd books.

The Ralph Harris farm will undoubtedly be able to show some splendid progeny from these boars next year.

Walker's Jacks, Jennets and Stallions.

Philip Walker of Moline, Kans., starts a card in this issue of THE KANSAS FARMER, to which we invite the attention of any of our readers that may be interested in this kind of stock.

Mr. Walker is offering for sale at prices that will move them a fine line of jacks and jennets, also a few draft stallions and one saddle stallion.

Mr. Walker has been breeding and shipping this class of stock for twenty-five years and has established a reputation for quality, reasonable prices, and fair dealing that has not been surpassed. The jacks and jennets that he is offering are nearly all of his own raising and are thoroughly acclimated, they are of Mammoth and Spanish strains, and are all good ages.

The jacks are all black, with heavy bone, and are up to 16 hands high. In buying of Mr. Walker you have

HORSE OWNERS! USE

CAUSTIC BALSAM.



A safe, speedy and positive cure. The safest, best BLISTER ever used. Removes all bunches from horses. Impossible to produce scar or blemish. Send for circular. Special advice free.

THE LAWRENCE-WILLIAMS CO., Cleveland, Ohio.

the advantage of having a large number to select from and he can suit his customers in size, quality, and prices.

If you need anything in his line look up his advertisement on another page and write him mentioning THE KANSAS FARMER and he will give you a square deal.

Good Horses in Demand.

The recent sale of horses sold at Watson, Wood Bros. & Kelly sale on the 3rd inst. demonstrates the fact finance does not affect the demand for good horses as they succeeded in selling ten head at an average of \$1,132.

Their sale coming at the time of the International kept many buyers away so that the entire offering was not sold. The firm still has a large number of horses that they are anxious to move during the next three weeks in order to make room for their new importation.

The sales in detail are as follows:

No. 66502, 2-year-old black Percheron stallion named Armagnac, sold to E. J. Dawson, Goodland, Kans., \$1,160.

No. 66854, 2-year-old black Percheron stallion named Fillet, sold to W. R. Dowling, Norcatur, Kans., \$1,200.

No. 67082, 2-year-old black Percheron stallion named Eclair, sold to H. G. Galvin, Davey, Neb., \$1,080.

No. 67950, 2-year-old black Percheron stallion named Bazin, sold to Enis Plessinger, Cheyenne Wells, Colo., for \$1,100.

No. 44863, 3-year-old black Percheron stallion named Sineau, sold to Wm. Kerr, for \$1,460.

No. 49810, 4-year-old black Percheron stallion named Hercule, sold to Dave Hancock, \$1,290.

No. 68775, 2-year-old black Percheron stallion named Andrea, sold to Jim Lightbody, \$1,000.

No. 24468, 2-year-old English Shire stallion named Nallstone Baskerville, sold to J. R. Maynes, Henderson, Iowa, for \$1,250.

No. 58804, 4-year-old imported black Percheron stallion named Goliath, sold to Dave Hancock, for \$1,050.

No. 81849, 3-year-old imported gray Percheron stallion named Didi, sold to Wm. Kerr, for \$800.

No. 61601, 3-year-old black Percheron stallion named Harmanda, sold to John Povey, Stromsburg, Neb., for \$1,000.

No. 62755, imported yearling English Shire filley named Nallstone Golden Jewel, sold to J. R. Maynes, Henderson, Iowa, for \$500.

No. 52756, imported yearling English Shire filley, named Nallstone Spruce, sold to J. R. Maynes, Henderson, Iowa, for \$500.

Agricultural Advertising.

"Advertising combined with intelligence and enterprise will do more to elevate the farmer and give deserved prominence to his occupation than any other factor," says Prof. G. C. Humphrey of the animal husbandry department at the college of agriculture of the University of Wisconsin, in an article on "Agricultural Advertising" in the current number of the Student Farmer. "In fact, many advantages are enjoyed at the present time by our most progressive farmers who may be recognized by the advertising which they do in one way or another."

"The importance and value of advertising for stimulating trade and making it possible for business men to compete with one another, can be best appreciated if one knows that there is annually spent in the United States for advertising an amount estimated to

be \$500,000,000. It is safe to say that a very small per cent of this amount is expended for agricultural advertising.

The great majority of farmers have not awakened to the necessity of applying anything more to their occupation than hard manual labor, which, to be sure, is necessary and indispensable, but which alone classes the farmer with the man who works ten hours daily with shovel and pick, and earns one or two dollars a day. Successful agricultural advertising practised by intelligent and enterprising farmers will overcome prejudice and elevate the occupation of farming to a plane where men can enjoy their labor and the same luxuries enjoyed by business men of other occupations or professions.

The first step in agricultural advertising is to make the farm a respectable place of business and one which will invite patronage. The farm should be christened with a suitable name, and its stock and produce marketed under the name of the farm as well as the name of the proprietor. The stock and produce should have a specific trade mark, to distinguish it in name as well as in quality, and to induce buyers to become permanent customers.

The Veterinarian

We cordially invite our readers to consult us when they desire information in regard to sick or lame animals, and thus assist us in making this Department one of the most interesting features of The Kansas Farmer. Kindly give the age, color, and sex of the animal, stating symptoms accurately, and how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. In order to receive a prompt reply, all letters for this Department should give the inquirer's postoffice, should be signed with full name and should be addressed to the Veterinary Department The Kansas Farmer, Topeka, Kansas.

Hogs with Cough.—I have forty-two spring shoats that have run on alfalfa all summer and have had milk and corn. They have been coughing for about two months. The cough seems to be kind of a dry cough. They are in a good thrifty condition. Can you tell me what to do? E. B.

Olsburg, Kans.

Answer.—Give 1 ounce of sulphate of iron and 2 ounces of Zenoleum in their feed twice a week on an empty stomach.

Faulty Castration.—I had a man castrate some hogs for me the past summer and he insisted on putting on coal oil and wagon grease, and eighteen of the lot had tumors form, and I lost several in cutting out the tumors. I let them run to a water hole as it was hot weather. Now what caused the tumors and what is the best plan to get rid of them? Wakefield, Kans. E. L.

Answer.—Have a qualified veterinarian dissect the tumors out. They are caused by faulty castration. Make the openings lower down and larger and remove all of the coverings and cord up short and you will not have them.

Bog Spavin.—I have a grey mare colt, coming 2 years old, that has a bog spavin on left hind leg. It came on her about 5 months ago. She is not lame. F. H.

Mt. Hope, Kans.

Ans.—Take tincture of iodine 4 ounces, oil of turpentine 1 ounce, cantharides tincture 1 ounce, croton oil 2 drams, olive oil 4½ ounces, mix and paint the joint once a week with a small brush. Use just enough of the mixture to cover it over once and if it gets too sore omit using it for a week and grease with vaseline.

Affected Glands.—I have a cow troubled with something like lump jaw. The lump came on the lower back part. One lump came near the throat under the jaw. Two of the lumps have discharged pus, the other one has not broken. The cow has been ailing for about three months. What, if anything, can be done for her? I. C. S.

Udall, Kans.

Ans.—Take potassium iodide 4½ ounces and add sufficient water to make one pint, mix and give a tablespoonful twice a day between meals. Gradually increase the dose until you are giving nearly two tablespoons twice a day in a teacupful of water as a drench. A qualified veterinarian, who understands dissecting, can remove the glands and all the matter from underneath and insure a complete cure.

Blind Ewes.—What is the cause, and a remedy for ewes going blind at this time of the year? I have about one hundred in my flock, all are high grade Shropshires. The ewes eyes will run for a few days and either one

or both will turn blue and then the ewes becomes totally blind. They are in good shape and are young stock, 1, 2, and 3 years old. C. R. R.

Leavenworth, Kans.

Ans.—Give them the treatment described under E. D. M. of this issue.

Calves with Sore Eyes.—I recently shipped in some calves from the stock yards and noticed a few with sore eyes, but supposing it to be the result of some external injury in shipping, and would be all right in a few days, I attached but little importance to it. Other calves became affected, their eyes would get light colored, and in the worst cases, the pupil became red, and considerable water trickled from the eyes. Some of the calves are almost blind and have fallen away in flesh. In some cases considerable mucus from the nostrils was discharged. Please state what ails them and, if possible, a remedy that may improve their condition. E. D. M.

Peabody, Kans.

Ans.—Keratitis contagiosa, it is a contagious disease and will go through the herd, among cattlemen it is pink eye. Take calomel and boracic acid each four ounces, mix and open the eye well and blow in enough of the powder in each eye to cover the entire ball, just once. It will do the most good when the disease is just starting.

Horse has Sore Foot.—I have a 14-year-old horse, bay, that weight 1,400



A baby jack, a product of Europe, being grown for A. L. DeClow's Cedar Rapids Jack Farm. The purest-bred jack stock in the world. Remember the Cedar Rapids Jack Farm is the farmers' supply and cheapest place in America to buy first-class jacks and stallions.

pounds that I think has foot rot. The back part of his foot got sore and seemed to be sore up under the frog. The frog in one front foot came out and left it sore. Can this trouble be cured? What with? The horse has been this way for about three weeks. Jewell, Kans. W. R. D.

Ans.—Trim off all of the loose frogs and wash with a tablespoonful of carbolic acid to a pint of warm water, every night, then dust them full of calomel. Keep his stall good and clean with a deep bed of straw.

Mare has Abscess.—I have a mare, 8 years old, that has a swollen breast. She can scarcely move at all for the swelling extends from between the front legs back to the girth and down the left front leg to the knee. I noticed about November 8 that she was lame, but could not see anything the matter anywhere. On the following Sunday morning I saw a small lump on the left side of the breast. I first used turpentine and then a good liniment, I got the receipt from THE KANSAS FARMER, it was for a bad strain. Not long ago I thought I would lance it as that might help it, but it only bled a very little, and very little pus was discharged. What is the trouble with this mare and what should I do for her? J. H. H.

Banner, Kans.

Ans.—It is an abscess. Open up freely underneath the abscess and wash out well with creolin in warm water, one part to forty of warm water. Use a spray pump and wash out once a day.

Broken Wind or Heaves.—I have a bay horse, 8 years old, that has been troubled with his breathing for the last two years. Whenever he exerts himself his breath comes quick and heavy, making a noise through his nostrils. He acts as though he was choking and has a short cough and flem comes up in his wind pipe. About

once a month he runs a thick, yellow discharge at the nostrils, after that he seemed better for a while. The horse is in good condition. What is the trouble with this horse? F. W.

Hill City, Kans.

Ans.—The horse has broken wind or heaves. Give only bright prairie hay and dampen his feed, if it is oats and bran, also his hay if dusty, and do not give him more than he ought to have. Water him before feeding. Mix oil of tar 4 ounces, nux vomica, Fl. Extract 3 ounces, glycerine sufficient for 1 pint, inject a tablespoonful back on the tongue 3 times a day with a small dose syringe.

Castrating Pigs.—At what age is the best time to castrate pigs? Will anything that has been castrated on one side beget young? Z. M.

Miltonvale, Kans.

Ans.—At the age of 3 to 4 weeks old. Yes.

Fewer Accidents on the Union Pacific.

The Union Pacific Railroad Company reports that during the past year about \$2,000,000 were expended in the installation of safety appliances, all for the purpose of reducing to the lowest possible degree the chance of accidents. That this expenditure has not been in vain is shown by the comparative report of the loss of life and of personal injury on account of accidents. For the year ending June 30, 1907, the total number of employees killed on the Union Pacific system was 66, and injured 859, out of a total of 27,000 employees, and 95 per cent of the injuries were very slight. During the year 1906, 63 employees were killed. During the year ending June 30, 1907, there were 3 pas-

sengers killed and 166 injured. In 1906 2 passengers were killed and 135 injured. During 1907 those employed as postal clerks, express messengers, etc., 1 was killed and 39 injured, compared with 3 killed and 15 injured during 1906. Other persons who lost their lives during the past year through railroad accidents of the system number 35, with injuries to 45, against 46 killed and 73 injured in 1906. The total killed in all accidents for the year 1907 was 105. The total injured 1104, against 114 killed and 1983 injured in 1906.

When it is taken into consideration that the increased business handled by this company is indicated by increases of 2.66 per cent in tons of freight carried one mile and 12.87 per cent in the passengers carried one mile, 10.16 per cent in the total train mileage and 5.71 per cent in the total car mileage, the decrease in the loss of life is remarkable.

The principal train accidents during the year, include a collision between a running wild freight car and a freight train near Cheyenne on August 20, 1906, in which one engineer was killed, one fireman and one brakeman injured. This accident was due to failure to properly set the brakes in the Cheyenne yards.

On September 4, 1906, through defective track near Red Buttes, Wyoming, a passenger train was derailed. One trespasser beating his way over the line was killed and another trespasser and 10 passengers injured.

On October 9, 1906, a passenger train was derailed by broken rail near Wamego, Kansas. One conductor and 46 passengers were slightly injured.

On October 10, 1906, freight trains collided at Ridge, Wyoming, owing to overlooking of train orders. Two engineers, 1 fireman and 1 brakeman were killed and 2 firemen injured.

On December 3, 1906, 1 brakeman was killed in a collision between freight trains near Point of Rocks, Wyoming.

On January 2, 1907, at Brule, Nebraska, 2 passenger trains collided, causing the death of 1 passenger and injury of 7 passengers, 4 mail clerks and 4 employees. The cause of this accident was improper flagging and control of trains.

On March 25, 1907, through failure to observe signals, 2 freight trains collided at Gilmore, Nebraska. There were no persons injured.

On May 15, 1907, freight trains collided at Red Desert, Wyoming, due to carelessness of an engineer and causing slight injury to 1 engineer.

In all the above cases, employees responsible for the accidents were discharged, after careful inquiry made into the accidents by special boards of inquiry, which have been provided for during the past year, and which consist of officials of the road together

USEFUL GIFTS

—FOR THE—

BRIDE, SWEETHEART,
RELATIVE OR FRIEND

You will find at Hayden's an array of gift giving goods not only beautiful but useful.

No matter which way you turn, something confronts you that will be just right.

And in dealing here you know you get just what you think you get, and at the smallest margin of profit.

Remember only five days more in which to make your Christmas purchases.

James B. Hayden,

JEWELER

727 Kansas Ave., Topeka



BARGAIN OFFER

50 Strawberries, 50c, 5 kinds
50 Asparagus, 50c, best
12 Grapevines, 50c, 4 best kinds

Any one of these prepaid for 50c; any two for 75c, or we will send them all for \$1.00

and if order is received before Jan. 1, will add as an extra premium for promptness, 1 Clematis Paniculate, finest of all Clematis. IOWA NURSERY CO., DES MOINES, IOWA

with persons of prominence, integrity, and reputation who may be selected to fill a place upon the board.

Carefully compiled statistics, the result of close inquiries, during the year, have supplied a basis upon which the management of the road are acting with a view of reducing accidents to the minimum. A system of tests was established three years ago for the trying out of the watchfulness of employees relative to the signal system. These tests are conducted on all divisions. A school of instruction, or a board of examiners passes over the system each six months drilling both new and old employees in the matter of transportation rules so that all may think, know and act uniformly in the performance of their respective duties. With an educational system and with the protective measures that are employed, it is more than likely that during the next year, there will be a still further decrease in the number of accidents, and in the loss of life and personal injuries on the Union Pacific.

TO MAKE GOOD COOKING BETTER.

Valuable Cook Book Containing Hundreds of Choice Recipes and Other Kitchen Helps, to Be Sent Free to Our Readers, on Request.

Here is something that should have prompt attention at the hands of every one of our readers. Do not postpone it.

The Enterprise Manufacturing Company, of Pennsylvania, 234 Dauphin Street, Philadelphia, has just gotten out a new and up-to-date edition of their valuable cook book, "The Enterprising Housekeeper." The regular price of this book is 25 cents, and it is well worth it, but every one of our readers can get it absolutely free, simply by writing to the Enterprise Manufacturing Company and asking for it. "The Enterprising Housekeeper," in addition to recipes for hundreds of delicious dishes, contains many suggestions for labor-saving kitchen helps. It shows the ways of using the Enterprise Meat and Food Choppers, and other Enterprise machines to the best advantage. Many women will be astonished to learn the trifling cost of these machines, the work they save, the almost endless uses to which they can be put, and the delicious dishes they prepare. The Enterprise Meat and Food Choppers chop any kind of meat, raw or cooked, easily, rapidly, and well, and best of all, chop without crushing. Fish, vegetables, and practically every kind of food, can be prepared with these machines as in no other way.

Those of our readers who desire a copy of "The Enterprising Housekeeper" should get their request in as soon as possible. Though the edition is a large one, it may be exhausted.

The Use of Metals in Construction.

With the price of lumber going up and timber getting scarcer every year, it is not surprising to note the vast quantity of iron and steel that is being used in modern construction. The adoption of these metals makes it possible to build ten, twenty, and even forty story buildings where a building of five or six stories was unusual when contractors were confined to wood or stone. This is certainly the age of iron and steel. Immense battleships of steel now ride the ocean, while only a few years ago an armored cruiser was a thing unthought of. The use of these metals is not confined to the erection of large buildings or the construction of battleships alone. Everywhere you go, you'll see evidence of the widespread uses of these metals. Probably one of the most interesting, and at the same time useful ways in which these metals are utilized, is in the manufacture of a corrugated road culvert that has remarkably great strength. This culvert is patented and is made by The Corrugated Metal Manufacturing Co., of Emporia, Kansas. On account of the heavy coating of zinc, and the annealing of the iron sheet from which these culverts are made, they are practically indestructible. Anyone who is interested in the betterment of their roads, would find much value in the catalogue and other advertising matter which is sent out free by the above named company.

CAN THERE BE A LARGE POULTRY INDUSTRY?

(Continued from first page.)

hens cost 50 cents apiece the investment in stock would be only \$500. If another \$500 were invested in appliances the total investment would be only \$1,000. Again, the amateur will say, "If the \$500 worth of hens should last only one year and if it cost \$500 each year to renew the stock and \$1,000 to feed the hens there would still be left a net income of \$1,500." The amateur figurer of course goes further and proposes that if the investment be doubled the net income will be doubled, and if the investment be multiplied by four there will be a net income of \$6,000 a year.

Of course, the amateur's figures are wrong. But worse than the cutting down of margins is the fact that the building up of a large poultry industry presents contingencies that never fail to surprise and disappoint the amateur.

The increasing demand for poultry and eggs, an increase that is likely to be accelerated with the continued growth of the cities, lends importance to the poultry industry. The problems not yet solved are worthy of most careful consideration. Their solution should bring rich rewards for those who solve them.

THE GREAT MARKET FOR PURE-BRED POULTRY.

In presenting this special poultry number of THE KANSAS FARMER, the publishers' purpose is to recognize in a suitable manner the great and growing poultry industry. In doing this the aim has been to present matter useful to the poultry-raisers on the farms. That the interests of these lie in the direction of improved stock—of pure breeds—is as certain as in the case of the producers of hogs, cattle, and horses. There are very many breeders of highest class pure-bred poultry among the readers of THE KANSAS FARMER. Not a few of these present their compliments to the fraternity in the advertising columns of this number. These are wise. The ultimate market for the great bulk of poultry and poultry products leads to the table. No less true is it that the great market for the breeder of pure-breeds must be found among the producers of poultry and eggs for market. The best possible medium for reaching this ultimate market for pure-breeds is THE KANSAS FARMER, as has been abundantly proved by the experiences of the years past.

How They Score a Chicken.

BY THOMAS OWEN.

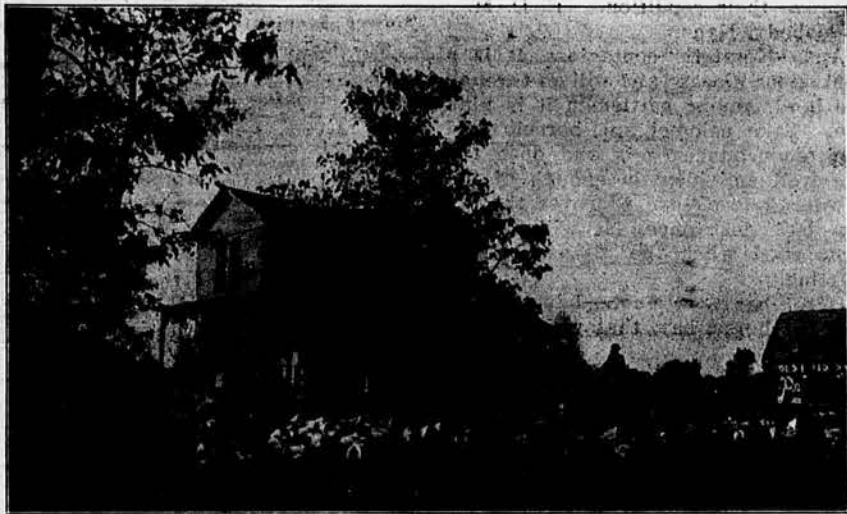
At a recent fall fair, we overheard a gentleman tell a subscription solicitor of a poultry journal, that he would not subscribe for the paper because there was nothing of interest in it to people who were not poultry fanciers. For instance, said he, "although I have read a great many poultry papers, I have never seen an article in any of them explaining how a chicken is scored. I know a perfect chicken is supposed to score 100 points and that he is cut for certain defects, but how much for a bad comb or a poor wing I never knew." Of course, the gentleman had never exhibited birds at a poultry show or he would have found out some of these things.

I assume that there may be many readers of THE KANSAS FARMER in the same position as this gentleman, a lover of poultry, yet not a fancier or

exhibitor, but anxious to learn more of them. Like Agrippa they are "almost a Christian," but not quite. So to enlighten such we will tell them how the judges score a chicken hoping it may be both interesting and profitable to them.

The reader who has exhibited fowls and knows it all, may pass this article by, it is not meant for him.

The American Poultry Association of the United States is an organization of the poultry fanciers of America, associated together for the purpose of bettering the condition of pure-bred poultry and disseminating literature conducive to that end. They publish a book called "The American Standard of Perfection," in which all the fine points and all the defects of pure-bred poultry are minutely detailed. This is the poultryman's Bible, his guide in all his dealings with his stock, and the final arbiter at all poultry shows.



Home of Mrs. A. P. Woolverton, one mile west of Topeka, Kans., Route 8. showing a part of her large flock of Light Brahmas. Baby chicks a specialty.

The judges are supposed to follow its directions and the exhibitors must abide by its decisions. It lays down certain rules for the guidance of all and the score of a fowl is determined by its instructions. A perfect chicken is presumed to score 100 points. To make that hundred points there is a scale of points affecting each section of the bird. In the American class the scale is as follows:

	Points.
Symmetry.....	8
Weight.....	6
Condition.....	6
Head—shape 3, color 3.....	6
Comb.....	8
Wattles and earlobes.....	6
Neck—shape 4, color 6.....	10
Back—shape 4, color 4.....	8
Breast—shape 5, color 5.....	10
Body and fluff—shape 5, color 3.....	8
Wings—shape 4, color 4.....	8
Tail—shape 4, color 4.....	8
Legs and toes.....	8
Total.....	100

We will assume that the judge is about to score a Barred Plymouth Rock cockerel. His band number is 60. Each fowl at a poultry show must be banded so that the judge and secretary can tell them apart and keep a record of their scores. The fowls are weighed soon after arrival and the weight of each placed on a card. In this instance this bird weighed 7½ pounds. The Standard says a Barred Plymouth Rock cockerel should weigh 8 pounds and for every pound he is deficient he is docked two points. This bird is half a pound short in weight and is docked one point for weight. Note the accompanying score-card.

OFFICIAL SCORE CARD.			
Date, January 16.	Variety, B. P. Rocks.		
Owner, T. Owen.	Sex, cockerel.		
Address, Topeka.	Band No. 60.		
Entry No. 21.	Weight 7½ pounds.		
	Shape. Color.		
Symmetry.....	½		
Weight or size.....	1		
Condition.....	½		
Head.....	½		
Eyes.....	½		
Comb.....	1½		
Wattles.....	½		
Earlobes.....	½		
Neck.....	½		
Back.....	½		
Breast.....	1		
Body and fluff.....	½		
Wings.....	½		
Tail.....	½		
Legs.....	1		
Toes.....	½		
*Hardness of feather.....			
†Crest and beard.....			
Total cuts, 12½.	Score, 87½.		
*Applies to Games and Game Bantams.			
†Applies to Crested Breeds.			

The judge looks at the general appearance of the bird and finds him de-

ficient of being an ideal bird and docks him one-half point for symmetry. He finds his condition to be off to the extent of half a point. The head of the bird is not shaped just right in the judge's estimation and he marks one-half point against him. The color of his eyes is off to the extent of half a point. The Standard says the eyes of the Barred Plymouth Rock should be "large, clear, and bright bay in color." If they are gray or green or any other off-color, they are docked accordingly. The comb of this bird is a poor one for he is docked one and one-half points. The Standard says the comb shall be "single, rather small, perfectly straight, free from side-sprigs, with five even and well-defined serrations, fine in texture, bright red." The wattles of this bird are not right; one is longer than the other and he is docked one-half. The ear-lobes of Barred Plymouth Rocks should be

bright red. If there is any semblance of white they are docked accordingly. This bird has a little white and is docked one-half point. If there is any permanent white in the earlobes it disqualifies the bird at once and the judge will have nothing more to do with him. The neck of this bird is neither correct in shape or color and is docked one-half point on each. The shape of his back is not so to the liking of the judge and he docks him one-half; and the color of the feathers of the back are off one whole point. Probably the judge finds a solid black feather there in place of a barred one. His breast is not full or rounded enough and he is docked one point for shape and one-half because the color is not just right. The color of the body and fluff, the wings and tail are off a half-point each, while their share is all right. The color of the legs is off one point, probably because there are some scales on them or they are other than bright yellow in appearance. The toes are docked one-half point, one of them is crooked. This makes twelve and one-half points out of 100, which leaves the score of the fowl 87½ points.

Should a Barred Plymouth Rock have any feathers on shanks or toes; permanent white in the earlobes, lopped comb, decidedly wry tail, a deformed beak, or red feathers in any part of the plumage, he is disqualified and thrown out of competition. This bird that scores only 87½ points is not considered a first-class bird. The Standard says a bird to win first money at a show should score 90 or more points; and to win a second prize should score 88 or more; and that no prize be awarded to any specimen scoring less than 85 points. This bird, therefore, would be considered a third-class bird.

We have marked defects in this imaginary bird in all sections; not because he is a typical bird, but to explain the cause for all the cuts on score card. Very few birds are cut in so many sections as this bird.

In figuring up the score of a pen of young fowls at a poultry show, the Standard says: "Add the scores of the females together and divide the sum by the number of females in the pen; to the quotient thus obtained add the score of the male and this sum



Top Prices for Poultry

Suppose your flock of chicks or old fowls will average a certain weight at market time. Suppose you so handle them as to make each weigh a full pound more than you expected. That would be a nice, clean, extra profit, wouldn't it? Do you know that?

DR. HESS Poultry PAN-A-GE-A

given as the makers direct, will help a fowl to digest and use such a large portion of the daily feed that it actually grows larger and heavier than it would be possible to make it without Poultry Pan-a-ge-a. This is true. Poultry Pan-a-ge-a contains the bitter tonics to act upon the digestion, iron for the blood and nitrates to expel poisonous matter. It is the prescription of Dr. Hess (M.D., D.V.S.) and is a guaranteed egg-producer as well as flesh-former. Makes chicks mature early and also prevents poultry disease in old or young.

Poultry Pan-a-ge-a is endorsed by poultrymen in United States and Canada. Costs but a penny a day for 80 fowls.

Sold on a written guarantee.

1½ lbs. 25c, mail or express 40c
5 lbs. 60c; 12 lbs. \$1.25
25 lb. pack \$2.50

Send 2 cents for Dr. Hess 48-page Poultry Book, free.

DR. HESS & CLARK, Ashland, Ohio. Instant Lice Killer Kills Lice.

BIG PROFITS IN POULTRY.

But you need to know the best methods of feeding, housing, and caring for your flock. You should know how and what to feed to get the most eggs; how to run incubators; how to select and mate various breeds; the merits and faults of each breed; how to care for the young chicks in brooders; how to keep down diseases; and how to keep the flock free from lice and mites. Poultry Culture, the only poultry paper in the great poultry state of Kansas, gives all this and more. It gives the information just at the season you need it. Its writers tell you from their own experience how they have handled their flocks and made money. You can make money out of your flock, too. Poultry Culture can show you how. Full information given on all poultry subjects. It is large, beautifully printed on fine paper, with handsome illustrations of all the breeds, houses, fixtures, incubators and everything about the poultry business. It is complete in every detail. Only 25 cents a year. Send stamps or coin. Sample free.

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CHICKS THAT LIVE

get strong and healthy—lay the most eggs—best for market—are chicks hatched in

RELIABLE Incubators

—the one non-moisture incubator. Best by 26 years' test. Sold under money-back guarantee. Our New Free Book tells all.

Write Today

Reliable Incubator & Brooder Co., Box B62, Quincy, Ill.

A NEW POULTRY BOOK

Progressive Poultry Culture. By Dr. A. A. BRIGHAM. The latest and most complete work on the subject yet published. Filled with up-to-date information, and fully illustrated. Written by the leading authority in this country and the best book for both beginner and fancier. Price \$1.50 postpaid.

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50 young men to learn telegraphy and station accounting and earn from \$3 to \$125 per month. We have railroad wires giving actual experience, making it a practical school. Indorsed by A. T. & S. F. Ry., Write for illustrated catalogue. Santa Fe Railway and Telegraph School, 501 Kansas Ave., Topeka, Kans.

GIVE WARM MUFFLERS! 50c

"Way Mufflers"—Warm and soft—knitted from good yarns—made to fit closely around the neck, with secure clasps. Gray, black or blue.....50c
Large Silk Mufflers—Of good silk, in white, black, blue or gray, at.....50c
Also many others in all colors and qualities, up to \$3.

KANSAS MAIL ORDER SERVICE

The Mills Co., Topeka.

shall be the score of the exhibition pen."

An exhibition pen consists of one male and four females, the females score respectively, 91½, 91½, 92½, and 92½. Adding these together we get 368 points, which divided by four brings the average to 92 points. The score of the male is 91 points. The male is supposed to be half the pen, therefore we add this score of 91 to the average of the females 92, making the score of the pen 183 points.

Parti-colored birds, that is, birds that have two or more colors in their feathers, are not supposed to score as high as solid-colored birds. We recognize one point of difference between them, and the latter are generally handicapped that amount if they come into competition with the parti-colored birds in a sweepstake. We think, however, that there is more difference than 1 point between them and that a 92 point Barred Plymouth Rock is equivalent to a 95 point White Plymouth Rock. We are breeders of the latter variety of fowls and naturally would favor them, but we believe in "giving the devil his due," no matter how black he may be.

When a bird's score reaches these high figures, and fraction of a point added, increases the value of a fowl out of all proportion to the lower score. Say a 94 point bird is worth \$10, a 95 point bird is worth \$50, a 95½ point, \$100; 96 point, \$250, and a 97 point bird, \$1,000. I. K. Felch, the veteran poultry expert and judge once wrote us that a 97 point Barred Rock or Light Brahma male was easily worth one thousand dollars. Some talk very glibly of owning a 95 or 96 Barred Rock, but the best judges say that a Barred Rock male that scores over 92½ or a female over 93½ points are very hard to find. However, if you think you have a 97 point bird of any variety, we would not make a pot-pie out of him; at least not until this money stringency is over. After that, if you wish to dine off a thousand dollar rooster, all well and good, but at present the gold eagles for us, even if they haven't got "In God we trust," on them.

Poultry Houses.

BY THOMAS OWEN.

Of different styles of poultry houses there are no end and a man must indeed be captious who can not please himself with one of the many different kinds that are illustrated.

R. B. Wilkinson, Tonganoxie, Kans., has a two-story house, 20 by 54, with a shed 10 by 54. It is build of grout or concrete and the walls are thick, strong, and substantial, making it warm in winter and cool in summer. Its capacity is 400 laying hens and they thrive and keep healthy in it all through the year. It is well ventilated.

In another place in this paper will be found the plans and specifications of a new poultry house by Mr. Wilkinson, an improvement he says over the one he now has, which must be very good, if it beats the old one.

While these poultry houses may be more pretentious and take more labor to build than the ordinary farmer wants to give to a chicken house, it may not be amiss to consider a cheaper form of house. A shed-roof poultry house is probably the cheapest kind that can be built. One 12 feet wide by 36 feet long is a very convenient size and could be made into four pens. We like it sloping to the south, 7 feet high on the north and 4½ feet on the south. Four windows in the south side. We also like a passage way of 2½ feet on the north side so that one can go in to see his chickens without soiling his feet or scar the fowls. The soft feed and drinking water can be placed in the passage way and the chickens can eat and drink without fouling their food. It can be built of drop siding or up and down boards, then battened. It should be covered on the inside with tar paper. A new kind of poultry house is now having a run in the East, and has reached some parts of the West, and that is the open front poultry

house. It can be made of any dimension desired, though it is advisable to have it pretty wide, say 14 or 16 feet wide. The idea is to make it perfectly air tight on the north side and the east and west ends, and open at the south side, with only poultry netting to keep out prowlers and keep the fowls in. It is said by those who have used them to be a very healthy kind of house and although open in front it never gets cold enough to freeze the chickens or stop them from laying. Another style of poultry house that has appealed to the writer, especially when riding through a wheat belt country and seeing the piles upon piles of good straw going to waste; and that is the straw built poultry house. We have never seen one built, but the following description of one by Mr. W. H. McCormick in Poultry Tribune and strikes me as being a good one. He says the material only cost him \$9.80. If the open-front idea of a poultry house were worked out with straw, it could be built for much less money as no drop siding or windows would be required, simply one door in the south with poultry netting the balance of the south side would be all that would be required.

"I would describe my straw stack poultry house, which is positively the healthiest house that can be built, as follows: I built it two years ago; size 16 by 32 feet by 5 feet high, but may be made any dimensions to suit one's wants. I set 8 foot posts in the ground 3 feet deep and 8 feet apart either way, thus using fifteen posts in the house. The south side is sided up with drop siding, with a large, roomy door in the middle and two 2 by 3 windows on each side of door. On each end on north side I have stretched 4 feet woven wire fencing. The top was made by laying 16 foot logs both ways, using fifteen logs in all and on top of this was put brush to keep straw from going between logs. Now, I am ready for the straw which was blown on by a windy stacker when we thrashed.

"I put eight or ten feet of straw on back and two ends, letting it come around in front as far as possible, so as not to cover any of the windows; enough straw must be put on to make a water proof top. I thrashed on it over a quarter of a day and it was at least 20 feet high when completed. Now, we have the building complete, except the inside, which may be arranged any way to suit user. I allow to keep 150 hens in this house and get eggs the year round. This house is never damp and there are no frosted combs; neither is there any foul air, it is always sweet and fresh. It is warm in winter and cool in summer, and my fowls are never sick in any form.

"The woven wire, put on before the straw, is absolutely essential, otherwise the fowls will scratch out the straw in different places and steal away nests occasionally. This house is the best and cheapest that can be built, but if you are careless and let the lice get it, it would be the worst to get them out of. I never have seen a louse or a mite of any kind in it. I keep lice killing nest eggs in the nests at all times and aim to paint the roosts with lice paint every two weeks in warm weather and every four weeks when it is cold.

"This house cost \$9.80 and is better than any house that can be built at any price. I must say, however, that I did the work myself and was able to get the logs and roosts from a grove at home, so my only cost was for windows, drop siding, and woven wire.

"The straw may be fed off to cattle or horses after winter weather is past and new blown on each thrashing time, thus having a new house every year."

Poultry in High Altitudes.

With a complete failure of our apple crop, and being newcomers to New Mexico, this year has been a hard one. Two years ago I purchased from a poultry farm, which advertises in THE KANSAS FARMER, some S. C. W. Leghorn pullets and a cockerel. From these I raised two pens of

twenty hens. One pen laid 208 eggs per hen per year, the other 198.

Last spring eggs failed to hatch with hens, also in the incubator. For a support I had to rely on my 2-year-old hens. I fed them well on wheat, corn chops, bran, and table scraps from a first-class hotel. I ground up the table scraps with the cabbage leaves and turnips which grew in my garden. For this I used an Enterprise meat chopper like the butcher uses. I did not have a sick hen during this year. For grit I bought crushed lime rock from the cement and brick yards.

In, this dry, high country I find it best to dig a cellar for the incubator and keep it damp with a pail of water hanging from the ceiling. My cellar is a dugout like the cattlemen used in early days, ventilated by two stove pipes. Mrs. B. R. BUFFHAM, Roswell, N. M.

Poultry Notes.

One of the finest flocks of fowls we have seen for a long time is a flock of over 300 Light Brahmas owned by Mrs. A. P. Wolverton, Topeka, Kans. They are fine in shape and color and are as healthy a flock of chickens as one can see anywhere. In addition to these Mrs. Wolverton has 75 capons of good size and weight. All these fowls she raised this year from thirty-six Light Brahmas. Besides these she sold over 800 baby chicks and one thousand eggs for hatching. Mrs. Wolverton says she never had a flock of any breed of fowls that laid so well as these. This is remarkable, for Light Brahmas as a rule, have not the best reputation as egg-layers. Having more fowls than she wishes to keep over, she will dispose of her surplus stock at a reasonable price. Her advertisement will be seen elsewhere in this issue.

The laying contest that for the past year has been carried on at the Kansas State Agricultural College by Supt. W. A. Lamb, ended December 1. Twenty-five pens, containing six hens and one male, were entered, each pen representing a particular variety of fowl. The object was not entirely to get a record of the eggs laid by the different varieties, as blood lines and methods of feeding enter largely into that, but a great amount of other data may be gathered from a contest of this kind, such as the cost of feeding a hen; the varieties that stand close confinement the best; the ones that are broody the most; whether or not a hen loses time by being allowed to sit; which pays best, to have hens lay in the fall and winter or in the spring and summer, and many more problems that confront the poultry farmer. The cost of feeding a hen in close confinement is rather large, ranging from 80 cents to \$1.17 per year. The American varieties proved to be broody the most. The following table gives the six pens that made the best record, in the order given.

Variety	Cost of Val. of	Feed.	Eggs.	Profit.
S. C. W. Leghorns...	\$4.93	\$9.465	\$4.535	
S. C. B. Leghorns...	4.83	7.65	2.82	
S. C. B. Minorcas...	5.28	7.30	2.02	
B. Leg.-Red Cross...	5.62	7.25	1.63	
S. H. Hamburgs...	4.85	6.21	1.36	
S. C. Brown Leg...	4.96	5.63	.573	

Total 24 hens... \$30.47 \$43.505 \$12.938

This table shows that while the Minorcas laid 61 eggs more than the Red Cross, the value was only five cents more because of the season when the eggs were laid. The time of the year eggs are laid enters very largely into the profit or loss.

The premium list of the State Poultry Show to be held in Topeka, January 6 to 11, 1908 is now out, and a copy will be mailed to anyone on request to the Secretary, Thos. Owen, Sta. B., Topeka, Kans. The week of this show is known as Farmers' Week, when the State Agricultural Society meets, the State Swine Breeders' Association, and other kindred organizations. If you are in Topeka that week you should attend the State show by all means.

This is a good time of the year in which to buy pure-bred fowls. Poul-

EAT is the most essential element in the hatching of eggs. The heater is the heart of the incubator. The "Fairfield" has a good, strong heart that never fails to work. Ventilation and moisture are the other two important elements to the process. Without boasting, we claim that in all three of these important essentials the Fairfield Incubator is the peer of any incubator built.

Fairfield
INCUBATORS AND BROODERS

in competition with other makes have carried off the medals in many instances. But what we consider of more importance than medal winning in establishing their superiority, is the records they have made in the hands of purchasers under the most unfavorable conditions. That's because they are practical machines, built for practical people. Farmers, their wives, sons and daughters, have been remarkably successful with our machines.

Don't buy an incubator or brooder until you get our new catalog and read our guarantee. Get the machines that insure success. Write for catalog today.

Nebraska Inc. Co., Box 7, Fairfield, Neb.



Free Poultry Book Certificate

Cut out, sign and send this Certificate and by return mail you will receive a copy of our Great Free Book Telling How 140,000 Men and Women are Making Money with the Famous

Sure Hatch Incubator

The book is full of valuable help to beginners and professional poultry raisers. Tells why the Sure Hatch excels all other incubators—why it hatches most chicks that live and grow into dollars quickly. The Sure Hatch is the incubator that runs itself and pays for itself. Send no money—the book is free. Use coupon or ask for it on a postal.

SURE HATCH INCUBATOR CO.
Box 42, Fremont, Neb., or Dept. 42, Indianapolis, Ind.
Send book to

Name _____
Address _____

How to Make \$130.00 IN A FEW MONTHS

RAISING CHICKENS
Less than \$20.00 capital required. Our big, 100-page, Free Queen Book tells how lots of people are doing it—some doing even better. You can do it, too, with

QUEEN INCUBATORS

They hatch more chicks and hatch them big and strong. They represent our best efforts after making 80,000 machines. Guaranteed 5 years. Sold on unlimited trial. Freight paid to your R. R. Station. Send for our Free Book today.
QUEEN INCUBATOR CO.,
Box 28, Lincoln, Neb.

\$7.15 Buys the Best 120-EGG Incubator ever made

Double cases all over; best copper tank; nursery; self-regulating. Best 100 chick hot-water brooder, \$4.35. Both ordered together, \$11.00. Satisfaction guaranteed. No machines at any price are better. Write for our book today or send price now and save waiting.
Belle City Incubator Co., Box 18, Racine, Wis.

WALLACE INCUBATOR

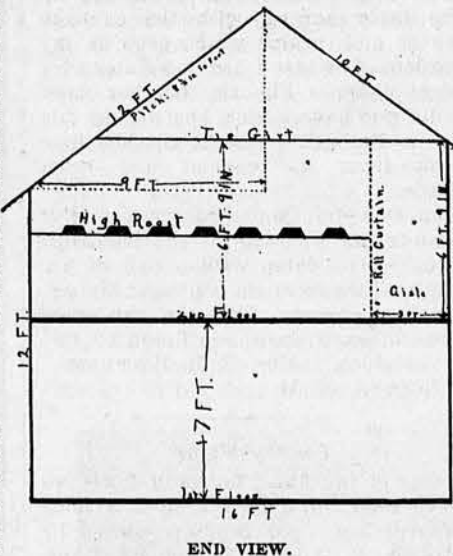
Built by experienced poultryman. Guaranteed. You have whole season to try it. Perfect ventilation. Self-regulator. Non-moisture. Raise chicks easily in Wallace Brooder. Free catalog. Wallace Incubator Co., Box 36, St. Joseph, Mo.

try-breeders will sell stock much cheaper now than they will in the spring, besides there is generally a rush in the spring-time and half the time a breeder can not furnish what is required. The poultry shows are now in full blast and the prospective buyers should attend these and choose the variety of fowl that he intends to breed. He can often buy in the show room just what he needs and he sees what he is going to get, which is much better than buying stock on any person's description. It takes no more to keep a pure-bred chicken than it does a scrub, but the satisfaction of keeping pure-breds is much greater, and the profits larger, for they will outlay the scrubs and produce more flesh. Attend your nearest poultry show and treat yourself to a pen of pure-bred fowls.

Plan for Farm Poultry House.

Except in the south, this house is to have no openings, neither windows nor doors. The upper story is for the roosts and the ground floor for scratching and laying department. The ground where the building is to stand should be at least one foot higher than the ground around it. Dig trenches 12 inches wide and 18 inches deep, from outside to outside 16 feet 4 inches by 32 feet 4 inches. Fill with concrete to the top of the ground. On this build concrete wall 1 foot high

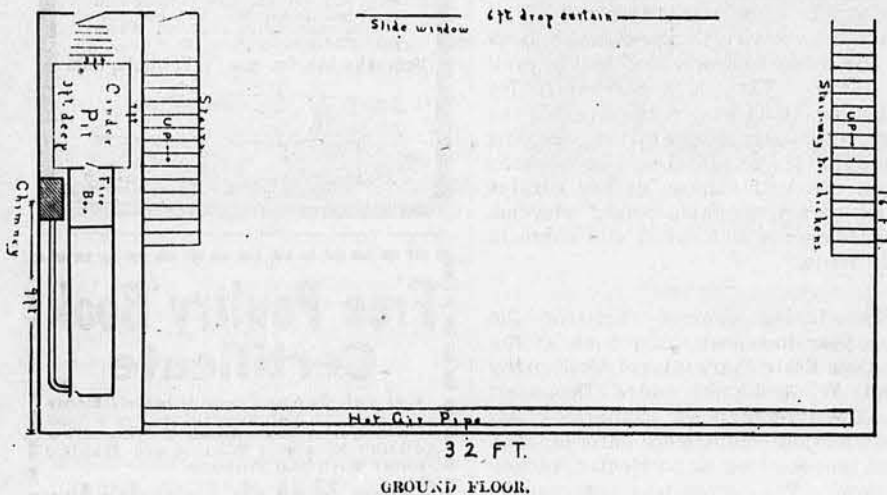
should be 2 feet apart, except on the south. They should be spaced 6 feet apart, then 4 feet apart, etc. The 4-foot space to be boarded up and slide windows put in, both in upper and lower stories. The 6-foot space is for curtains to hang. Use two 2 by 4 pieces



END VIEW.

for plates; put ties on up to the square to hold building from spreading. Keep them there until roof is on and the tie girts are in.

A 1 by 6 should be spiked to studding just below plate and extended to

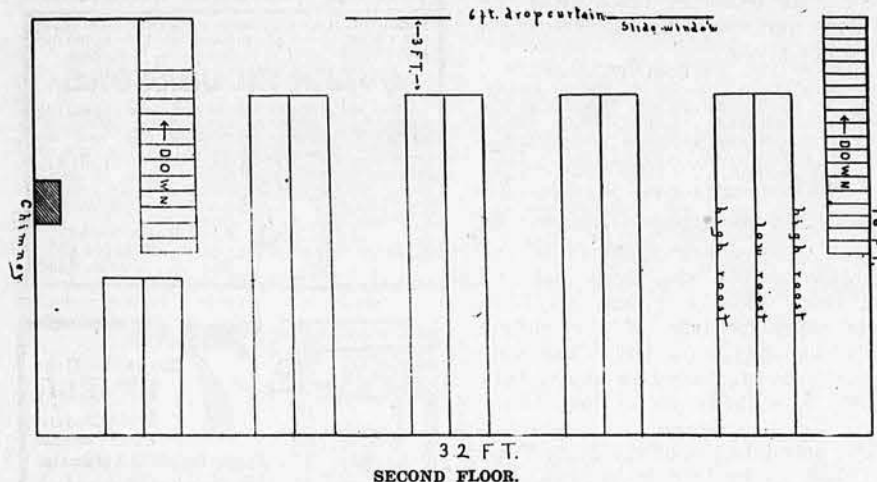


GROUND FLOOR.

Plan for Farm Poultry House 16 by 32 Feet, 12 Feet Posts, 2 Stories High, with 14 Feet Posts on South.

and 8 inches thick, 2 inches back on the lower 12-inch wall, so when complete the upper wall will be 16 by 32 outside. Put on sill 1 by 6, or 2 by 6, set up studding back 4 inches from the face of the wall 2 feet apart, except on the south. Split any old boards into strips 1 to 3 inches wide or get small pales or any waste lath. Nail these diagonally on the outside of studding, about 12 inches apart on both ends and on the north side up to the square. These laths should be nailed on about the same pitch as

the joist about 3 feet from the wall in several places, to hold wall steady at eaves of building. It would be better to have them on the south side but we can not on account of the aisle running full length. This south side will have to be braced with short braces in 4-foot spaces that are boarded up. The open space should be covered outside from sill up two or three feet with wire mesh and the rest of the way up with 2-inch mesh inside of studding same way up to within eighteen inches of the top, or plate. Curtains made of



SECOND FLOOR.

roofs, and should be well nailed. They are to hold the mortar, stiffen the walls, and brace the building. Posts should be set about 8 or 10 feet apart, inside of the building at least 3 feet in from outside of wall, extending up against studding just under upper floor; they will be some in the way on the ground floor, but we will have to have them to keep the building from swaying in the middle; these posts should be set on stone, or cement, to keep them from rattling. Studding

white cloth to hang on rollers and should work between these two wire partitions. This inside wire work is to keep the curtains in place when the wind is blowing hard. The curtains are to be let down in cold or windy weather and rolled up in warm weather. The gables should be boarded or sided up as any building when rafters are up and roof boards are on. Lay shingles to a cleat instead of a line; give each course a coat of white-wash made into a thin paste. When

through, give exposed parts of shingles a good coat of the same but a little thinner.

Put in one or two ventilators in the peak of roof with trap doors to which is fastened a rope running down to upper floor, where you can open and close it. These ventilators should be kept shut except in extremely warm weather.

Take clay two-thirds and one-third coal cinders, take out sulfurous chunks, as they will slake and cause trouble by bursting off plaster, or use crushed cobs, or sawdust, or fine-cut straw or corn-stalks. Run them through mixer the same as you would clay for making brick. As this is shoveled back mix in plenty of straw. Then take manure forks and build walls with this mixture on outside of studding, a little less than 4 inches thick, lapping it well over the diagonal lattice work to stay it until set, then smooth down with trowel on inside between studding. Dress down the outside, pat it down and check it until it is all creased with a potato spade, then while soft run on cheap coat of rough lime mortar; no hair is required. Don't rub it too much but mix it with clay and float it on. If the sand is as coarse as hickory nuts all the better; it will float on like quicksand. Let this set and dry a few days then put on a finishing coat of lime mortar, not too rich with lime. When well dried give it a coat of stearate of lime. This is made of 10 pounds of unrendered tallow cooked with 1/2 bushel lump lime. Float this on while warm. This should be repeated once every two years at least. This is fine for any stone, brick, or plaster work. Here you have walls which are almost non-conductors of heat and cold that will last a lifetime with but very little expense. Concrete made of sand and cement will conduct cold and heat almost equal to metal. It is more liable to crack, and is four times the expense.

The ground floor of the house should be partitioned off as shown in the draft. This room should be lathed the same as the outside walls, on both inside and outside, and it should be plastered. The wire mesh or slat door opening into furnace room from south will let in air to pass through furnace room over furnace and into the large pipe, not less than 1 foot wide and 8 inches deep in clear, running full length of back side of house, starting one foot below joist at entrance of furnace room, with a little rise, so it will touch the under edge of joist at farther end. This pipe should be nearly tight at furnace room and the farther away the more open. Pipe could taper down at farther end from furnace to the small size under this wooden box or pipe. This is a fine place for nest boxes.

This furnace room is a fine place to burn sulfur in the spring or early part of the summer to keep down mites and lice. Put down a sheet of paper and sprinkle over it a handful of sulfur, then touch a match to it. Let the sulfur simmer, for the fumes will pass through the pipe and fill the house. Do not use too much sulfur when fowls are in the house. This fumigating should be done the first thing in the morning as there is usually less wind. Do it as often as two or three times a week. It is but little expense and no lice will live or prosper after such treatment.

The last board, say about ten inches on back or north side of upper floor, should be left out and space should be capped so dirt will not drop down from the upper floor, and so air can pass up and down freely. The cap over this opening should be nearly 18 inches high.

Fire should not be built in this furnace except to bridge over zero weather, just enough to keep the fowls' combs from freezing. This artificial heat, when the house is closed comparatively tight, is a good thing to keep up circulation, carry out all foul air, and take out all dampness.

Plan perches for each hen. Spread them out evenly over the house. This keeps them from wedging, for wedging is a bad thing in cold weather. The end perches

JOHN DEERE
MOLINE, ILL.

Lightest Draft Plows

Over 75 per cent of the draft of a plow comes in front of the line at which the man in the illustration above is pointing.

This is the "wedge" that cuts, lifts and starts the furrow-slice to turning.

The shape of a plow at this point determines whether the draft is to be heavy or light.

All John Deere Plow Bottoms

are "narrow waisted" and shaped to enter the ground the way a thin wedge splits a log. John Deere plows are the lightest draft plows in the world.

The Finest Booklet of the kind ever published will be sent free to you for the asking. It is full of handsome pictures of ancient and modern plows, plowing scenes from all countries and contains an interesting story.

Write for booklet.

Ask for it by number 113. Mention this paper.

Deere & Company, Moline, Ill., U. S. A.

Start Early

profits are greatest for the man who markets his chickens early. Do not be satisfied with old, easy going methods. Get the best equipment—produce the best and make the most money. Write for our new book, "Incubator Why?" telling why our machines turn 90 per cent of the eggs into chickens and why we can do better for you on prices. Please say whether interested in beginners' outfit or large machines.

GEORGE ERTZ CO., Quincy, Ill.

BIGGER POULTRY PROFITS

Our new 128-page Poultry Book teaches the inexperienced and gives the expert many valuable hints. Tells why "SUCCESSFUL" INCUBATORS AND BROODERS are best. Offers 14 varieties of fine birds and eggs at low prices. Catalogue free. Booklet on "Proper Care of Chickens, Ducks, Geese and Turkeys," 10 cents. Poultry paper 1 year 10 cents.

DES MOINES INCUBATOR CO., 156 Second St., Des Moines, Ia.

Hatch Chickens by Steam with the EXCELSIOR INCUBATOR OR WOODEN HEN

Simple, perfect, self-regulating. Hatch every fertile egg. Lowest priced first-class hatcheries made.

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The Old Reliable Anti-Friction Four Burr Mill.

Double the capacity of other mills. 2-horse mill has 24-ft. Grinding Burrs all grinding at once, and grinds from 25 to 60 bu. per hour. 4-horse mill has 30 feet of Grinding Burrs and grinds from 60 to 80 bu. per hour. Absolutely no Friction or Gearing. Will earn cost in 3 days. The largest ear of corn to these mills are like pop-corn to other mills. We manufacture the most durable and fastest grinding line of mills sold, including our famous Iowa No. 2, for \$12.50.

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780 Kansas Avenue,
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should have a little more room than the rest. Each perch should have from 8 to 10 inches, according to the size of the fowls.

Besides outside curtains there should be roller curtains from the tie girts, above upper floor just south of ends of perches on north side of aisle, to drop down to within one foot of upper floor. These curtains are to be used only on cold nights.

With this house you have one with the ventilation coming from one way, the only way to properly ventilate the poultry house. Streaks of cold air through the warm air is death to man or beast as well as to fowls. The ground floor should be covered with 3 inches of the same material as walls. This makes a lasting floor if kept dry and is almost as warm as a brussels carpet, and it is the only floor for a poultry house.

A two-story poultry-house is recommended by all writers. People forget that the roof and foundation are the most expensive parts of a building. With the two stories you get double the room, much better ventilation with but very little more expense. The nearer square in every way and the larger a building, the more room you have in proportion to material used. Remember the minister's barn was 500 feet long, 20 feet high, and 2 feet wide, "lots of lumber and little room."

Two-inch wire mesh should be tacked to the tie girts which are 2 feet apart, one to each set of rafters. This is to keep fowls from flying up and roosting on the tie girts.

I prefer putting up rafters 8½ inches to the foot raise, as it gives more projection at eaves with 10 feet stuff for south and 12 feet for north slope. The studding should be set out to outer edge of wall on south side.

R. B. WILKINSON.

Tonganoxie, Kans.

Make All You Can.

EDITOR KANSAS FARMER:—While you are making some money at poultry-raising, why not make all you can? If you are making nice money with mixed breeds, under ordinary conditions, why not raise the full bloods and be in a position to sell fowls and eggs for breeding purposes? No demand, do you say? Well sir, there is a demand. A nice flock of full bloods commands admiration. They will, to a great extent, advertise themselves. Give them a little better treatment and get 150 to 200 eggs per year instead of 75 to 100 from the scrub under very common conditions.

Yes, you can raise the scrub's egg record, but while you are at it, expend your energies towards reaching the highest possible profits. The full bloods are not only the most profitable in a direct way but they make your place or premises look better, gives the owner a prestige that is comfortable and really profitable in the long run. To ask the owner of a scrub flock why he does not have some particular kind, four times out of five he will say the common chickens are more healthy. I have known this kind of claims to be made right in the midst of the scrubs dying off. Such claims are prejudice, pure and simple. Take the common kind or the full bloods and pen them up in unnatural, close quarters and the effect is the same in either instance. Turn them loose on the farm and give them good treatment and both will respond.

While the first trap nests were a craze and the excitement soon abated, there were enough logical poultry-fanciers who held on to the trap nests to start and maintain an improvement in egg yield. This improvement is entirely with pure breeds. The trap nest serves a useful purpose. They are to the poultry-raisers what the Babcock test is to the dairyman.

Another reason for full bloods is the evenness of market fowls and eggs. A coop all the same color is more attractive and will bring a better price, and the same of eggs. To start out with I intended to write about getting the top market price, and as a starter in the right direction, full blood poultry is first requisite.

Any poultry-raiser that has one or more cases of eggs in a week can get from 20 to 40 per cent more for them by looking up a private market, some hotel, groceryman, eating house or or the diner on trains. Put the eggs up in cartoons, holding one dozen each. Put them up fresh and clean and stamp them with a rubber stamp. A trade can be worked up with any city groceryman that caters to the high-class trade, or if can be done direct with the concerns mentioned.

I know whereof I speak about these things. I know of a number that are doing it. I know of a single creamery company that handles 15 cars of eggs per month in pretty much the same way. I know of parties who are making a nice thing out of it and there is plenty of room left.

There is nothing that we eat, that goes on the market in such a haphazard, filthy condition as the poultry and egg product. Not by any means am I overdrawing. Consider it for yourself. No matter how old or besmeared the case, just so long as it will hold the eggs and nail together, it will do. No attention is paid to the smell of the egg fillers, no sorting for color, no attention is paid to dirt or feathers sticking to the shells. Most assuredly it would take a hungry person to fill up on the stuff if he saw it first.

The most careless method is followed in marketing fowls. Take a walk in the market place in any city and we get a lesson. Right there we find fowls of all ages, sizes, and colors in the same coop. I might say, without overdrawing, that the coops are a mixture of fowls, feathers, and corruption. At the average market place, it is a relief to find a coop evenly balanced up in size and color. A really decent coop makes us draw a more satisfied breath.

In these days of cooperative creameries, grain elevators, and other things helpful to the producer, it is queer that the most important and biggest industry of all is neglected. Every town or poultry-raising community could advance the popularity of poultry and eggs as food and make money while doing it. It could be operated as individuals or as a company.

Let me say here, that after a groceryman has handled a few cases of eggs put up as I have suggested, the matter of price becomes secondary to keeping that kind in stock. The cleaner and more attractive appearance gives his store a prestige instead of making an eyesore to tasty customers. There is nothing more handsome than a stock of clean eggs in attractive cartoons, there is a repulsiveness in a filthy stock of eggs.

M. M. JOHNSON.

Clay Center, Nebraska.

Why We Should Raise Pure-Bred Poultry.

The question is often asked, does pure-bred poultry pay better than the mixed breed? Yes, we know they do. In the first place did you ever see any one who has had the care of any kind of poultry look on a flock of pure-bred poultry, all of one color, one shape, and of the same habits, that did not think they were beautiful? We all love the beautiful and therefore the pure-bred poultry get better care than the mixed ones. We breed them to lay and therefore get more eggs because we love the beautiful birds and cared for them better.

If we were going to raise a corn crop I am sure we would try to plant a good variety of seed in the best soil possible and give it good attention, while growing, if we would reap a goodly harvest. And it is just so with our poultry. Without the right kind and proper attention our flock is small and of little value. I am not going to say what breed we shall or shall not raise. The kind that suits our fancy best and the kind that we understand how to breed best is the kind for us to raise, as it is always easier for us to care for the birds if we think their color and shape just right.

And again did you ever hear of any one selling eggs from a flock of mixed chickens for any thing more than the



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common market price which range from 10 to 15 cents per dozen about 9 months out of the year and the other 3 months eggs are from \$2 to \$3 per dozen? But the person who is so unfortunate as to have a flock of mixed chickens don't usually get any eggs at that time of the year, as his birds are not bred to lay, and are all colors, all shapes, and all sizes, and are a very homely flock to look upon, so much so that they do not get the attention that the beautiful pure-bred ones do, and the results are very poor. But if our birds are pure-bred and bred to lay we can get eggs the whole year. During the three winter months when eggs are from 20 to 30 cents per dozen we are getting lots of nice eggs and a good price for them, and then when the market price drops to 10 and 15 cents per dozen the time for setting hens and incubators is at hand and if we have the right kind of pure-bred poultry we can command a good price per setting for our eggs and sell all we have for hatching. We are away head of the one who has the mixed flock. And again when we have raised our young chicks, which was no more trouble and they did not eat any more than the mixed ones, we can sell them for \$1 to \$10 each, and some times even higher prices have been paid for very high-scoring birds. While the mixed chickens must be sold to the butcher at the market price, which if not very early-hatched is usually about 25 cents each and sometimes less. The cost of raising is just the same or perhaps a little more for the pure-bred ones; I think the pure-breds grow faster and therefore takes less feed to raise them to market size.

It is just the start that is needed; a few settings of eggs or a few chickens well-cared for will give any one a start in good pure-bred poultry. Something beautiful to look upon, and the results will be more and better poultry and better returns for labor and time spent in the poultry-yard.

Mrs. Edw. Cody.
Clay Center, Kans.

Turkeys for the Farm.

So many farmers have the idea so firmly lodged in their minds that turkeys are an expense and a nuisance upon the farm that I fairly ache to prove the truth to them.

I have been following a flock of turkeys about, here and there upon the farm, for over six years. I have two extra good eyes and an average amount of intelligence, hence I believe my experience may be taken as reliable.

One season we had two acres of corn that was attached by chinch bugs. One flock of turkeys made that field their home until the bugs were gone. Now I do not know whether turkeys would make a business of eating these pests year after year or not. I simply state what mine did one year.

Another year when a field of clover was cut it was alive with grasshoppers. In the fall, when the turkeys began to shorten the distance of their range, they began to spend hours daily, in this clover. Now I give you a neighbor's opinion. He said he would not have believed those turkeys could have so ridden that clover of both the hoppers and their eggs. The field was practically free from these pests the next season. One other man acknowledged the error of his former belief.

It is true the turkeys pick some clover leaves but not so very many, just when they first enter a field they take a little toll, after that they attend strictly to their business of insect-catching. They also kill and eat mice and small snakes. If any "doubting Thomas" would just go with my flock for an hour I believe he would say White Holland turkeys are the greatest weed-destroyers ever invented. The flock spreads out and marches through a field abreast like a company of soldiers when they do not want one enemy to escape. Sometimes they go almost on a run, but they are not on parade as one will find who watches their movements. Every kind of bug seems to go. All are acceptable, and so many of the noxious

weed seeds too. But I think the very choicest to a turkey is foxtail seed. This weed always follows corn and oats, the seeds ripen and seeds the lend to help exercise the farmer the year following. So after the seed is nearly ripe the turkey catches the seed head at the base and with an upward motion of the beak strips nearly every seed from that head. When corn is in the stock it isn't your old corn, Mr. Farmer, that the turkeys are after, it is the weed seeds. It is only seldom that they molest the shock corn unless an ear, partially husked, just tempts them too much.

Now about another false accusation the farmer makes. "Turkeys always eat their heads off." That falsehood stirs me way down deep. From the third day of his life until heavy frosts the turkey is almost self-supporting. He prefers no breakfast, choosing rather the early morn for hunting as then the insects are more easily surprised than after the sun has limbered their legs. And all during their growing the only reason for feeding them is to make them tame and to know that they are domestic birds and have a home. But so many evenings I just have to stand right in the gate and keep them from running over their wheat, they have only eaten a bit, so rushed are they to get to roost before dark.

During wet spells you must feed



your turkeys as they can not find the necessary insects.

One woman wrote me last season saying that she had one flock of turkeys ranging off in the field and sometimes she did not see them for a week, but how they were growing and not one had died. She had another bunch staying near the house and these she fed several times per day, yet they were not so large as the others and one died every few days. If I knew the cause, would I please



help her? I did know the cause, and helped as well as I could. She was trying to make chickens out of turkeys. It can't be done successfully. A chicken takes naturally to having feed handed to him, but the turkey asks no odds of man, until cold weather, if he is just allowed his freedom and has a good, live range.

I truly believe any man whose mind is open to reason will, after a fair test, say turkeys are good for the pasture, good for the clover and good for

all other fields besides. If your flock has to be limited to a few acres I would not try turkeys, for they would be so dissatisfied they might prove harmful to the crops. But ours have never injured one thing. Not even in the garden; and they are fine to clear out cabbage worms, etc. And you can mention no other animal except sheep that are so easily managed. You can drive them anywhere you wish, first to one field, then to another, where they can do the most good, but they will gradually work back where they began ranging when first turned out in the spring.

Here is another for the turkey. You do not have to hunt your customers at selling time. He hunts you. And you do not have to throw in a chromo with him either. Turkeys are always ready sale, and almost clear profit, as his growth was made mostly upon waste products. I most heartily endorse turkeys for the farm.

HATTIE WELD ANDREWS.
Greeley, Kans.

Colony Houses and Brooder Coops.

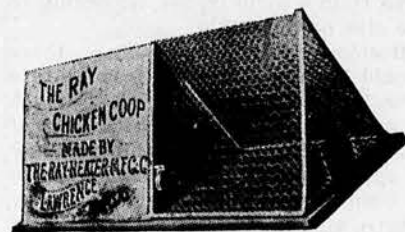
W. A. Doolittle, Partridge Wyandotte specialist, Sabetha, Kans., gives the following descriptions and dimensions of styles in use on his poultry farm:

As illustrated herewith, these colony houses are made 6 by 5 feet, 4 feet

4 inches high at back, 5 feet 4 inches in front with shed roof, as shown in picture, and are made as follows: For sills, or runners, I used 2 by 6 cypress, as cypress lasts very much longer when placed on the ground than either yellow or soft pine. The sills are cut 6 feet long, and sled runners at each end. These stand edgewise and are tied across with three pieces of 2 by 4's, cut 5 feet 4 inches, laid flat and morticed into top of sills or runners, one at each end and one in the mid-

dle. The floor is made of 8-inch ship-lap, cut 6 feet and nailed lengthwise of the frame on the 2 by 4's. The sides and ends are made of 8-inch ship lap, running up and down, cut 4 feet for back and 5 feet 4 inches for front, and run down over frame two inches and nailed. The top is nailed to a square frame 6 by 5, 4 inches, made from 2 by 3 sawed out of 2 by 6's. This completes the frame. The roof is made from 8-inch tongued and grooved soft pine, cut long enough to

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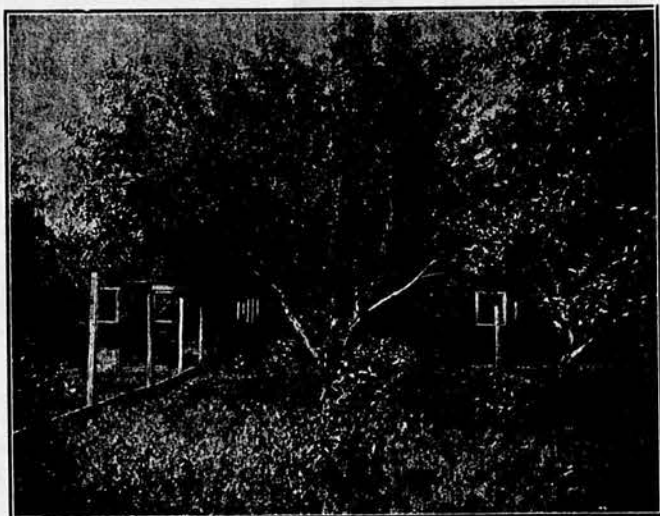
extend about 6 inches over at back and front.

The door, which is simply three of the 8-inch ship-lap, is at the front right-hand corner of the end and is left down about 2 inches from the top, so that it can be swung open without interfering with room. It is hinged to open out and back. Running up and down at each side of the door is a 2 by 3 to which a screen door is hinged so as to open in and to the front, made out of 1 by 6 fencing. The cross piece at the bottom is 1 by 6; top and side pieces are 1 by 3, ripped out of the 1 by 6. The screen doors and windows are covered from the inside with 1-inch diamond-mesh poultry netting, made from No. 18 wire, galvanized after it is woven. This is much stronger and better than the ordinary and

storms. However, they are most satisfactory and made as follows:

Two pieces of 2 by 4's, 3 feet long, are placed edgewise on the ground. Use ship-lap for flooring, cut 4 feet long and 2 feet 6 inches wide. Nail this to the sills which raise the floor 4 inches from the ground and keep it dry in heavy rains. The sills project about 2 inches in front and 4 inches in the rear for the coop to rest on, as it is made so as to fit over the outside of the floor, and they carry the rain off and not to the floor as it would if made to rest on the floor.

Make a square frame for top and bottom out of 1 by 3's cut out of 1 by 6 fencing the proper size so that outside of frame is the same size or a trifle larger than the floor. To this frame nail the back and ends, running

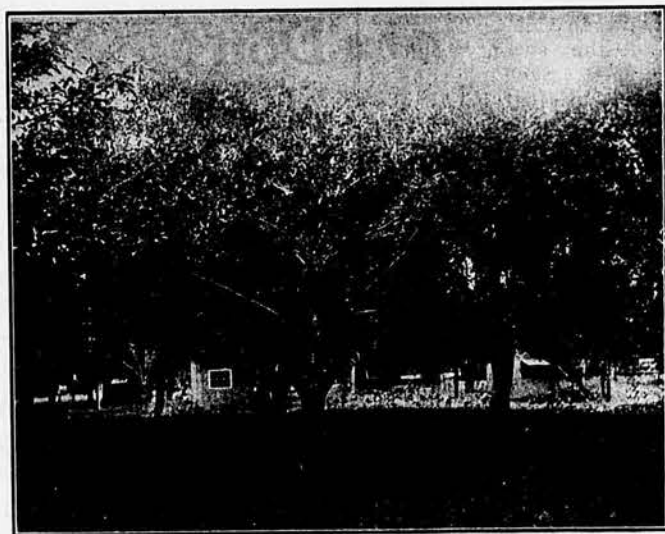


makes the house rat- and skunk-proof. The screen doors are for the purpose of an additional ventilation during the hot summer days and nights, and may be fastened with a hinged hasp and locked with a small padlock. I use what is called the R. F. D. mailbox padlock. Each one has an individual key that will not unlock any other, but there is furnished with them a major key which unlocks all.

In front is one 6-light 8 by 10 window, hinged at the top so as to swing out and act as a storm-protector when open; at the front righthand corner is a small trap door, hinged at the top with a spring screen door hinge which holds it open when raised and holds

up and down; back 23 inches high and front 27 inches. This gives a shed roof and as stated allows the side and end boards to extend down over the floor and rest on the sills.

The roof is made of half-inch lumber put on crosswise of the coop and cut 4 feet 6 inches long so as to project out over the front of coop 18 inches and about 6 inches at rear. This front projection protects the front of the coop from storms that would otherwise beat into the coop. The roof should be covered with some good roofing paper; I used 2-ply rubberoid. The whole front of coop, excepting 8 inches at righthand corner, is covered with heavy galvan-



it shut when lowered. This trap door can be used for birds to pass through and main door or screen kept locked except when passing through to clean the house.

The object of these colony houses is to place twenty-five or thirty chicks in as soon as large enough to leave the brooder house, and as they are on runners can be drawn with a horse to any part of the farm and colonized so that each little flock has its own range and if placed at the edge of farm or pasture where insects are plentiful the results can not help being most satisfactory, as no method of feeding can equal free range and plenty of insect life.

COOPS FOR HENS AND CHICKS.

The illustration gives but a poor idea of the coops as they are placed in the orchard under the trees, which furnish shade and protection from

ized screening, $\frac{1}{4}$ - to $\frac{1}{2}$ -inch mesh. The righthand corner, above spoken of, is used for a doorway. A solid door is used for closing the coop at night and renders it rat- and vermin-proof. A slat door is made to take the place of the solid door when it is wise to retain the hen and allow the chicks to run out during the day.

The screen usually comes 30 inches in width and as there would be a 6-inch strip come off of it, as the coop is not high enough I used this strip in the back by running the back boards up within 5 inches of the roof and nailing the 6-inch strip, above mentioned, over it. This gives ventilation through the coops, but as it is at the top and over the chicks they are not harmed by the draft.

You will see I have not fastened the coop to the floor, but placed it over the floor, resting it on the sills which,



as stated, project beyond the floor. This is done so that the coops may be tipped back, leaving the floor of the coop so that it may be easily cleaned. The sides and back of the coops are made from store boxes and are not expensive. If painted they will last for years. This is the only kind of brooder coops used on my premises and the most satisfactory I have seen to date.

The Expansion of Market Poultry on the Farm.

The Kansas farmer is not living up to his opportunities in many ways, especially is this true in regard to poultry. The time was when he regarded poultry as a nuisance, while he now is ready to acknowledge the usefulness and profitableness of the hen, yet he does not get near the profit from her that he should for the reason that he leaves the care of the hens to the busy housewife who usually has all she can do, and more than she should do, in the house.

I have visited farms where the conditions were ideal for poultry-raising as far as the situation was concerned and where what few hens that were kept went far towards paying the family grocery bills, yet the farmer would provide no quarters or facilities for enlarging the flock. Such men are like a man down in Missouri that had an apple orchard, every year the buyer came around and paid him \$500 for his apple crop as it stood, the \$500 provided him and his family with the necessities of life and he was satisfied; he made no effort to enlarge his orchard so as to get \$1,000, instead of \$500. So it is with the farmer, if the hens can rustle their living and provide a fair share of his living he is satisfied but thinks he can't afford to build comfortable houses for them to stay in during the storms of winter; yet we of the fancy know that it would be a paying investment for him to do so.

I knew personally one farmer that for three years bought all the supplies for his family that could be bought at a general store including a \$60 wagon and paid the hired man's wages from the egg receipts. All the poultry house he had was a 12 by 14 shed, he lived in the timber in a bend of the Kaw river and the woods were full of chickens. The chickens increased mostly of their own accord by hiding out nests. He kept three good fox hounds or I think the increase would have been a decrease.

A farmer to expand in the poultry business, to enlarge his facilities for producing market poultry or eggs, must invest some money first in poultry houses and fixtures. The houses need not be expensive but should have water-proof roofs. They can be made very low at the back 2 or 3 feet is sufficient as it is not a necessity for the attendant to be able to walk erect in all parts of the building.

In these days of building blocks made of rock, sand and cement, a few low walls for poultry houses need cost but very little; the fronts should be of muslin or canvas; the roofs are the most expensive, the best roof for the purpose being ship-lap covered with Paroid.

After the houses are built some provisions must be made for hatching and rearing the chicks, which is done by procuring some good incubators and brooders, also some portable houses with wire screen or netting over the windows, so that when the windows are removed in warm weath-

DOOLITTLE'S PARTRIDGE WYANDOTTES

The world's best general purpose fowl. Birds from my New York, Boston, Chicago and World's Fair winners for sale cheap. Illustrated catalogue telling how to mate and breed them, for 10 cents. Satisfaction guaranteed. Write today to

W. A. DOOLITTLE, The Partridge Wyandotte Man
BOX K. SABETHA, KANS.

er the chicks may be shut up at night safe from their enemies. These portable houses are for the chicks after they leave the brooder and no longer need artificial heat.

The demand for poultry and poultry products was never better than at the present time and no other class of people have so good a chance to increase the product than the farmer. While the town lotter and the suburbanite may be able to cater to the demand for fancy breeding stock it falls to the farmer to supply the bulk of the market products in poultry as well as other articles of food.

The big cattle ranges are a thing of the past in Kansas and grain is bringing such a good price that there is very little profit in feeding hogs for market, so it behooves the practical farmer to pay more attention to poultry in the future, than he has done in the past.

A ton of poultry can be produced at less cost than a ton of any other meat and will bring a much larger price per ton.

You are at a dead expense in feeding cattle or hogs until they are ready for market. The helpful hen is paying expenses with her egg product while her meat products are growing into value.

In conclusion I want to emphasize one thing, to keep poultry on a paying basis one must be continually culling the flock. Put all the male birds on the market as fast as they are old enough to meet the demands of the market, market the hens as soon as they cease to be useful and thus keep nothing that is not giving you value or growing into value. W. A. LAMB.

Manhattan, Kans.

Securing Fertility in Eggs.

Officials of the Department of Agriculture have been collecting data regarding the factors which affect the fertility of eggs, this question having been carefully studied at a number of the experiment stations in the United States and elsewhere.

Too warm quarters for laying stock and overfeeding are commonly believed to exercise an unfavorable influence on egg fertility as well as does a cold season. The way eggs are handled or stored is also believed to affect the proportion which will hatch, as do also the conditions under which incubation occur.

The vigor and character of the parent stock and the length of time the male bird has been with the flock are also important questions with respect to egg fertility. At the outset it should be pointed out that fertility and "hatch-ability" are not necessarily identical.

An egg may be fertile and still the germ does not have sufficient vitality to produce a healthy chick under the ordinary conditions of incubation. In a series of incubator experiments at the Rhode Island Station, of 8,677 eggs tested, 83 per cent were found to be fertile, while only 46 per cent of the fertile eggs, or 38.6 per cent of the total number of eggs hatched, under the conditions of the tests.

The various observations made, while not entirely conclusive, indicate that, in order to secure fertile eggs, which will hatch, the laying stock must not be kept in very warm quarters or over-fed; the males must be kept with the hens continuously, and that only eggs should be used which are produced after the male has been with the hen several days.

Only fowls from very vigorous par-

ent stock and those known to produce a high percentage of fertile eggs (hens vary widely in this respect) should be used; the hens should be allowed a rest after each laying period, while the eggs should be handled carefully, not subjected to extremes of temperature in storage and used only when comparatively fresh.

Barred Plymouth Rocks.

The perfection in which the best standard Barred Plymouth Rocks are bred at the present time, easily puts them in the lead of all other pure-bred poultry. While it is very true, that all Barred Rock breeders do not have the best of Barred Rocks, yet they exist, and these who have given them special care and attention, have something to be proud of in the line of Barred Rocks. I have always advocated and practised single mating, or what is more commonly called Standard mating. This process of mating is simply producing cockerels and pullets of even color from the same breeding pen. The Barred Rocks of the past, as every one knows, is of very uneven color; that is, the cockerels are of a light shade, while the pullets are dark. In order to produce color according to the standard of excellence, from which all poultry is scored, most breeders adopted the double mating process. That is, in order to produce dark cockerels, a very dark pen was mated up, and to produce pullets of proper shade, a light pen is mated. The result is, that the cockerels from the light pen, being alto-

er. Yet poultry does pay, and pay big. Dairying interests are given much more attention and ten times the newspaper space, yet in Kansas it is not so important nor has it increased to the same extent as the poultry interests. The Kansas State Agricultural College is considering the question of greatly improving and extending the work done at the college in regard to poultry study and experiments, possibly putting in a practical poultry farm at Hays in the course of time, where the poultry and eggs would be produced under actual farm conditions. Coburn reports give the amount of butter and milk sold and also the poultry and eggs sold from the farm, but, like the United States census, takes no account of the cows and hens in the towns and villages. The most authoritative report is that compiled from the 1900 census by the general government, which shows in 1900 the value of the poultry and eggs in Kansas was \$13,782,294, excluding all poultry under three months old. Assuming that the birds under three months old, at the time of the census, represented the renewal flock, which is well within bounds, the total value of the birds and eggs sold and consumed, was represented by the figures given. Coburn shows that the value of the poultry and eggs sold have increased practically 100 per cent from the time of the United States census to 1906, which would mean a total of \$27,456,588 this year, but the consumption on the farm has not increased in like rate so the correct figures are

per day at ten cents making a total of \$50.50 and the net returns \$52.50. In this estimate the average cow is not taken, nor the average returns, much less. To the cost the missing of a calf and milk crop about every fifth year properly should have been included. The average returns of poultry on the farm as shown by the 1900 United States census was four hundred per cent per annum. Fifty dollars worth of poultry producing marketable products in one year worth two hundred dollars. The grain consumed is paid for ten times over in the destruction of insects and weed seeds; the time for their care is probably half that required by the cow, but after computing it on the same basis and allowing the offset for feed there remains the credit of the poultry branch of farm income from \$50 worth of birds \$163.50. Not all farms get this return, nor does one cow in ten bring the returns credited the dairy side, but if the eggs and poultry consumed on the farm is taken into account it will be found the estimate for both sides is very fair and that for dollar for dollar the investment in poultry brings in six times as much as the dairy and benefits the farm more. Moral, grow hens.—W. E. Blackburn, in Anthony (Kans.) Republican.

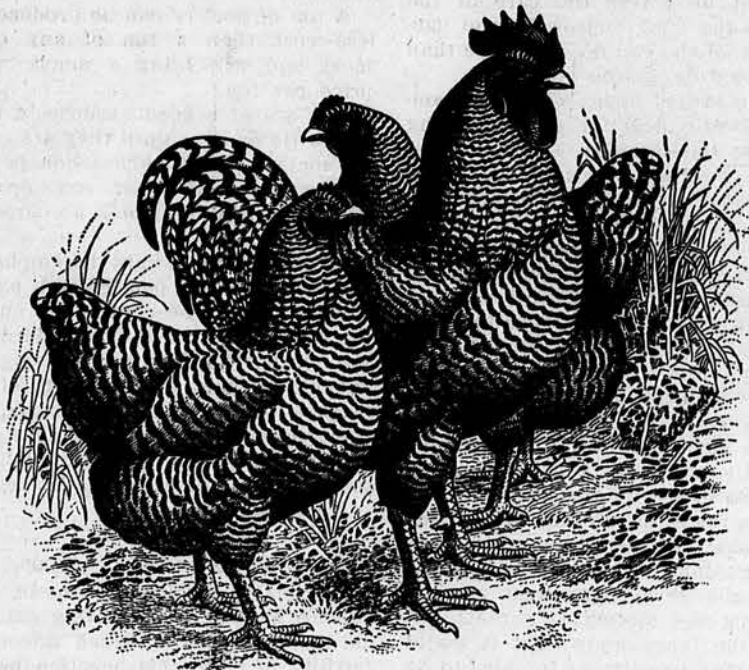
Mendelism in Poultry-Breeding.

ROSWELL H. JOHNSON, CARNEGIE INSTITUTE, WASHINGTON, D. C.

The rediscovery of Mendel's Law has caused a revolution in plant breeding. It is not strange, therefore, that poultry-breeders as well as other animal-breeders should ask if it does not also offer them some help. The poultry-breeder is, in fact, especially fortunate, inasmuch as one of the most extensive studies in scientific animal-breeding which has yet appeared is based on poultry. This is "Inheritance in Poultry," by C. B. Davenport, Station for Experimental Evolution, Carnegie Institution. There have also been extensive studies of heredity in poultry by Bateson and Hurst in England and by Erf in Kansas.

Let us first consider what Mendel's Law is. We can do this best by taking one of the crosses reported on in the paper referred to above.

Black Minorcas were crossed with White-Crested Black Polish. It is well known that Polish fowls have a crest or "top-knot," while the Minorcas have none. Now, in this cross every single one of the seventy chicks hatched had a crest. Such inheritance is called alternative—that is, all the progeny resemble one parent in this one respect, while the influence of the other parent is not apparent. When some of these cross-bred birds were bred together, some of the young had crests and some had none. The proportion that was not far from three crested to one without crest. This result accords with Mendel's law. In this case the crest is said to be dominant and crestlessness recessive. A dominant character, then, is one which is found in 100 per cent of the first generation by hybrids and 75 per cent of the second generation. A recessive character, on the other hand, is found in none of the first generation, but in 25 per cent of the second generation. The real meaning of this result may be more readily understood, if we follow the suggestion of Dr. Darbishire in using colored chips. Let white chips represent the germ cells (either spermatozoa or eggs) of the crested birds and red chips the germ cells of the crestless birds. Now the fertilized eggs of the Minorca-Polish cross will each contain one crest-bearing germ cell and one non-crest-bearing germ cell, which we may represent by two chips, a white and a red. Since the crest is dominant, we put the white chip on top. Or, if we choose to represent the whole result, we would have a lot of red chips covered with white ones. When one of these cross-bred chicks grows up, it will produce two kinds of eggs, or if a cock two kinds of spermatozoa, one kind carrying the crest and the other carrying the Minorca head. There are equal numbers of



gether too light in color, are culls fit only for the common market. On the other hand, the pullets from the dark pen is altogether too dark, and are also turned off to the common market being culls, hence by the double mating process, one-half of the flock are worthless as pure-bred poultry. This has always been a draw back to the farmer who purchases such, for we can be safe in saying that all of this class practise only single or Standard mating, and if single mating is followed with stock thus bred, a very poor class of offspring will be the result. I have bred Barred Rocks for 30 years by single mating, and by careful mating I can, and do, produce, as even shade as any double mating I ever saw. Not only that, but I can increase weight, improve shape and hardiness, choice deep barring, and have as few culls as with almost any other breed. The accompanying cut is a good type of well-bred Barred Rocks.


A. H. DUFF.

Larned, Kans.

The Value of Poultry.

In the fall of the year is the time when the farmer's wife begins to doubt the value of poultry on the farm; the hens are moulting, eggs are hard to find and the demand of the chickens for grains to offset the diminishing insect supply becomes noticeable, while their inclination a little later to seek sheltered roosts in the barn over the horses or on the implements in the shed provokes disturbances in the mind of the tidy farm-

ner 25 million dollars in cash. If, to these figures is added the value of poultry raised in towns and villages and their eggs, and the hens charged up with the grain fed, it would be found that the actual cash worth of poultry to the State of Kansas probably exceeded 30 millions per year while there economic worth in the destruction of injurious insects and eating weed seeds would amount to as much more. The price of eggs on which the estimates given are based was less than ten cents per dozen in 1900. It has averaged probably better than twelve cents for the past five years. Eggs sold bring in considerably more money than poultry sold, in Kansas. Without intending to depreciate the importance of dairying we would make a comparison between the output of one cow, and a flock of poultry of equal value. A fifty dollar milch cow should give two hundred pounds of butter per annum, one calf and a thousand gallons of skim milk, while the manure product is worth probably one-half the cost of her feed. With butter at twenty cents a pound, which is more than the average price paid for country butter or even by creameries for butter-fat, there is a total of \$40 to which should be added the value of the calf at dropping, \$10, and the worth of the skim milk for feeding, \$20 and manure values, say \$6, total \$76. To get the net returns the cost of the cow's feed, \$12, the value of the service of the bull, \$2, the work of caring for milk utensils, an hour



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"I have used 10 bottles of Dr. Miles' Heart Cure and can truthfully say it has done me more good than anything I have ever used, and I have tried nearly everything that I knew of. The doctor who attended me asked me what I was taking and I told him Dr. Miles' Heart Cure, he said it was not going to do me any good, but it did. I have not taken any for a year now, and while there is occasionally a slight symptom of the old trouble, it is not enough for me to continue the use of the medicine. If I should get worse I would know what to do. Take Dr. Miles' Heart Cure as I did before. I consider myself practically cured of my heart trouble."

S. H. DUNNAM, Livingston, Texas.

Dr. Miles' Heart Cure is sold by your druggist, who will guarantee that the first bottle will benefit. If it fails he will refund your money.

Miles Medical Co., Elkhart, Ind.

each kind. We can now represent the result by putting equal numbers of red and white chips in a hat. Since one egg will be fertilized by but one sperm-cell, we draw out of the hat two chips. The chances are (you can try it yourself) that one in four times you will get two white chips, one in four that you will get two red chips, and two in four that you will get a red and a white. Now this same thing happens in the fertilizing of the eggs. In that fourth of the cases where the crest-producing egg was fertilized by a crest-producing spermatozoan, the chick has a crest, similarly, where the non-crest-producing egg was fertilized by a non-crest-producing sperm-cell, the chick has no crest. In the other 50 per cent, the chicks have a crest, only because the crest is dominant.

D give { DR } 1/4 D
X give { X } 1/4 DR
R give { RR } 1/4 RR

Many characteristics of poultry gave results like this in the experimental crosses. In the case where the double comb of the Polish met the single comb of the Minorca, the hybrids of the first generation (DR) had Y shape combs. In the second generation, one quarter of the progeny had single combs, one quarter double combs, and one-half with a Y shaped comb. In still other characteristics, such as shape and size, the inheritance was not alternative at all, but blended, i. e., the progeny were intermediate.

Let us now construct a table of inheritance, using the experiments of Davenport, Bateson, Hurst, and Erf, and one of my own. The characteristics which are printed in capitals are dominant. Those in bold faced type are partly dominant. When both characteristics are in ordinary type, there is no dominance, or the result is variable:

WHITE FEATHERS
COLORED FEATHERS
BARRED ROCK FEATHERS
BLACK FEATHERS
BLACK HACKLES
RED WING BAR
SHAFTING
PENCILING
BLACK SKIN
BLACK IRIS
TAILED
NORMAL FEATHERS
FRIZZLED FEATHERS
MUFFS
CREST
NO DOME ON SKULL
LOW NOSTRIL
ROSE COMB
PLAIN HOCK
Tail continues to grow
Beard
Legs feathered
Black shanks and beak
Four toes
Large size
White ear lobe
White eggs
Yellow shanks and beak of Leghorn

silky parent and the yellow-skinned parent will be black skinned and plain feathered. Crossing these chicks together one-fourth of the progeny will be silky and one-fourth will have yellow skin. The birds which show both silkiness and yellow skin will be one-sixteenth of the number. These birds bred together will breed true. There may be some slight impairment of color, which could only be eliminated by gradual selection. Yet this is simply because the inheritance is not absolutely alternative.

If we take the more difficult task of combining two dominant characters, the work is somewhat complicated. Let us combine the barred plumage of the Barred Plymouth Rock with the crest of the White Polish. In this case the first generation hybrids all show the desired combination of barred plumage and crest. But we have not yet the object sought, for they will not breed true as yet. If we cross together these chicks, nine-sixteenths of the second generation will show both crest and barred plumage, but only one-sixteenth is capable of breeding true, that is, are DD in the terms used above. But these pure dominants can only be distinguished from those that are not pure by actual breeding. We must, therefore, take the pullets of this second generation, which show barred plumage and crest and breed them successively with the cockerels showing the same combination till we find one which will throw all barred, crested birds from the same pullets.

Poultry-breeders will find in Mendel's law an explanation of such phenomena as the cropping up of single combs in rose comb breeds, the rose combs do not appear in single comb breeds. It explains too the "strong inheritance" of booted legs and dark

Colored feathers
White feathers in Silkies
White Rock feathers
Red feathers
Laced hackles
No wing bar
No shafting
No penciling
Light skin
Red iris
Rumpless
Silky feathers
Normal feathers
No muffs
No crest
Dome on skull
High nostrils
Single comb
Vulture hock
Tail stops growing
No beard
Legs not feathered
Yellow shanks and beak
Five toes
Small size
Red ear lobe
Brown eggs
Black shanks and beak of the Brahma

Let us now see how Mendel's law could be used by a poultry-breeder. Suppose there appears among a flock of fowls a bird having a new and desirable characteristic, which one desires to perpetuate. For instance, comblessness. It is not known whether comblessness is dominant or recessive, but by analogy we can assume it is recessive. The progeny of this bird crossed with a normal one will be all normal. If we breed these chicks together, one-fourth will be combless, and when these are bred together, they will breed true. If the new characteristic, which we desired to perpetuate, is known to be dominant, such as the crest, the procedure is more difficult. Three-quarters of the second generation chicks will be crested, but only one-quarter will be pure dominants, which are capable of breeding true. The pullets must be bred to several cockerels in succession till one is found which gives all combless chicks from some of the pullets.

Mendel's law will be used, however, far more frequently in combining two or more characteristics in one fowl. Although this complicates the work, I can perhaps make it clear in two examples. Suppose we desired to combine the silky feather of the silky fowl, which has a dark skin, with a yellow skin. By consulting the table it will be seen that silky feathers and yellow skins are both recessive. This makes their combination easy. The chicks of the first generation from the

feet often noticed by poultrymen. The best short elementary treatise on Mendel's law is Punnett's "Mendelism." (Macmillan). After reading this, the poultry-breeder will find Davenport's "Inheritance in Poultry" (Carnegie Institution of Washington) profitable and helpful.

Keeping Poultry in Limited Quarters.

H. DECOURCY, IN INLAND POULTRY JOURNAL.

There was a time, not very long ago, when it was believed to be absolutely necessary to have free and practically unlimited range for laying hens and for raising healthy, thrifty chickens that would develop at maturity into robust fowls of fine quality and full size. But ideas and conditions change with time and it has now been demonstrated, by the work of thousands of practical poultry-keepers in all parts of the world, that chickens can be as advantageously raised in limited quarters as on free range, and that closely yarded fowls will, when intelligently managed, give quite as good results in the shape of eggs, and sometimes better results, when kept in small runs than when allowed full liberty to roam over the farm.

AVERAGE PRODUCTION OF FLOCKS.

I may point out that whilst the best-managed flocks running at large on a farm seldom yield a higher average in eggs than 140 per annum, it is not uncommon for penned stock to yield

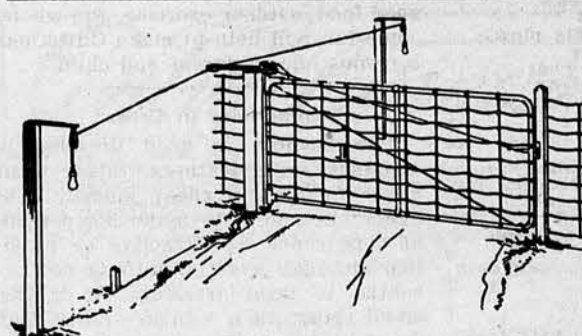
Williams' Shaving Soap

H

ARD-WORKING farmers usually have strong, wiry beards, and need the best shaving soap to soften them. Ordinary soaps only smart, and irritate the face and sometimes poison it. Williams' Shaving Soap softens the beard in a wonderful way, and leaves the face soft and refreshed after shaving.

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170 to 200 eggs in the same time. The demonstration of this fact and also the proofs, which have been advanced as to the practicability of successfully raising chickens in close quarters, have opened up the field of poultry culture to a much larger section of the community than it would be possible to include in the category of practical poultry-keepers under the old notion of absolute necessity for free range for both old and young stock. It has now been amply demonstrated that poultry can be exceedingly profitable when carefully kept in small runs, and that the profits from them in such conditions are often actually greater than if the birds were allowed to roam at large over a farm.

FREE RANGE VERSUS CONFINEMENT.

There are undoubtedly many advantages to be gained by allowing poultry free range, but it is wisely contended that the advantages of cheap food, little labor and immunity from disease are counterbalanced by the disadvantages of lower production, loss of growing crops and annoyance to neighbors by trespass, loss of fowls and chicks from the depredations of foxes, cats, dogs, weasels, hawks, magpies, etc., when fowls are left to do for themselves.

That such losses are very serious there can be no doubt, and it is certain that many people are deterred from keeping poultry by the fear of them. With these we must take into account the number of nests of eggs that are laid out in hedges, stacks, ricks and barns and never discovered or at least only found when they are too old to be of any use.

THE SMALL LAND HOLDER AS A POULTRY-KEEPER.

If the large farmer who allows his birds unlimited range has advantages as a poultry-keeper he has also some disadvantages, and there is no doubt that with the reported results of recent research to guide him, the small land holder can now have his innings. And he will find himself on as safe ground with only a few acres devoted to intensive poultry culture as if he had a realm stocked at the rate of only a few birds to the acre.

One of the reasons why hens kept in pens seem to be more productive than those allowed free range is that so many of the eggs laid by the latter are lost, but it is also contended by those who have given a fair trial to both systems of poultry-keeping

that most of the energy necessary for the conversion of food into eggs is expended by the free-range hen tramping over the farm, looking for a grasshopper here, and a grain of wheat there, and a beetle somewhere else. By some she is likened to a tramp, who moves from place to place and always enjoys freedom and perfect health, but is an enemy to himself as well as to the community. "A ROLLING STONE GATHERS NO MOSS."

The roving hen is, indeed, said to be a rolling stone, gathering no moss. Her food is cheap; she finds for herself most of what she requires, but she eats much that is not productive of eggs or flesh when she runs over a large area and is not dependent on her owner to supply exactly the right kind and quantity of food for the production of the maximum number of eggs. The rations of the free-range hen can not be regulated with the same degree of nicety that is possible with the hen in an inclosure, and this is why it is found so difficult to secure the coveted two-hundred-eggs-a-year average with large flocks running over a farm, whilst, with some effort, it may be attained with the closely penned flock.

SMALL OR LARGE FLOCKS?

When several breeds are kept or when it is found necessary to divide a large flock into several small ones, the most economical plan of a house to build is a continuous one, divided into apartments to suit the size of the flocks. One of the first things which must, therefore, be considered is the size of flocks, or the number of birds which it is advisable to keep in each lot. For greatest egg-production combined with economical handling, it is generally found most convenient to keep laying hens in flocks of twenty-five, and if eggs for hatching are required, two males can be kept with this number by changing them on alternate days. Those who do not want fertile eggs can keep fifty hens in a lot with quite satisfactory results, but, all things considered, the smaller flock will be found best.

STYLES OF HOUSES AND YARDS.

With a continuous house the runs must be long and narrow to match the breadth of the compartments, and the difficulty is that it is not economical to erect yards of this shape owing to the extra cost of fence. As this is but an initial expense, however, and good material will last a

(Continued on page 1384.)

Home Departments

CONDUCTED BY RUTH COWGILL.

UNPROFITABLE DREAMS.

He does not care for common things,
Like doing simple chores,
But how his fancy takes on wings
And with what ease is soars
As he sits by the kitchen stove,
When daylight is near spent,
And tells how things would start to
move
If he were President.

The barn needs shingling, since it leaks
With every shower of rain,
For axle grease the wagon squeaks,
And tons of hay have lain
Through half a dozen showers or so
The while his dreams are bent
On how the trusts would have to go
If he were President.

His fences from neglect are down,
The cows are in his corn,
He saw them, with an angry frown,
A week from yesternoon—
And yet to making some repair,
No useful aid he's lent;
He's thinking how the rogues would
fare
If he were President.

He started out to milk the cow
A half an hour ago,
And met a neighbor with his plow,
So sat right down to show
How evil are the times and what
This vice of grafting meant
And what would be and what would
not
If he were President.

The pump is out of order quite,
And will but wheeze and squeak,
And so his willing wife at night
Bears water from the creek,
Because he must have time to think
Not how to pay the rent,
But how he'd make the neighbors
blink
If he were President.

And you, my friend, does you barn leak,
Your fences need repair?
Does your pump ever wheeze and
squeak
From lack of little care?
Or do you sometimes shirk your chores,
And is your fancy bent
On healing economic sores
With you as President?

—T. W. Foley.

Peace and Good Will.

As the Christmas time draws near
there are so many things to be done
that often in our eagerness to make
the day a success and accomplish all
we have set out to do we lose sight of
the true Christmas spirit and fail to
emphasize the Christmas message,
"Peace on earth, good will to men."
We neglect the everyday work that
means so much to the life in the fam-
ily. The same care in the cooking and
serving the meals and keeping the
home neat is not observed. The rush
and disorder brings not peace and
good will but has a tendency to make
discord, faultfinding, and fretfulness.

May we live each day as if there
were no others coming; doing our best
"decently and in order," verifying in
our everyday living what Christ came
to teach. May the star of Bethlehem
not be seen only on Christmas morn,
but may its rays reach from one year's
end to the other; then will the day
mean something more than mere giv-
ing and receiving.

It is the aim and endeavor of every
mother to make the Christmas time a
happy, joyous one, but often it hap-
pens that the very things used are
the means that defeat her purpose.
Full stockings and full stomachs are
not the only things essential to make
a happy Christmas. Peace and good
will will not abide long in the home on
Christmas if children are overfed,
over-indulged, and selfishly pampered,
if mother is worn out with making
ready and has not peace dwelling with-
in her. Mother is the star in the home,
to the children, and if the light is un-
certain or dim their joy is lessened.
If she is cross and nervous they will
immediately imbibe the same spirit,
and peace and good will go out. If
mothers want their children to have a
truly happy Christmas they will, while
providing for their wants and satisfy-
ing or gratifying their desires, teach
them the true meaning of Christ's
birthday, and teach them the joy of
unselfish giving.

Mothers have been known to com-
plain that the children are cross and
quarrelsome on Christmas and to ex-
press themselves as being glad when
the day was over and that it "comes
but once a year." This is not the

Christmas spirit. Children who are al-
lowed to eat candy and sweets before
breakfast are almost sure to have the
stomach thrown out of order and this
will make any ordinary child peevish
and ill-tempered. As a preventive do
not give the sweets with the other
gifts but either have them on the
breakfast table or on the sideboard to
eat after breakfast, or a pretty way is
to have little baskets or boxes of
candy placed at each plate. Fruit may
be eaten before breakfast. Sometimes
it happens that children are disap-
pointed in their presents. Parents
should try to give the children what
they would like if it is within their
power and is reasonable, and should
they fail, make it right in some way
that their happiness be not spoiled.

Plenty of fresh air, not too much
good food, outdoor exercise, and whole-
some fun will help to make Christmas
a joyous one to parent and child.

Simplicity in Dress.

The keynote to good dressing is
simplicity and neatness, rather than
an overloading of cheap finery. It is
every one's duty to make his person-
al appearance as attractive as possi-
ble, although great wealth is not es-
sential to good dressing. It is the
small things in a woman's dress that
seem to count the most. No matter
how beautiful the gown is that she
wears, if the hands and the hair are
untidy, the whole appearance will be
spoiled.

Soiled collars, skirts dragging below
the belts, and petticoats showing be-
low the skirts will make a girl most
untidy. These things, no matter how
limited one's means may be, can be
prevented by a little time and care, if
only she realized the importance and
the difference it would make in her ap-
pearance.

The woman of small means, who de-
signs her own clothes, is the woman to
gain most. There is some individual-
ity and personality about her clothes
that a woman with wealth who pays
her dressmaker by the year and cares
only to follow the style, does not pos-
sess.

Extremes in fashion should always
be avoided. Some women are always
in, exaggeration of the fashion, and
such exaggeration shows a lack of re-
finement and good taste.

Judicious selection must be the se-
cret of good dressing on the part of
the stout woman. She must religious-
ly avoid plaids, and then there are the
stripes the slender girl should fight
shy of.

The contour of height, hair, face, and
complexion and style of woman should
be taken into consideration when se-
lecting materials for a gown. Many a
girl has natural artistic ability for
blending colors and an eye for out-
line, but they lack a practical knowl-
edge of putting materials together.

The prettiest and most attractive
gowns can be made out of very inex-
pensive materials with the use of the
many dainty laces and embroideries
that are used so much for trimming.

Now that there are so many schools
of domestic art and science, almost
every girl who has the ambition can
secure a thorough knowledge of these
arts.

REBECCA R. BOSWELL.

Decorate at Christmas Time.

Every home must have wound in and
about it, mingling, as it were, with
good cheer, good will and peace the
holly and the evergreen on the occa-
sion when the star of Bethlehem
shines in the Christmas sky.

The old way of decorating church
and Sunday-school room was to em-
ploy heavy, clumsy ropings of ever-
green, which were too gloomy to give
the best effects. Of late years the
tendency to drape with light vines and
smaller festoon work is a great im-
provement.

In our homes at Christmas each
room should have at least a touch of

green. A pretty and easy way is to
have the pictures and mirrors simply
topped with evergreen, with a border-
ing to the curtains of ground pine,
Southern moss, or evergreen. Bitter-
sweet, feathery wild clematis, the ber-
ries of the bayberry bush, and the
seed pods of the wild rose are all val-
uable for mingling with the "gifts of
the forest" that spell the usual Christ-
mas cheer.

Hoops taken from old barrels cover
with evergreen nicely for wreaths.
Stars may be cut from wire netting
with a strong pair of shears.

Where there is to be no tree, even
if there are no children, have a wee
one on the dining-room table as a cen-
ter-piece, ablaze with candles, gay with
ornaments, tinsel, candied fruits and
a variety of gilded nuts!

A star of white cotton sprinkled
with diamond dust, edged with holly
or galax leaves, makes a very attract-
ive center-piece.

Pine cones gilded and strung make
decorative festooning for chandeliers.
The tissue-paper "garlands" which
come in all colors take the place of ex-
pensive ribbon nicely for decorative
purposes.

A cotton Santa Claus will delight
the children as a center-piece, and may
be made at home, or a chimney of ap-
ples with the jolly saint emerging
from the top.—Farm and Fireside.

A Christmas Tree Party.

All children love a Christmas tree,
and one mother added to the usual hol-
iday joy by giving her little people a
Christmas tree party.

All the decorations were home-made,
and no small part of the children's
pleasure was in helping with these.
Cranberries were strung on stout
thread, as were also bright hollyber-
ries; cranberries and popcorn were
strung alternately; popcorn was also
threaded by itself. Field corn—red,
white and yellow—which had been
soaked for a week in water, was also
threaded in strings, and some of it
was gilded or silvered. Peanuts were
also strung and splashed here and
there with gilt paint. A flower made
out of tinted tissue paper was at-
tached by wire to the tip end of every
branch; these were all red. Stars and
crescents cut from cardboard were cov-
ered with gold and silver paper.

But the chief attractions of the tree
were the goodies that hung thereon.
There were little bunches of raisins
tied with bright baby ribbon; gilded
English walnuts, not so fine that they
could not be cracked and eaten; corn-
ucopias filled with home-made can-
dies; little bags made out of netting,
overcast at the edges with brilliant
worsted, and filled with dates and figs;
little toy baskets containing dainty
sandwiches; bright red apples and
oranges—these were wired close to the
trunk of the tree, and the bright red
and the orange shone beautifully
through the green of the tree. Then
there were doughnuts and ginger-
bread made in the form of animals,
dolls, and even old Santa Claus him-
self; and, to top it all, each little guest
received a star-shaped Christmas cake,
with his or her name on it in pink
icing.

The happiness of the children knew
no bounds when the presents—which
were little toys wrapped in many
thicknesses of tinted tissue paper—
were distributed by Santa Claus.

After the toys came the refresh-
ments, which were also taken from
the tree.

The party was thoroughly enjoyed
by the children, and the expense and
work of preparation were very little.—
Selected.

Give a Book.

It is a good thing to include at least
one good book in the list of Christmas
gifts. Parents are often at a loss to
know just what to buy. Here are a
few names of books that may help
as suggestions:

The most popular work of fiction
this year is "The Weavers," by Sir
Gilbert Parker. Then there are the
stories of Alice Hegan Rice, that are
always healthy and happy. Kate Doug-
las Wiggin, who wrote "Rebecca,"

DOCTORS MISTAKES

Are said often to be buried six feet under
ground. But many times women call on
their family physicians, suffering as they
imagine, one from dyspepsia, another from
heart disease, another from liver or kid-
ney disease, another from nervous pros-
tration, another with pain here and there,
and in this way they present alike to
themselves and their easy-going or over-
busy doctor, separate diseases, for which
he, assuming them to be such, prescribes
his pills and potions. In reality, they are
all only symptoms caused by some uterine
disease. The physician, ignorant of the
cause of suffering, keeps up his treatment
until large bills are made. The suffering
patient gets no better by reason of the
wrong treatment, but probably worse. A
proper medicine like Dr. Pierce's Favorite
Prescription, directed to the cause would
have entirely removed the disease, there-
by dispelling all those distressing sym-
ptoms, and instituting comfort instead of
prolonged misery. It has been well said,
that "a disease known is half cured."

Dr. Pierce's Favorite Prescription is a
scientific medicine, carefully devised by
an experienced and skillful physician,
and adapted to woman's delicate system.
It is made of native American medicinal
roots and is perfectly harmless in its
effects in any condition of the female
system.

As a powerful invigorating tonic "Fa-
vorite Prescription" imparts strength to
the whole system and to the organs dis-
tinctly feminine in particular. For over-
worked, "worn-out," run-down, debili-
tated teachers, milliners, dressmakers,
seamstresses, "shop-girls," house-keepers,
nursing mothers, and feeble women gen-
erally, Dr. Pierce's Favorite Prescription
is the greatest earthly boon, being un-
equaled as an appetizing cordial and re-
storative tonic.

As a soothing and strengthening nerv-
ine "Favorite Prescription" is unequaled
and is invaluable in allaying and sub-
duing nervous excitability, irritability,
nervous exhaustion, nervous prostration,
neuralgia, hysteria, spasms, St. Vitus's
dance, and other distressing, nervous
symptoms commonly attendant upon
functional and organic disease of the
uterus. It induces refreshing sleep and
relieves mental anxiety and despondency.

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the stomach, liver and bowels. One to
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world. Be sure and ask for Mrs.
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and sportsmen. Sent free. Address, The Kansas
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also has a new one, "The New Chronicles of Rebecca."

For good solid reading one of these will meet the need: "China and America To-day," by Arthur H. Smith; "The Marks of a Man," by Robert Speer; "On the Trail of the Immigrant," by Edward A. Steiner; "For Each Day a Prayer." This is a compilation of prayers that may be used in family worship by those who are too timid to use their own words in prayer.

"Winsome Womanhood," by Margaret E. Sangster, will make a beautiful gift for the girls.

Among the many interesting books for children are "The Little Peppers" stories, "The Little Cousin" series, and the Baum books, which are modern fairy stories. There are always to be found splendid animal story books and nature stories that are so interesting and instructive to children. Lives of noted people and stories of the Bible that are written in an entertaining and instructive way are valuable books for children.

Cooking Meats.

Lotta I. Crawford, of the Domestic Science Department of the Colorado Agricultural College, gives a few points to be considered in the selection and cooking of meats:

Meat is the name given the muscle or flesh of animals which is used for human food. It belongs to the nitrogenous class of food and may be divided into three groups, i. e., meat proper, poultry, and game.

Meat is cooked to make it more palatable, to make it look better, and to kill the germs. It is made chiefly of albuminoids, fats, mineral matter, and water. The muscle, or lean part of the meat, is composed of small bunches of tiny hollow fibres, filled with bright red juice, and held together by a tiny membrane called connective tissue.

Fresh meat should be bright red, the flesh should be firm to the touch, and should have no unpleasant odor. It should be taken from the paper just as soon as it comes from the market, as the paper absorbs some of the juice, and it is apt to give the meat a disagreeable taste. The meat should be placed upon a plate and kept on the ice or in some cool place until ready to be cooked.

Good beef should be of a bright red color. The fat should be a light straw color. In poor beef the lean is coarse, open grained, and flabby, and often quite dark, while the fat is yellow.

Veal should be fine grained and white, with a suggestion of a pink color. The fat should be firm and white.

In mutton the lean should be fine grained and a rich, red color and juicy, the fat firm and white. In fresh pork the fat should be firm, clear and white and the lean pink. In salted meat the fat is sometimes a delicate pink. This is an indication of sweet, healthy pork, but it is more usual to find it without color.

Of all our foods there is none which we find more often poorly cooked than our meats. Most of our cooks would be very indignant if they were told that they do not know how to roast meat, yet there is not one in ten who can cook a roast properly. Scientifically, what we call roasted meat, is not roasted meat at all, but it baked meat. Roasted meat is cooked before an open fire. Baked meat, if properly prepared, is very delicious and is a very satisfactory substitute for roasted meat.

DON'T'S.

Meat which is to be cooked in this way should not be placed in a pan of water and washed (the method pursued by most housekeepers), but instead it should be wiped thoroughly with a clean, damp cloth. The juices of meats are readily dissolved in cold water.

Do not rub salt and pepper into the meat before placing it in the oven, as directed in the majority of receipts, for this also extracts the juices of the meat.

Do not place any water in the bak-

ing pan—for then the meat will taste as if boiled.

METHOD TO FOLLOW.

After thoroughly wiping the meat with a damp cloth, place it in a baking pan—one having a rack in the bottom is the most desirable. Scatter some trimmings of fat from the roast in the bottom of the baking pan and a few pieces on top of the meat. Place in a very hot oven and let it remain there, without opening the door, for at least five minutes (longer if the oven is not very hot). You want to sear over the outside of the meat quickly so that the juices of the meat can not escape. When this is accomplished, the temperature of the oven should gradually be lowered, allowing the meat to cook slowly. When the meat is about half done it should be sprinkled with salt and pepper. Mix what salt and pepper you think will be needed and apply, a little at a time, as you turn the meat from side to side during the process of cooking.

The Young Folks

PLEASURES OF WINTER.

When the wintry sun has vanished
From his path adown the skies,
And the sleety branches rattle,
And the rising night wind cries,
'T is the time when home is brightest,
In the rosy firelight glow;
When within, the cheer of winter,
And without, the drifting snow.

When the storm king sways his scepter,
Summons forth his mighty host
With a sound as of the surging
Of the waves upon the coast,
Then it is that shadows waver
As the dying log burns low;
All within, the cheer of winter,
And without, the drifting snow.

Though old earth a spotless mantle
Of the deepest winter wears,
Though each window pane is frosted,
And each twig a diamond bears,
On the heart the flames are leaping
From the north the wild winds blow;
Then within, the cheer of winter,
And without, the drifting snow.

—St. Nicholas.

Holiday Entertainment.

The coming holiday season will call for amusements for home and evening entertainment. Here are two parties described which are taken from exchanges:

A HISTORY PARTY.

The articles necessary for a history party are blank books, scissors, paste, brushes, and some old magazines. Perhaps I ought to add that a sense of humor and some imagination are excellent aids in this unique entertainment. It gives the most fun and pleasure for a small expenditure of time and money of any game that I know of. A little preparation is necessary. On the outside of each book print or write or paint the guest's name. Have a book for each visitor. On the first page write, "The Pictorial History of John Smith, or Mary Davis," or whatever the name chances to be. On the next page, across the bottom of the sheet, inscribe "His Earliest Portrait." On the next, "Some of His Youthful Playmates." Then "His Childhood Home," "His Pets," "His First Love," "His Early Environments," and so on up to "His Latest Portrait." When one gets to work at the history, all manner of odd and funny inscriptions will suggest themselves. At the end of the book leave a few blank leaves for the compiler to fill in and label as he may choose.

Give each guest a book, a pair of scissors, a paste dish and a brush, and some old illustrated magazines. Then let them go ahead and fill the book with pictures clipped from the pages of the magazines.

You can either request the workers to keep their work unseen by others, so it may be a surprise, or allow each one to look on the other's book to help the idea develop. It will be a merry gathering from the start, and it is well to have the sexes pretty evenly divided, and to give the ladies' history books to the gentlemen to make up, and vice versa.

The baby advertisements offer excellent chances to those needing cuts for the first page. Some show great ingenuity in patching several pictures

together, and thus making one interesting whole.

When the books are filled they are passed around and examined. A vote is taken as to which is the best one, and a prize awarded it. After examination the subject of each book receives it as a souvenir of what every one will declare was a jolly occasion.

A NUT PARTY.

The invitations for a nut party may be accompanied by a suitable quotation, or simple, appropriate pen and ink sketches, or may be plainly written without sentiment or adornment.

Before the time set for the party, let small bags be made from any thin material. These may be very simple, or they may be more elaborate that they may be used afterwards for handkerchiefs, work or spools. Before the arrival of the guests, have nuts of various kinds hidden about the rooms, great care being taken not to secrete them near expensive ornaments.

When the guests are assembled and are ready for action, present to each a bag, and request all to search for nuts around the room, this being called the squirrel game. The invitation to search may be given in rhyme, something like the following:

Come, squirrels all, 'tis late in fall,
And you should work with cheer.
Your winter store, fresh nuts galore,
You'll find are hidden here.

The person who in a given length of time collects the greatest number of nuts may be awarded a prize for industry and skill, as in the other games, if prizes be desired; but as guests are capable of enjoying themselves thoroughly without thought of material gain, prizes are not a necessity. The bags of nuts may be taken home as souvenirs.

Now let the guests try their skill in making ornaments. Supply them with needles, thread and thimbles, and place before them a basket of peanuts. Request the ladies to make gentlemen's watch guards, and the gentlemen to construct ladies' neck chains. Appoint three judges to decide which one has made the handsomest article in a given length of time.

A ring game may be played by putting a large nut in the center of the table and placing around it a circle of nuts which will roll easily, that the players may snap from the edge another nut, also an easy roller, and try to break the ring and dislodge the central nut.

The players should be numbered and should respond quickly to their calls, that the interest in the game may not flag. Each player should occupy the position taken by the first one when making his shot, and should use the same nut. The same number of turns should be allowed to each

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player, and the one who dislodges the central nut the greatest number of times will be the winner.

For refreshments serve nuts, or anything in which nuts are cooked, or whatever is suitable to eat with nuts. —Clara D. Guilbert, in Holland's Magazine.

An Unusual Courtship.

Nearly thirty-eight years ago Mark Hanna was just starting on his business career as a grocer in Cleveland. He was poor, plodding, and, to the casual observer, a very everyday sort of young man. Daniel Rhodes was one of the rich coal-owners of the State. He had one daughter, Gussie, the very idol of his soul. Gussie Rhodes met and loved the obscure, poor, young man, Mark Hanna. Mr. Rhodes was astounded when the daring young grocer called upon him and asked for the hand of his daughter. He refused absolutely to grant the young suitor even time enough to beg. He said, "No!" curtly and sharply, and when he saw his daughter he tried to scold her, but instead he took her in his honest arms and begged her not to think of "this unknown man, Hanna." He said he never, never could consent to such a choice for his child.

Gussie Rhodes told her father, with many a reassuring embrace, that she would never marry without his consent, and she added, "But papa, dear, I shall never marry any man but Mark Hanna." Then she promised her father not to see her lover or to write to him for a year at least. A foreign tour was taken for that change of scene which is supposed to work wonders in heart affections.

For nearly a year the "change of scene" prescription was faithfully pursued, and the patient, always cheerfully submissive, gentle, and charming, obviously grew frailer day by day. Almost in despair the old man brought his child home again, and one morning he gathered the courage to ask her if she still cared for Mark Hanna.

"Why, father," she replied, "I shall always love Mark. I told you that, you know, a year ago."

Poor old "Uncle Dan" Rhodes. Sending for the obscure young man, he said to him: "Mr. Hanna, Gussie loves you; that is my only reason for accepting you as her future husband. You are poor. I'll fix it so Gussie can live as she has been accustomed to, and I suppose I must see you marry her."

Now the coming young man cast ever so slight a shadow of his future greatness on the opportunity of the present.

"Mr. Rhodes," said he, "I most gratefully accept the gift of your daughter's love, but I can not make her my wife unless she will be content to live as my means will enable us. I can neither accept aid nor permit my wife to accept it from any one."

So Mark Hanna and Gussie Rhodes were married, and the bride went from her father's big house to live in a tiny cottage, where, with one maid of all work, she was as happy as a queen. —Newspaper Clipping.

A Giant Camera.

The largest camera in the world, three times as large as its nearest competitor, is owned by Prof. G. R. Lawrence, of Chicago. With it several noted pictures have been taken, including bird's-eye views of factories and towns. It is also used for enlarging other pictures.

The body of the camera is 9 feet 4 inches wide, 6 feet high, and 20 feet long, when fully extended, and in its construction over 30 gallons of glue were used. The lens is 12 inches in diameter and cost \$1,500. All moving parts, including the curtain slide, run on roller bearings. The focusing is done by two panels of glass, which can be moved to all parts of the field.

The plate-holder weighs nearly 500 pounds, when loaded, and is put into the camera by means of a derrick. Great care is used in loading, as a broken plate would result in the loss of \$150. The plates are made of plate glass, 8 feet long by 4 feet 3 inches wide, and weigh over 200 pounds.

In order to dust the plates, a man

enters the camera through an opening in the front. A piece of ruby glass is then placed over the lens and the slide in the plate-holder is withdrawn. After the plate has been dusted, the slide is replaced and the man steps out.

In making enlargements, the focusing is done from the inside and the operator remains in the camera during the exposure. In this process the entire apparatus is supported by springs, which absorb any possible vibration. —Popular Mechanics.

The Little Ones

FOR CHRISTMAS DAY.

There's a bustle in the kitchen
And a rattle and a din,
And such peculiar goings-on
You'd best not venture in;
The eggs are being beaten
And the butter's being dripped,
And the flour's being shaken
And the cream is being whipped;
The nuts have had their heads
Cracked.

The jelly's all a-quake;
Outsiders, keep your distance—
Daisy's making Christmas cake!

Don't say she's lost her ribbon
And her apron's all awry;
Don't speak of flour upon her nose
And smut above her eye;
Don't tell her that the pans are
Greased.

The powder's quite a fault,
That heaping cup of sugar
Was a heaping cup of salt;
Don't mention that the fire is out.
'Twould be a grave mistake—
Onlookers, keep your distance—
When Daisy's baking cake!

—Nancy Byrd Turner, in St. Nicholas.

THE CHRISTMAS SPIRIT.

It is just a week or two till
Christmas, all the year,
Why, then, I'm sure I'd grow to be
Perfection, pretty near.
I'd never slight a duty that was wait-
ing to be done,
Nor fail to be polite and kind to each
and everyone.
I'd answer, "Thank you, sir," or "ma-
am," and likewise, "If you
please,"
And bow to older folks, and do so many
things like these;
And when I had a lot of sweets I'd
give my playmates some.
As I do now when Christmas Day is
just about to come.

Were Christmas always to arrive in
just a little while,
I know I'd never care to frown—I'd
wear a pleasant smile—
And though somebody asked amid the
fondest of my play
If I could pause and help them I
would do it right away.
I'd always wash my face and hands,
nor wait till I was told
On chilly winter mornings when the
water seems so cold.
I'd be as kind and cheerful and obli-
ving all the year.
As I am now when Christmas Day is
pretty nearly here.

But Santa Claus, so I am told, is
watching all the time
With sparkling eyes the boys and girls
of every land and clime;
He knows the ones that truly strive
to do the things they should
And all the year, day after day, en-
deavor to be good.
If that's the case I'm half afraid he
can not bring me all
The gifts that I am wishing for, since
sadly I recall
The very many times when I was not
so kind, I fear.
As I am trying to be now with Christ-
mas almost here.

—Nixon Waterman.

THE CHRISTMAS CAKE.

Oh! go to the grocer's for sugar and
spice,
For raisins and currants and every-
thing nice;
And go in a hurry, for mama must
make
The nice, brown, sugary Christmas
cake.
Hurrah! hurrah for the Christmas
cake
That mama will mix and the baker
will bake.
The nice, brown, sugary Christmas
cake.

Here's flour from the miller, his
whitest and best,
And freshest of eggs from the spec-
ked hen's nest,
And ev'rything ready for mama to
make
The nice, brown, sugary Christmas
cake.
Hurrah! hurrah! etc.

We'll call all the children to join in
the fun!
Oh! skip, little sister! and run, brother!
run.
The raisins to seed and the sifter to
shake.
While mama is making the Christmas
cake.
Hurrah! hurrah! etc.

Now mix it and stir it, and stir it and
taste;
For ev'rything's in it, and nothing to
waste;
And ev'ry one's helped—even baby—to
make
The nice, brown, sugary Christmas
cake.
Hurrah! hurrah! etc.

Now, ho! for the baker; to him we
must go.

Who'll carry the Christmas cake,
steady and slow?
Big brother is ready, and gladly will
take
The nice, brown, sugary Christmas
cake.
Hurrah! hurrah! etc.

The baker is waiting; his over is
warm;
He'll bake the cake nicely and keep it
from harm.
The jolly good baker! He knows how
to bake
A nice, brown, sugary Christmas cake.
Hurrah! hurrah! etc.

The oven is ready, the cake's in the
pan;
Now, bake it, good baker, as fast as
you can!
But "No," says the baker, "'twould be
a mistake
To hurry in baking the Christmas
cake."
Hurrah! hurrah! etc.

I'll not bake it fast, and I'll not bake
it slow;
My little round clock on the wall there
will show
How long I must watch and how long
I must bake
The nice, brown, sugary Christmas
cake.
Hurrah! hurrah! etc.

Then "Ticky, tickety, tickety, tock."
Went steadily ticking the little round
clock.
The baker kept watch; so he knew
when to take
Right out of the oven the Christmas
cake.
Hurrah! hurrah! etc.

Hurrah for our mama! She surely can
make
The nicest and spiciest Christmas cake.
Hurrah for the baker! Hurrah for the
fun!
Hurrah for our Christmas cake! Now
it is done!
—Maud Lindsay, in Kindergarten Re-
view.

Jack Frost.

Jack, not Jack Frost, but Pattie's
brother, greeted his sister one morn-
ing after the first frost, with these
words, "Morning, Pat, Jack Frost has
been around and has painted the
leaves all red and yellow and brown."

Pattie did not reply but hurried with
her dressing and ran out into the yard
and when mama called her to break-
fast she found her looking up into the
trees. "What are you looking at, Pat-
tie?" asked mama.

"I am looking for the little boy Jack
told me about. I can see the leaves all
painted but I can't see the little boy."

Jack laughed one of his big-boy
laughs and said to his sister, "There
he is on the grass."

"Where? I don't see him," she re-
plied.

"Jack Frost isn't any real little boy,
Pattie," said mama, "but that is what
they call the cold that turns the leaves
such pretty colors, and when the
weather gets colder you can see his
work on the window panes. Don't you
remember how you liked to look at the
pretty figures on the windows last win-
ter?"

"Oh, yes, and I tried to draw a leaf
like one on the window—but I guess
Jack Frost can draw and paint better
than I can."

Helen's Nest.

Once upon a time there was a little
girl named Helen. She lived in the
country, and about her house there
were many fine trees, where the birds
came every year to spend the summer.
Now Helen loved to watch the birds,
butterflies and bees doing their work.

Well, one day Mr. and Mrs. Oriole
came to look at the big elm tree. They
soon decided to build a nest there, and
each flew off in a different direction
to find building material.

"Oh, rana," cried Helen, who had
caught the gleam of brilliant orange
and black, "let's help them so they'll
stay here."

"All right, little girl," answered her
father.

Helen had helped birds before by
putting bits of string and worsted and
straws on the ground and nearby
bushes.

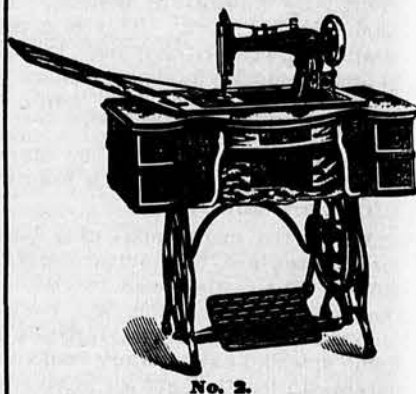
Suddenly she clapped her hands, ex-
claiming, "Oh, I'm going to label this
nest, and then, after it's all built, it
will be mine!"

So she carefully wrote her name on a
tag of paper, putting a long piece of
white string through the end of the
tag. On some other tags she wrote
the day and month, "May 28." Then
they were left in plain sight and Helen
scampered away.

The birds did not seem to notice the
strings at first, but later every one
was gone, and from that hanging nest

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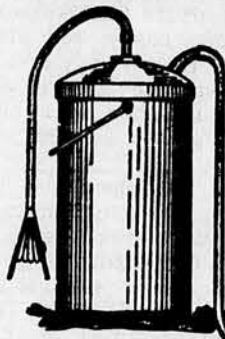
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waved six little tags bearing Helen's name and the date!

When the birds had raised their families and gone South, her father took down the nest and brought it into the house to Helen.—St. Nicholas.

Club Department

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Vice-President.....Mrs. C. H. Trotter, Junction City
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(All communications for the Club Department should be directed to the Club Department, Kansas Farmer, Topeka, Kans.)

Farmers' Wives' Clubs in New York.

About five years ago Cornell University started a movement for the amelioration of the wives and daughters of New York farmers. No other class of women need diversion more than country women, and the club is to be the way provided for the diversion. The reading course for farmers' wives, which has been commented upon before in these columns, is the means used in New York State. It now numbers on its roll, twenty-two thousand pupils. Miss Van Rensselaer, who is the prime mover in the cause, is quoted by the New York Sun:

"Farmers' wives know more about their husbands' business than any other class of women. The farmer's success is largely dependent upon his wife. It was because of this intimate relation that this reading course was first thought of. So much was being done for the farmer himself that we thought for the sake of the farm something should be done for the women.

"The reading course is carried on primarily by pamphlets published monthly. The first of these was on the subject of saving steps. Besides advising readers to plan their work to save time, strength, and health, the pamphlet pointed out various simple methods and inexpensive contrivances that would help.

"One suggestion was that of a tile drain for waste water from the house, such a drain to cost four dollars. Any one who has watched the numberless buckets of dish-water which have to be lugged out of the house day after day by the women on the farm can appreciate what this means.

"We showed the cost and convenience of a simple dummy for carrying food from cellar to kitchen; gave illustrations of a cold-weather window cupboard, and published a request asking for suggestions.

"Then we went on to the question of decoration. We explained the difference between artistic simplicity and inartistic over-decoration.

"The next paper was on sanitation, the next devoted to the boys and girls. It is a great problem with the home-loving farmer how to keep his sons and daughters from flocking to the city. Attention was called to the necessity of giving the children an interest in life, to throw on them suitable responsibility and to train them for home-keepers.

"We send out discussion papers with all our pamphlets, and we receive many interesting communications.

"Besides helping the women of the farm in their domestic lives, the reading course aims to broaden their views by helping them form clubs and making them take a personal interest in the neighborhood school. One of our pamphlets treated entirely on that subject, urging that each of the clubs which had been formed to study our course should devote at least one meeting a year to considering the improvement of the public school grounds.

"As often as possible lecturers are sent from Cornell to meet the farmers' wives' clubs. They either lecture or hold a meeting for discussion and the answering of questions. I know of no other class of women who are more intelligent, or who have a more sane view of life. The farm women who have taken these courses have proved themselves particularly valuable in organizing and directing study clubs.

"The only drawback to the work is that it is not large enough. Unfortunately, it is only for women of New York State. I know the life of the farmer's wife. I know how much such a course of reading and study brings into her existence. I know how unselfish she is. Every State in the Union owes the farmer's wife more than she will ever get in this world."

What Father Does.

Mothers may talk, work, struggle to make their sons models by which to shape a new heaven and a new earth. But the boy's world is in the man who is his father, and the boy believes that, whatever may be right on Sundays or at prayer time, the things that are really good, that really count in life, are what father does. Moreover it is what father does which defines the means with which the boy shall work, the sphere wherein his efforts shall be shaped. In a word, what father does is the beginning as it is the end of the boy's achievement.—Harper's Bazar.

A FARM ECONOMY.

The use of a "food tonic" as a preventive of indigestion and consequent check on growth and development, is becoming a settled practice among owners and feeders of live stock.

It is a well-established principle that bitter tonics strengthen digestion, that iron builds rich blood in abundance and that nitrates remove from the system the clogging poisons that are not less deadly because their action is slow. It sometimes happens in feeding cattle or hogs that the gain of months is almost completely lost by a mistaken idea of economy which prevented a slight outlay for the "food tonic."

This is a sample of the same old policy which "saves at the spigot to waste at the bung."

Continuous and rapid growth or fattening is impossible without daily doses of this beneficial tonic preparation.

Keep that in mind and remember that back of the idea is the indorsement of such men as Professors Winslow, Quimman and Finley Dun, noted the country over as experts in all that relates to veterinary medical practice.

It has been found that all farm animals are equally benefited by the use of the "food tonic." Horses are in better condition for work or driving and where the object is to sell them invariably show to better advantage. To hasten a bunch of hogs when high prices are in prospect, there is nothing better, and the actual profit derived from its use may be well illustrated by a simple computation.

Suppose a bunch of four 125 pound hogs be taken as an experiment and that a maximum dose of two table-spoonfuls be given twice a day. Now, the actual weight of tonic eaten by the four hogs would be 1-6 of a pound and would cost 5-6 of one cent or a fraction over 6 cents per month, per hog. Then if the fact be taken into consideration that a thrifty hog may increase a hundred-weight in a few weeks, we see at once that the "food tonic" would soon pay for itself and a large margin of profit be realized.

This is the theory and practice of the "tonic idea" and there is abundant evidence to sustain it. Men who are using the "food tonic" regularly, find that it pays for itself over and over again and that there is no small investment made that gives so handsome a return.

The larger business of cattle raising and feeding is also equally broadened and extended by this commonly practiced principle of giving a digestive tonic. By its use a bunch of steers is carried safely through the months when heavy feeding is the rule, and brought to a satisfactory market condition without a moment's check in the process of development.

Sheep and lambs benefit as much from a consistent use of "food tonic" as other stock, tests by a State experiment station proving in one instance a profit of 235 per cent over the cost, from which it would seem that no farm economy is more practical or profitable than the "food tonic" idea.

Women Who Wear Well.

It is astonishing how great a change a few years of married life often make in the appearance and disposition of many women. The freshness, the charm, the brilliance vanish like the bloom from a flower which is rudely handled. The matron is only a dim shadow, a faint echo of the charming maiden. Few young women appreciate the shock of the system through the change which comes with marriage and motherhood. Many neglect to deal with the unpleasant pelvic drains and weaknesses which too often come with marriage and motherhood, not understanding that this secret drain is robbing the cheek of its freshness and the form of its fairness.

As surely as the general health suffers when there is derangement of the health of the delicate womanly organs, so surely when these organs are established in health the face and form at once witness to the fact in renewed comeliness. More than a million women have found health and happiness in the use of Dr. Pierce's Favorite Prescription. It makes weak women strong and sick women well. Ingredients on label—contains no alcohol or harmful habit-forming drugs. It is made wholly of those native, American, medicinal roots most highly recommended by leading medical authorities of all the several schools of practice for the cure of woman's peculiar ailments.

For nursing mothers, or for those broken-down in health by too frequent bearing of children, also for the expectant mothers, to prepare the system for the coming of baby and make its advent easy and almost painless, there is no medicine quite so good as "Favorite Prescription." It can do no harm in any condition of the system. It is a most potent invigorating tonic and strengthening nerve, nicely adapted to woman's delicate system by a physician of large experience in the treatment of woman's peculiar ailments.

Bad Symptoms. The woman who has periodical headaches, backache, sees imaginary dark spots or specks floating or dancing before her eyes, has gnawing distress or heavy full feeling in stomach, faint spells, dragging-down feeling in lower abdominal or pelvic region, easily startled or excited, irregular or painful periods, with or without pelvic catarrh, is suffering from weaknesses and derangements that should have early attention. Not all of above symptoms are likely to be present in any case at one time.

Neglected or badly treated and such cases often run into maladies which demand the surgeon's knife if they do not result fatally.

No medicine extant has such a long and numerous record of cures in such cases as Dr. Pierce's Favorite Prescription. No medicine has such a strong professional indorsement of each of its several ingredients—worth more than any number of ordinary non-professional testimonials. The very best ingredients known to medical science for the cure of woman's peculiar ailments enter into its composition. No alcohol,

harmful, or habit-forming drug is to be found in the list of its ingredients printed on each bottle-wrapper and attested under oath as complete and correct.

In any condition of the female system Dr. Pierce's Favorite Prescription can do only good—never harm. Its whole effect is to strengthen, invigorate and regulate the whole female system and especially the pelvic organs. When these are deranged in function or affected by disease, the stomach and other organs of digestion become sympathetically deranged, the nerves are weakened, and a long list of bad, unpleasant symptoms follow. Too much must not be expected of the "Favorite Prescription." It will not perform miracles; will not cure tumors—no medicine will. It will often prevent them, if taken in time, and thus the operating table and the surgeon's knife may be avoided.

Doctor's All Agree. The most eminent writers on *Materia Medica*, whose works are consulted as authorities by physicians of all the different schools of practice, extol, in the most positive terms, the curative virtues of each and every ingredient entering into Dr. Pierce's Golden Medical Discovery. In fact it is the only medicine, put up for sale through druggists for the cure of all diseases of the mucous surfaces, as nasal catarrh, throat, laryngeal, and bronchial affections attended by lingering, or hang-on-coughs that has any such professional endorsement—worth more than any amount of lay or non-professional testimonials.

Do not expect too much from the use of Dr. Pierce's Golden Medical Discovery. It will not work miracles. It will not cure consumption in its advanced stages. No medicine will. Nor is the "Discovery" so good for a sudden attack of acute cough, but for the lingering, obstinate, hang-on-coughs, accompanying catarrhal, throat, laryngeal and bronchial affections, it is a most efficacious remedy. In cases accompanied with wasting of flesh, night-sweats, weak stomach and poor digestion with faulty assimilation, and which, if neglected or badly treated are apt to lead to consumption, the "Discovery" has proven wonderfully successful in effecting cures.

The formula is printed on every wrapper of "Golden Medical Discovery," attested as to correctness under oath, and you can't afford to accept any substitute of unknown composition for this non-secret remedy no matter what selfish interests may prompt the dealer to urge such upon you. In fact it is an insult to your intelligence for him to do so. You know what you want and it is his place to supply that want.

Dr. Pierce's Pleasant Pellets are the original "Little Liver Pills" first put up by old Dr. Pierce over 40 years ago. Much imitated, but never equalled. They cleanse, invigorate and regulate stomach, liver and bowels, curing biliousness and constipation. Little sugar-coated granules—easy to take as candy.

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Agriculture

Oats Instead of Spring Wheat.

I would like to ask a few questions on raising spring wheat as I intend to sow about twenty-five acres on black loam soil. This soil is very rich and I would like to know what kind of seed wheat to sow as I fear some kinds would produce too much straw. Which would be the better to sow; Northern or home-grown seed? What time in the spring do you sow spring wheat and how much should I sow per acre. W. E. TURNER.

Douglas County, Kans.

I would not advise you to grow a spring wheat. From the experiments at this station we find that spring wheat has not been a profitable crop to grow. Oats or barley are also somewhat uncertain crops, but I would prefer to sow oats or barley on the land in question rather than spring wheat. If the soil is "very rich," as you have stated, it will not be well to grow any small grain on this land as the straw is apt to make too rank a growth and lodge thus causing a poor development of grain and a low yield. Such land is much better adapted for growing corn than small grains. However oats may succeed well on this land provided the season is not too wet.

Of the varieties of spring wheat tested at this station, the Durum or macaroni wheat has outyielded other kinds. However, the Durum has yielded on the average only about one-third as much as the best-producing varieties of winter wheat. At this station we find that the Fife varieties have given somewhat better results than the Bluestem or Velvet Chaff varieties. Our seed was secured from the Minnesota Experiment Station, St. Paul, Minn. Northern-grown spring seed-wheat seems to give as good results or perhaps better, than home-grown seed. However, if you decide to sow spring wheat and can secure good home-grown seed I would prefer to sow it rather than to import new seed of which you do not know the value.

Spring wheat should be sown just as early in the spring as a proper seed-bed may be prepared. Sow about five pecks of seed-wheat per acre. I have mailed you a copy of circular 9 on wheat culture. A. M. TENEYCK.

Wheat for Pasture.

I would like very much to know your opinion in regard to fall-pasturing wheat, 150 head of steers on 200 acres of wheat, on bottom, and I think what they call "gumbo" soil. I want to know if it is a benefit or detriment to the wheat and also what effect the tramping will have on the ground, the next year? Mrs. R. J. McCULLOUGH.

If the wheat has made a good growth it may not be injured by pasturing, in fact it may be benefited if not pastured too closely, or during periods of wet weather when the ground is soft. Again if the soil is inclined to be loose and mellow the tramping of cattle will firm the soil about the roots of the plants and thus benefit the wheat. Pasturing also benefits wheat when it has been infested by the Hessian fly.

Usually, early-sown wheat is more benefited by pasturing than late-sown wheat and early-sown wheat should also furnish more pasture. However, if the seed-bed is too loose, although the wheat may not have made very much growth, it should not be injured by light pasturing and the tramping of cattle may improve the soil texture. On land such as you describe, however, care should be taken not to allow the cattle to tramp the ground when it is at all wet, also there is some danger of compacting "gumbo" soil too much. In order to overcome any injurious effect of compacting the soil the wheat may be harrowed lightly in the spring while the ground is still mellow from the effects of frost, and harrowed again after the wheat has made considerable growth.

No extensive experiments on pasturing wheat have been carried on at

this station. In the 13th Annual Report of the Kansas State Board of Agriculture, Secretary Coburn published the reports, on pasturing wheat, of a large number of farmers, representing all of the large wheat-growing counties of the State. The general conclusion from these reports was, on a whole, that the pasturing usually reduced the yield of wheat some but when the value of the pasturage was taken into consideration the balance was often in favor of pasturing. The injury or benefit of pasturing wheat is very much influenced by the season and other conditions as described above. A. M. TENEYCK.

Alfalfa in New Mexico?

I have located on a claim here in Eastern New Mexico in what is called the Portales Valley. The soil water is from three to thirty feet below the surface and there are three small lakes that contain what I suppose is alkali water. Salt grass is growing around these lakes and stock do fine on it in summer and it is cut for hay by the ranchmen but after freezing weather there is a white substance collects on the grass that will kill stock sometimes, but it seems that conditions have to be just right before it will kill them. I lost three horses last winter from running on this grass but cattle running on the same grass did well, none of them dying. Our place is just up out of the lowest flat and is free from alkali (supposed to be at least) and the land is covered with mosquito grass. The water is good.

What I wish to know is whether this is good alfalfa land or not? The soil is fine and deep, and of a chocolate colored loam. There has been no alfalfa tried on this land here in the valley. Any information you can give me will be thankfully received. I broke a piece of sod in May and planted the land to cow-peas and harvested them for hay and I intend to plow this land about eight inches deep. Would you sow this field to alfalfa next spring or plant to cow-peas again and turn the crop under and sow the alfalfa in the fall. This has been a very wet fall while last spring was very dry. My corn made forty or fifty bushels per acre last year, but this year was too dry for corn. C. F. MOORE.

Roosevelt County, N. Mexico.

I can not inform you whether the soil in question will grow alfalfa successfully or not and the only way to determine whether it will or not is to try it. If the fall is too dry I would advise early spring seeding at a time when you are apt to have sufficient moisture to sprout the seed.

Cow-peas make an excellent crop to prepare the soil for seeding alfalfa. If you intend sowing alfalfa on the field next spring, I would advise not to plow but disk and harrow instead, or if you do plow, plow shallow and work the land well in order to pulverize and settle the soil again. It would not be advisable to plow a crop of cow-peas under three weeks before seeding the land to alfalfa in the fall. The main factor in getting a good stand of alfalfa is to have a firm, well-pulverized seed-bed.

It may be advisable to sow alfalfa in a small way at first in order to try it and learn how to handle it in order to make it a successful crop. I have mailed you copy of circular No. 10 giving further information upon this subject. A. M. TENEYCK.

Farm Notes.

N. J. SHEPHERD, ELDON, MO.

Sod ground may be plowed now. Wasteful feeding increases the cost of an animal.

Apply the mulch after the ground freezes hard.

Order, harmony, and punctuality are essential to success in many enterprises.

It is cheaper to make growth than it is to make fat.

It is as easy to feed unprofitably by overfeeding as by underfeeding.

If you have heavy land that is not likely to wash away, plow it now.

As a rule mixed farming is the most independent and especially

when the farmer makes it a rule to; as nearly as possible, raise everything that is consumed in the family.

When a farmer buys a thing he can produce as cheaply, he is running in opposition to himself.

More time is spent and poorer results obtained if the work is not done at the proper time.

The question of profit is largely that of adapting your system to your land and your location.

Profitable farming means business farming and this entails making every effort to raise the largest yields possible.

Allowing any kind of a crop to be wasted is an indirect loss and takes just that much from the profits.

When the prices go below the point of profitable production in any grain or stock enough farmers abandon it to bring it up in a year's time.

A considerable portion of those farmers who are continually changing about always manage to change at the wrong time and consequently fail to make the profit they expect.

If we breed correctly we work to gain certain points and after these are once obtained they can only be kept up by persistently following the same line.

Manure is most valuable when the liquids and solids have been saved together. Neither is a complete fertilizer alone, but together they supply all of the demands of the crops.

Grains and fodder, which could be fed to a well-bred animal with profit, should not be wasted on a scrub that will no more than return its cost, if it will that.

The best success in farming is usually secured by following the line that you like best. If you have any special inclination in any one direction it is wise to give yourself an opportunity to test that one.

Where the stock are to be turned into the stalk fields after the corn is gathered it should be done as early as possible. After cold, stormy weather sets in the small amount of feed the stock will secure is balanced by the exposure to which the animals are subjected.

Horticulture

The Farmer's Garden.

MRS. F. P. RUDE BEFORE INDIAN CREEK SHAWNEE COUNTY FARMERS' INSTITUTE.

The farmer's garden could in many instances, appropriately be called the farmer's wife's garden. If it were really the farmer's garden he would wait until a convenient time to make and attend to it, where as his wife is usually ambitious, and wishes to have the earliest vegetables in the neighborhood. So between them it becomes a family garden which is what it should be. There are two things not to be allowed in a garden, chickens and weeds.

So if the plot is not to be fenced, it had better be located at the far side of the farm.

In the fall choose the garden plot plow and fertilize it well. Then buy, or beg, a large clump of rhubarb or pie plant. This can be divided into six to ten roots. Set these in a row 3 feet apart. Have the crowns covered with 1 to 2 inches of soil. If set too deeply they are apt to rot. If the row is long, a few horse radish cuttings could be planted to finish out, but set only a few as they soon become a nuisance from their nature to spread. Through the winter talk over and plan the garden and then buy the seeds early.

Procure two or three dozen good strong 4-year-old asparagus roots. As early as the weather will permit, set them in a deep furrow 18 inches apart, and cover lightly. At first work the soil to them until they are about 7 inches below the surface. Remember that the soil must be rich to grow asparagus and each year it should have a top dressing of rotted manure.

Plant the peas as soon as the ground can be worked. This can be done in

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The author is certainly to be congratulated on the successful manner in which he has accomplished a most difficult task. His book is unquestionably the most practical work that has appeared on the subject of feeding farm animals.

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February or the first week in March. A hard freeze will not hurt them. Cover them about 2 inches deep. The soil for the small seed should be well pulverized and smoothed so it will hold moisture. Then sow radish, E. S. W. T. is a good variety, and lettuce; Simpson is one of the best. Sow the onion seed and plant the sets for early use. Sow parsnips and beets about the middle of March. If cabbage plants can be had set them at this time, they should be 14 inches apart. They will bear quite a bit of cold if they once become rooted. As soon as the weather is warm and settled plant cucumbers. White Spine is a good variety.

The Barn's Burpee's green pod and Wardwell kidney wax are both stringless and excellent beans. Do not forget Henderson's bush lima beans. They are delicious, very productive and bear all through the season. If there should be a surplus at any time they are fine for winter use if dried when at the right state for the table. Melons and corn should be planted now. If a succession of corn is desired plant every 8 or 10 days until July 10. Now tomato plants should be set out if weather is warm and the ground moist. Dwarf stone or Champion are the best early varieties. After these are set egg-plant and pepper plants, both mangol and hot. The egg-plant is not often seen in a family garden. But it is delicious where properly cooked. After the first radishes and lettuce are half-grown make another planting using a white one, a long variety, so as to have a succession. Also plant more lettuce.

If you wish, you can sow cabbage or tomato seed for late plants about the last week in April. Successive planting of all kinds of vegetables can be made at any time or until the weather gets to hot or dry. The work and enjoyment of the garden is only just begun when it is planted. The battle is on now with the weeds and insects, and the enjoyment comes quickly with some of the early-maturing vegetables. Now the housewife has a good chance to show her skill in cooking. For I hold it takes more brains, gumption, and common sense to prepare vegetables properly, palatably, and to please the eye, than it does to cook meats or cook pastries.

How few really good gardens one sees in driving about the country. The farmer ought to have a good garden for the sake of his family, for economy and because the wife needs the product to supply the table.

Many of the vegetables, if properly cooked, takes the place of meat and are just as nutritious and more healthful. The garden ought to contain an herb bed, sage and parsley are the best known and most commonly grown, and are permanent when once sown.

The wife should have a border or bed for hardy plants and they always look, and do well in the garden.

The garden could contain peonies, phlox, iris, pinks and carnations, sweet williams, lark spur, canterbury bells, and as many more as there is room for. Also some of the beautiful fragrant annuals such as alyssum, mignonette, verbena, phlox D. and petunia. The pleasure derived from them will more than repay for the care given them. Then when the table is spread with its snowy cloth and shining glass and china and the fresh, daintily-prepared vegetables, it will need only the addition of a vase of the beautiful flowers to please the eye and tempt the palate to an enjoyment of the daily meal and life.

A HUNDRED MILLION TIES A YEAR.

Railroads Paid \$50,000,000 in 1906, and Used Timber Equivalent to the Whole Product of 600,000 Acres of Forest.

In the construction of new track and for renewals, the steam and street railroads used, in 1906, over one hundred million cross-ties. The average price paid was 48 cents per tie. Approximately three-fourths of the ties were hewed and one-fourth sawed.

Oak, the chief wood used for ties,

furnishes more than 44 per cent, nearly one-half of the whole number, while the southern pines, which rank second, contribute about one-sixth. Douglas fir and cedar, the next two, with approximately equal quantities, supply less than one-fifteenth apiece. Chestnut, cypress, western pine, tamarack, hemlock, and redwood are all of importance, but no one of them furnishes more than a small proportion.

Oak and southern pine stand highest in both total and average value; the average value of each is 51 cents. Chestnut ranks next, followed by cedar. Hemlock, at 28 cents, is the cheapest tie reported.

More than three-fourths of all ties are hewed; and with every wood from which ties are made, except Douglas fir and western pine, the number of hewed ties is greater than the number sawed. About ten times as many Douglas fir ties are sawed as are hewed. Of the oak ties a little over one-sixth and of the southern pine ties less than one-third are sawed. In contrast to the southern pines is the western pine, of which more than one-half the ties are sawed. In general, when lumber has a relatively low value the proportion of sawed ties increases, because the market for ties is always active, while that for lumber is frequently sluggish. All western species are affected by this condition, for stumpage is abundant and its value relatively low.

Ten per cent of the ties purchased were treated with preservatives either before they were purchased or at the treating plant of the railroad company. At least ten railroad companies are operating their own plants for the preservation of their construction material.

Of the many forms in which wood is used, ties are fourth in cost, sawed lumber being first, firewood second, and shingles and laths third. It has been calculated that the amount of wood used each year in ties is equivalent to the product of 600,000 acres of forest, and that to maintain every tie in the track two trees must be growing.

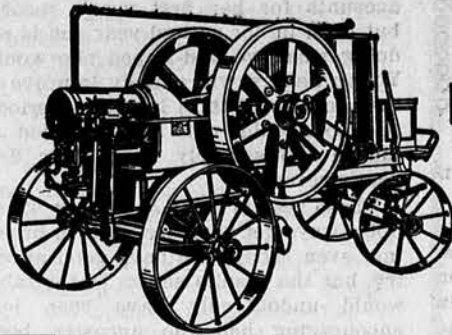
With nearly 300,000 miles of railroad trackage and approximately 2,800 ties to the mile, there are over 800,000,000 ties constantly subject to wear and decay. The railroads report that in the form of ties cedar lasts eleven years, cypress ten years, and redwood nine years. These woods, however, lack the desired weight and hardness, and, what is more important, they are not available in the region of the trunk lines of the Central and Eastern States. When it is considered, then, that the service of the longest-lived tie timbers in general use—chestnut, white oak, tamarack, spruce, and Douglas fir—is but seven years, while with some, as the black oaks, it is but four years, whereas a treated tie with equipment to lessen wear will last fifteen years, it is apparent how much the railroads can save if preservative treatment of ties is universally adopted. The saving in the drain upon the forests is of even greater moment.

Details of the consumption of ties in 1906 are contained in Circular 124, just issued by the Forest Service in cooperation with the Bureau of the Census. This pamphlet can be secured by application to the Forester at Washington, D. C.

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John Alexander Dowie has recently evaporated (it would be irreverent to say he died) but he was only one fraud—there are some still left. To be sure, they have but a little day and their light, like that of Elijah III is soon doused. And this brings us to an interesting test—the one which the public unconsciously applies to all products, religions and institutions—anything with energy in it, no matter what its principles or merit, will live for a while, but it is only the good thing that continues to live. Williams' Shaving Soap is nearly three-quarters of a century old and grows more popular every year.

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Dairy Interests

Dairying With Grade Cows.

FROM KANSAS EXPERIMENT STATION BULLETIN 125.

The Kansas Station has not had its herd long enough to show much results from the grades. The common cows that we purchased in Lincoln County have been graded up by the use of pure-bred Guernsey bulls. The first one was Campbell's King 4951; his dam, Yeska's Queen 6631, has a butter record of 600 pounds in one year. This bull was succeeded by Shylock of Darlington 4579; his dam, Nubia's Vesta 5986, has a record of 556 pounds of butter in six months. Mr. J. F. Schlappi, who was superintendent of the feeding department in the Pan-American dairy test, while in attendance at the Kansas State Dairy Association, scored this bull before the class, and gave him a score of 98 points out of a possible 100. He said: "I would not want an animal of better shape, and it would be hard to find an animal with better skin and hair than this animal has. I think this animal is a very fine one, and good enough for any man's herd. The college ought to be congratulated upon having such a fine animal." There are a few records of Campbell King's heifers recorded in the following table. The records of their dams are inserted for comparison:

Records of Half-Guernsey Heifers and Their Dams.

	Milk. lbs.	Butter-fat. per cent.	Butter-fat. lbs.
Half-Guernsey, No. 43; age, 2 years 8 months.	4,088.0	4.44	181.84
Dam, No. 26.	5,797.0	4.33	251.00
Half-Guernsey, No. 46; age 2 years 11 months.	2,964.7	5.29	157.10
Dam, No. 7.	7,994.5	4.16	333.06
Half-Guernsey, No. 47; age, 2 years 7 months.	7,684.6	4.27	328.30
Dam, No. 25.	5,952.0	4.23	251.50
Half-Guernsey, No. 52; age 2 years 10 months.	5,967.2	4.23	252.44
Dam, No. 24.	8,077.6	3.44	278.31
Half-Guernsey, No. 53; age 2 years 5 months.	5,910.3	4.11	243.38
Dam, No. 33.	7,325.8	3.63	266.34
Half-Guernsey, No. 77; age, 3 years 4 months.	7,602.3	4.17	317.64
Dam, No. 4.	5,824.0	3.89	226.90

It will be noticed that two of these heifers made a comparatively poor record the first year. We are keeping them, with the thought that perhaps in another year they may make a very fair showing.

It will be noticed that the best records of these grade Guernseys are with animals descended from good dams. There are exceptions to this, as shown in No. 46, who was out of a remarkably good common cow, No. 7. She aborted the first year, which partially

accounts for her first year's record; but even in her second year she is not doing what we had hoped she would. Young heifers will usually improve in the second and third lactation periods, and so should not be discarded or judged too severely upon their first year's record.

These results go to show that we do not always get what we want in breeding, even though we have good ancestry, but the results shown in the table would undoubtedly have been less encouraging had the ancestry been poorer. Because we get poor results at times is no reason for not exercising constant care in selecting our breeding stock and in weeding out the poor animals. There is no question but that we will get a larger per cent of desirable heifers when we breed from the best. While a common cow may give excellent results at the pail, there is no assurance that she will transmit her qualities to her offspring. When purchasing these cows we were told that No. 5 was the daughter of No. 20. No. 20 is the best cow in the common herd, and No. 5 ranks among the very poorest. Common cows should be used simply as a stepping-stone to something better. If we attempt to maintain the herd without improving it we will find that we are retrograding. Every year should witness a decided rise in the average production of the herd.

IMPORTANCE OF A GOOD SIRE.

The sire is frequently spoken of as half of the herd. If he is a good one

successful men in the handling of cows in the State of Kansas. He is quoted as saying: "An old red cow dropped two heifer calves in succession, one a half-grade Holstein, the other from a Short-horn bull. The Holstein heifer with a third calf produced an average of fifty-two pounds of 3.8 per cent milk for seven days, and, for the same time, the red heifer with second calf gave twenty-seven pounds of 4 per cent milk per day. The cows were half-sisters, one producing two and three-tenths pounds of butter per day, the other one and two-tenths pounds; the first milking eleven months of the year, the second dry at five months." "This instance," says he, "only serves to demonstrate the value of a sire bred for milk and butter, when the farmer is rearing a dairy herd."

Choice cows can seldom be bought at reasonable figures, unless it be at a dispersion sale; the owners know their worth and will not part with them. This being the case, the only way we can get a satisfactory herd is to raise it. This is not only more satisfactory but it is much more economical.

In breeding dairy cows a man should have a definite object in view. Too many shift from beef to dairy when dairy products are high and beef products are low, and then shift back again from dairy to beef when beef rises in value. By this method a man is constantly shifting from one breed to another, and as a result he is getting a herd that is good for neither milk nor beef. A man must have an ideal toward which he is breeding and then bend all his energies to that end. This shifting from one breed to another is a suicidal policy that will ruin any man and any herd.

IMPORTANCE OF A GOOD DAM.

A great deal of stress has been placed on the importance of a good sire but comparatively little has been said in regard to the breeding qualities of the dam. While these are not relatively of as great importance as the sire's, they nevertheless should receive careful consideration. We can not expect to get the best results from inferior dams, even if the sires are good. The weeding out of the poor cows then has a twofold importance: First, in raising the average production of the herd, and not letting a few unprofitable cows bring down the average so as to make the whole herd appear unprofitable; and second, seek to raise the standard of our breeding stock by furnishing both sire and dam of good breeding and individuality.

Stock Interests

Meat Supply, Consumption, and Surplus.

The supply of meat and its products in the United States, the total and per capita consumption, and the necessity of finding markets in other countries for several billion pounds of meat and meat products constitute the subject of Bulletin No. 55 of the Bureau of Statistics, Department of Agriculture, prepared by George K. Holmes, Chief of the Division of Foreign Markets, which will be issued in a few days, and may be obtained from the Superintendent of Documents, Government Printing Office.

CAPITAL OF THE MEAT INDUSTRY.

The importance of raising meat animals and of slaughtering and packing appears in the statement that a capital of \$10,625,000,000 is directly concerned, an amount five-sixths as large as all capital invested in manufacturing in 1904, a little greater than the estimated true value of all property situated in the south central division of States in 1904, as also of all property situated in the Rocky Mountain and Pacific region.

RELATIVE DECLINE OF STOCK OF MEAT ANIMALS.

While the National stock of meat animals has absolutely increased since the first live-stock census in 1840, it has steadily decreased relative to population, with the exception that a con-

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trary tendency was indicated for 1890 on account of the large number of range cattle at that time.

One-eighth of the National production of meat and its products in 1900 was exported, so that seven-eighths of the production constitutes the National consumption. Having in view solely the stock of meat animals that sustains the National consumption of meat, a ratio between the number of these animals and the population may be computed for each census year as far back as 1840, and, if this ratio of animals to population be represented by 100 to 1840, the corresponding stock for 1900 is only 59. The decline from 1890 to 1900 is one-fourth. Otherwise stated, if the per capita stock of meat animals in 1890 from which the domestic consumption was derived be represented by 100, the similar stock in 1900 was 75.

EXPORTS ARE ESSENTIAL.

In the meantime the exports of meat and its products have increased enormously. Most, but not all, of the exports are recorded in pounds. During the five years, 1878-82, the average annual number of pounds of exports was 1,340,000,000; the annual average for 1888-92 was 1,466,000,000; for 1893-97 the average was 1,608,000,000; for 1898-1902 it was 2,209,000,000; for 1903-6 the average was 1,913,000,000; and for the fiscal year 1907 the number of pounds of exports was 2,047,000,000. It is asserted in this bulletin that the welfare of the raisers of meat animals and of the slaughterers and packers is dependent upon finding foreign markets for the surplus of the production of meat above the home consumption.

NUMBER OF MEAT ANIMALS SLAUGHTERED AND EXPORTED.

The process of estimating the number of animals available for slaughter and the quantity of meat production is explained in full detail, and the conclusions are that 5,831,000 calves were slaughtered in 1906; that 6,229,000 steers were slaughtered and exported; and that 4,413,000 cows were slaughtered; or that 12,978,000 cattle, excluding calves, were slaughtered and exported. The exports of live cattle were about 240,000 head. The lamb slaughter was 12,765,000 head and the sheep slaughter, except lambs, 11,783,000, a total of 24,548,000 head. The hogs slaughtered and exported were 50,145,000, the exports being only 36,000. The total number of meat animals slaughtered and exported in 1900 was 93,502,000, of which the exported live animals numbered 276,000.

DRESSED WEIGHT.

The dressed weight of the 93,502,000 meat animals constituting the meat supply of 1900 was 16,549,921,000 pounds, of which 14,116,886,000 pounds entered into domestic consumption, lard being included with the dressed weight of pork.

In behalf of this investigation several large packing houses made test weighings of the bones contained in the dressed weight of animal car-

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Toronto, Can. Chicago, Ill.

he is more than half, as he will stamp his qualities upon his offspring, and on account of his prepotency the offspring will generally take more after the sire than after the dam.

THE QUESTION OF BREED.

Numerous inquiries reach this station relative to the best breed for crossing upon our common cows. The question of breeds has been a disputed question ever since breeds existed and will doubtless continue to be for all time to come. If the breed is being graded up for dairy purposes, there is no question but what the sire should be prepotent along dairy lines, and in selecting this sire it is well to see whether he has descended from high-producing cows. After eliminating the beef breeds, the question of breed depends more upon the breed of the man than upon the breed of the cow. We frequently find more difference between individuals of the same breed than we do between the different breeds.

Any of the dairy breeds can furnish sires that are vastly superior to those from grade or common cows. The dairy interests of Kansas have shown, from the average production of her cows, that her dairy farmers need to use a sire that will stamp his qualities in a way that will show at the milk-scale and at the Babcock test, and every dairy-farmer should feel that he is committing a crime when using anything but a first-class sire at the head of his herd. Life is too short to attempt to grade up a herd of common cows with a common bull.

The best record under the creamery patrons' investigation was made by a man who has been grading up along dairy lines for several years. The fact that his cows averaged \$8.50 per head more than the next best herd, and \$14 more per head than the fourth-best herd, and \$21.50 more than the average patron's cow, speaks well for his method of breeding as well as for his feeding and care.

For several years this station has been collecting records of different dairymen. In this collection we have the statement of one of the most suc-

casses, and to the weight of bones is added the estimated weight of retail butchers' trimmings from dressed meat, in order that the edible meat in the dressed weight may be ascertained. The weight of bones and trimmings constitutes 20.4 per cent of the dressed weight of the entire available slaughter of meat animals in 1900. Hence the net edible meat in the dressed weight of animals available for slaughter was 11,241,242,000 pounds.

MEAT NOT INCLUDED IN DRESSED WEIGHT.

The production of meat is not confined to what is termed "dressed weight," but includes liver, heart, tongue, and many other edible parts. Large packing houses weighed for this investigation the various edible parts of meat animals not included in dressed weight for a very large number of animals, and it was discovered that in the case of calves the average total weight of these parts is 9.6916 pounds; the weight of these parts for cattle, except calves, is 98.093 pounds, more than half of which is edible tallow; for sheep and lambs the average weight is 20.557 pounds; and for swine the average is 25.055 pounds, not including lard.

TOTAL AMOUNT OF MEAT PRODUCED.

It follows that in the entire meat supply of 1900 the weight of the various edible parts not included in dressed weight is 2,636,409,000 pounds. If to this number be added the weight of the edible portion of the dressed weight, the total is 15,870,889,000 pounds of net edible meat; and if to this is added the weight of the bones of dressed meat and the trimmings of retail butchers, the grand total production of meat in 1900 is found to be 19,186,330,000 pounds, substantially as bought by consumers, domestic and foreign.

CONSUMPTION PER FAMILY.

That meat consumption per capita has declined in this country since 1840 is plainly indicated. There is some ground for believing that at that time meat constituted about one-half of the National dietary in terms of total nutritive units consumed, whereas now it constitutes about one-third.

The average private family of 1900 contained 4.6 persons, and this family consumed on the average 855 pounds of dressed weight of meat, or 680 pounds of edible meat in the dressed weight. Upon adding to the 680 pounds the weight of the edible parts not included in dressed weight, the average family consumption of edible meat was 840 pounds.

In terms of meat and its products substantially as purchased by the consumer, that is, the sum of the dressed weight and of the weight of edible parts not included in dressed weight, the private family in 1900 bought on the average 1,014 pounds of meat, or over half a ton. This makes an average of 2.78 pounds per day and includes not merely meat commonly known as such, with its bones and retail butchers' trimmings, but includes lard, edible tallow, the meat or meat products contained in sandwiches, pies, bakery products, sausage, etc., and all kitchen and table waste.

Beef and veal constitute 47 per cent of the meat consumption; mutton and lamb 7 per cent, and pork 46 per cent. In the exports, beef by weight is 34 per cent, and pork 66 per cent.

CONSUMERS' MEAT COST.

Investigations of meat prices by the National Bureau of Labor indicate that the average price of meat per pound paid by consumers in 1900 was 12½ cents; 13 cents in 1901; 13½ cents in 1905, and 13¾ or possibly 14 cents in 1906. It follows that the retail meat bill of this country was \$2,052,279,000 in 1900, and about \$2,304,000,000 or more in 1906. Every increase of a cent per pound in the National average retail price of meat raises the total yearly expense to consumers by \$168,000,000.

FOREIGN MEAT CONSUMPTION.

Much information is contained in this bulletin relating to the consumption of meat in foreign countries. The record for Germany is especially full and trustworthy, since it has been made under the meat inspection law

of 1904. The per capita consumption of meat in Germany in the calendar year 1904 was 108.5 pounds, the statement undoubtedly being confined to the dressed weight. The average declined to 101.1 pounds in 1905, and to 98.7 pounds in 1906, horse and goat meat in each of the three years being together about 2 pounds. The pounds of meat consumed in Germany declined from 6,445,000,000 in 1904 to 6,028,000,000 in 1906, and in the meantime the net imports increased from 367,000,000 to 499,000,000 pounds.

The per capita consumption of meat in the United Kingdom is 121.3 pounds; in France, 79 pounds; in Italy, 46.5 pounds; in Australia, 263 pounds; New Zealand, 212 pounds; Cuba, 124 pounds; Sweden, 62 pounds; Belgium, 70 pounds; Denmark, 76 pounds. The foregoing figures stand for the weight of dressed meat, and the United States compares with the countries mentioned in having a per capita consumption of 185.8 pounds of meat in terms of dressed weight.

Feeding Rations.

C. W. BURKETT, DIRECTOR, KANSAS EXPERIMENT STATION.

We hear a great deal nowadays about feeding rations. Perhaps some of us think that all of the talk about balanced rations, and all of the talk about nutritive rations, and about feeding standards is mere foolishness. I hope this is not the case with you. There is no doubt that there has been a good many things said about the feeding of our live stock that has not been practical, but yet the application of a few primary principles to feeding are not out of place, since they simply suggest the way that practical feeders are doing things. In other words, today we are using such terms, as suggested above, simply because they express the best there is in the known subject of feeding.

We might say that our feeding stuffs contain five classes of materials in them.

The first is the protein, or that part of the feeding stuff that goes to produce lean meat in the body, makes blood, builds new tissue, and carries on the daily processes in the animal body.

A second group is called the carbohydrates, or the starchy materials. These are concerned in furnishing heat and fat and energy. They represent simply that part of hay and corn and potatoes and bread that go to keep the body warm, producing energy for work and fat where the animal enlarges.

A third group includes the oil or fatty part of the plant. Cottonseed has a good deal of fat or oil. Corn has a moderate amount. Now this constituent, like starch, when fed to animals, furnishes heat, energy, and fat. Since it is more concentrated than the starchy materials it is able to furnish more than twice as much heat, or fat, or energy, than an equal quantity of starch or sugar.

The fourth group of materials found in our feeding stuffs is the mineral substances. These go to make teeth and bones, and even contribute to the muscle and flesh. We are not concerned with the mineral materials in feeding our farm animals because, as a rule, that whatever feeding stuffs we give contain a sufficient quantity of mineral matter to supply the needs of the body. We are often thoughtless, however, when we go to feed our own children. We take the bran from the wheat and give it to our cattle and pigs and give only the soft white part of the wheat to our children, which is lacking in mineral materials. This is often the way with a good deal of our food. That explains why our children often have poor teeth and weak bones. I hope that you are as much concerned in the proper feeding of your children as you are with the feeding of your pigs and calves. In fact, everything that is said here applies just as much to the feeding of human kind as to the feeding of domesticated animals.

A fifth and last group of materials in feeding stuffs is water—just plain,

common water. We dismiss this when it comes to feeding because the water can be furnished by the brook or well, and we do not need depend for it upon materials we feed to the animals.

We, therefore, find that we have five materials in a feeding stuff: protein, carbohydrates, fat, ash, and water. We are concerned, however, only with the first three of them because the other two are readily supplied or they are already in sufficient quantities. We must have protein then to make muscle, tissue, and blood; we must have the starchy materials and fat to keep the body warm, to produce energy, and to make fat in the body. Now, then, the whole question of feeding is concerned simply in furnishing these three materials in the proper quantity and in the proper proportion, one to the other. If we were to feed corn alone, for instance, there would not be enough protein for supplying the wants of the body. Were we to add timothy hay or prairie hay to corn, as many of us do in feeding our work horses, then we should still get too little protein, because these kinds of hay contain so little of this material. That explains why our work horses and mules grow poor when we work them hard, and feed them nothing but corn and these hays, regardless of the quantity that is fed. Now this ration could be improved and made thoroughly satisfactory by feeding, instead of corn in entirety, a few pounds of bran or a pound or two of cottonseed-meal or linseed-oil meal. This would correct the deficiency in protein and make the ration "balanced," as it is called. Perhaps the ration can be further improved by cutting down the quantity of hay, and substituting in place of this quantity cut down, some clover hay, or cow-pea hay, or alfalfa. Either of these is rich in protein and furnishes the necessary muscle-making materials for the proper functions of the body. The problem of feeding is simply one then of furnishing necessary ingredients in the proper quantity and proper proportion. This is just what a practical and successful feeder does. He may not know it, but yet he is doing just this thing. When we feed our cattle corn, cottonseed-meal, alfalfa hay, and clover hay, or the "mixed ration," we are furnishing just the materials that the animal body needs for growth, maintenance, and fat production, and we are furnishing these materials in just the proper proportion we do to the others.

DR HESS STOCK FOOD

Animal growth and milk production are dependent for full development upon a healthy digestion. The key to the feeder's problem then, is a suitable tonic to prevent derangement of the digestive organs. Dr. Hess Stock Food is such a tonic. By making the greatest proportion of food digestible, it keeps the animal in health, causes rapid growth and a full measure of production.



Professors Quittman, Winslow and Finley Dun endorse the ingredients in Dr. Hess Stock Food. It is the prescription of Dr. Hess (M. D., D. V. S.) and is sold on a Written Guarantee.

100 lbs., \$5.00. Except in Canada and 25 lb. pail, 1.60. Extreme West and South. Smaller quantities at a slight advance.

Where Dr. Hess Stock Food differs in particular is in the dose—it's small and fed but twice a day, which proves it has the most digestive strength to the pound. Our Government recognizes Dr. Hess Stock Food as a medicinal compound, and this paper is back of the guarantee.

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Simply put it in a box where all live stock can have free access to it.

The animal's own appetite will make him eat just the amount to keep him not only free from disease but growing and fattening faster than by any other means. If he doesn't need it he will not eat it—therefore it is the most economical tonic ever made.

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Blackleg is unknown in herds where this tonic is kept in the pasture or feed lot.

The same is true of all diseases arising from overtaxed digestion or disordered stomach.

It purifies the blood, cleans and tones the stomach and bowels, improves digestion and assimilation and thereby increases the feeding value of every pound of feed on the farm, as well as making your live stock practically immune from disease.

Our Proposition.

The price of Taylor's Stock Tonic is \$3.75 per 100 pounds. You would buy it if you thought it would make you money. To satisfy you of its real merit we will send you 50 pounds on 30 days' trial. You don't pay for it unless it does the work. Send us the coupon below.

F. J. TAYLOR CO.
 Please ship me a 50-pound sack of your STOCK TONIC which I agree to use at once according to your directions. If satisfactory I will send you \$12.50 for the same. If not satisfactory I will return the empty sack within 30 days and you will balance my account.
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F. J. TAYLOR CO., 361 Live Stock Exchange, Kansas City, Missouri.



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Keeping Poultry in Limited Quarters.

(Continued from page 1375)

considerable time without repair or renewal, it is scarcely worth considering in comparison with convenience in attending to the poultry and saving of labor by having the runs well arranged. A continuous house may be of any desired length, and it is usually fitted with divisions about sixteen feet apart. This being so, sixteen feet will be the breadth of the runs and they may be extended to any length.

NUMBER OF FOWLS PER ACRE.

Assuming that there are twenty-five fowls in each lot and that the runs are sixteen feet wide, a length of 165 feet will give 400 fowls to the acre; that is, sixteen lots. One hundred feet will give 500 fowls to the acre, and fifty feet will give 1,000 fowls per acre. I consider the latter number far too many and should say that the extreme limit ought to be 500 to the acre. Even with this number there is considerable risk, and there must be absolutely no defect, great or small, in the management, to succeed with intensive poultry culture of this kind.

A PLAN OF YARDING.

which has given very good results, and can be recommended, is to have two runs for each lot of birds, one being left idle while the other is in use. This can be arranged by making runs at the back of the house to correspond exactly with those at the front. In case this arrangement is adopted, the fences should be of portable, well-made hurdles, and when one set of yards is becoming run out and in need of a rest, the fences may be readily taken down and moved to the other side of the house. This plan entails some extra labor, but it will pay better than having two sets of fences, for in any case it would be necessary to take up the divisions in order to admit of easy cultivation of the land. It will be found advisable to give the birds a period of four to six months at either side of the house in rotation, but the exact time must depend upon the nature and growth of the crop which is being grown on the untenanted half of the ground.

SUITABLE CROPS FOR FOWL RUNS.

The ground which is not occupied must, of course, be sown to some green crop, in order to purify the soil and utilize the deposit of manure which has been left upon the surface by the closely stocked fowls. It is difficult to advise as to the best crops to grow, so much must depend upon the season, as well as upon the nature of the ground, but the farmer should utilize his knowledge of the desirable rotation of crops, and grow those which will help to pay the rent, or to provide grain, roots or green foods for his fowls.

Of green foods, one of the most profitable would be alfalfa or clover, as both of these are first-class egg-producers, and would fully utilize the manure in the ground, and would make an excellent pasture for the fowls when they are returned to the runs after the removal of the crop.

A GRAIN CROP WITH GRASS TO FOLLOW.

A very good method of freshening a run in which poultry has been kept for some time, in such numbers that the ground has become badly fouled, is to remove the fowls to a fresh run and then give the soil a deep plowing and thorough harrowing. This may be done at any time between Christmas and the end of February. A grain crop may then be sown at the usual time, and when it is coming up a good mixture of grass seeds may be sown over it. In the British Islands we sow barley and oats in late March or early April, and a month or so afterwards the grass seeds are sown in. The corn crop is mown in August, and the young grass coming up afterwards makes an excellent pasture for poultry. By this plan we get a very heavy grain crop off our fowl runs and at the same time we freshen them in the most wonderful manner.

A POPULAR STYLE OF HOUSE AND RUN now seen on many farms is the two-

pen type. This consists of two compartments under one roof, and if the size of the house is thirty feet by twelve, divided into two compartments, each twelve feet by fifteen, there is accommodation of two flocks of fifty hens. Fencing can be economized by making the runs as nearly square as possible, and it will, therefore, be found economical to set up the house in the middle of a square of any size desired, and to divide the square into two runs, by setting up a wire fence across the middle of it, striking the walls of the house on either side, at the points where the house is divided by the inside wall. By this arrangement the runs extend on all sides of the house, and the fowls can take advantage of shade or sunshine at every hour of the day. The doors of the house may be placed either at the ends or at one side.

CHICK REARING IN SMALL YARDS.

As it is with adult fowls, so it is with chicks. The idea that they can be raised successfully only on unlimited runs has been proved to be erroneous, and not a few poultry-keepers now raise them in quite small yards. It is affirmed by those who have tried chick rearing in enclosures that they can raise quite as large and as healthy chicks as they were accustomed to raise heretofore on free range, and that the percentage of loss since the enclosure system has been adopted is much smaller than it used to be. That old rule that chicks must constantly have fresh ground still holds good when they are reared in confinement, for they can not thrive without plenty of green food, clean coops, and clean ground, and it is now, as it always has been, impossible to go on raising chickens, brood after brood, on the same piece of ground without loss.

CHICKS IN SINGLE BROODS

with hens will thrive very well in a two-by-three-foot coop, with a wire run attached, the run being the breadth of the coop and six to eight feet long. But the run must be moved every day, and if the coop has a bottom it must be cleaned every day. It does not take very long to move both coops and runs every morning, even when there are a great many of them, provided they are systematically arranged in the field at the start. Beginning at one side or a field the coops should be arranged side by side in a single row close to the fence, and then it will be only necessary to move each coop and run its own length daily. While this is being done the chicks must be shut up in their coop to prevent their escaping. Managed in this way,

CHICKS WILL THRIVE WELL

up to the age of 10 weeks, and it is generally time to wean them at this age, so that they may be put into larger flocks, say thirty in each, but they must have larger coops and runs from this time forward, if they are still to be kept in confinement. An opportunity now arises of separating the cockerels from the pullets, and not only should this be done, but the chicks should also be classified, and those of a size put together in a lot. Cockerels are more annoying to the pullets in confined runs than on free range, and the necessity for dividing them accordingly arises at an earlier age. With reference to the subject of raising chicks in close quarters a most successful poultryman has said: "By careful attention to all details good chicks can be grown in confinement. More can be done to make them healthy and happy by giving plenty of green food, fresh water, shade, and sunshine, and by keeping the coops clean and well ventilated, than by giving them the whole world to roam in."

A FINAL ARGUMENT.

Another matter to which it may be well to direct attention is that chickens in confined runs are always under the direct supervision of the attendant, and that although some extra labor is entailed by the daily removal of coops and runs to fresh ground, etc., the labor is on the whole lighter than it would be for an equal

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To any old subscriber, who renews his subscription before January 1, 1908, and sends one new subscriber and \$2.00 to pay for same, we will send free, the following:

Farm News Magazine.....	1 year
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The Kansas Farmer one year and any one of the following dailies for the price of the daily alone:

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Western Swine Breeder.....	1.00
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A Big Offer for Only \$1.50.

For only \$1.50 we will send the Kansas Farmer, National Home Journal, and Farm News, each one year, and the Cosmopolitan Magazine 3 months. All to go to one name and address, except Kansas Farmer, it may be sent to another address; or we will send the whole list free, excepting Kansas Farmer to any old subscriber sending us one new subscriber and \$1.00.

A Book for Everybody.

The Kansas Farmer has just bought a number of the Busy Man's Friend for its subscribers. This is a book of 250 pages of things that every one should know. It is a compendium of Legal and Business Forms. A Fund of Practical Information for Every-day Life. It contains the Busy Man's Code; The Hows of Business; Points of Law and Legal Forms; Digest of Laws; Practical Information for Busy Men; The Busy Man's Digest of Facts; Computations at Sight. The book is illustrated and bound in cloth. Any old subscriber who will send us \$1 for two new subscriptions will receive this book, postpaid, as a present. This offer is good as long as the books last. Order early and get "The Busy Man's Friend" absolutely free.

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FOR SALE—An extra fine lot of B. P. Rock cockerels at \$1 each. D. N. Hill, Lyons, Kans.

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FOR SALE—Barred Plymouth Rock cockerels from my prize winners, at reasonable prices. Eggs in season. Peter Reber, Neosho Rapids, Kans.

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PLYMOUTH ROCKS—Barred Rocks; some pure-bred cockerels for sale now, 75 cents each. Mrs. Wm. Humphrey, Corning, Kans.

For Sale, Until January 1, 1908

Purebred B. P. Rock chickens by prize-winning birds. Cockerels \$1.50 and \$2, pullets \$9 per dozen, \$5 per half dozen. A. C. Merritt, Hillcrest Fruit and Poultry Farm, North Topeka, Kans. Independent telephone 4351.

High-Scoring Pekin Ducks and Barred Rocks

Ducks 95 to 97. Rocks 88 to 93 1/2. Write me; my prices are reasonable.

CHAS. E. SMITH, R. 6, HIAWATHA, KANS.

Miller's Famous Barred Plymouth Rocks

If you want a fine cockerel from my prize-winning strain write me at once. I have a fine lot and they won't last long. Prices \$1.50 up. Satisfaction guaranteed. A. H. Miller, Bern, Kans.

Specialist of

BARRED PLYMOUTH ROCKS

Exclusively.

Double matings. None better than ours. Can please any one now in birds from \$2 to \$50. All guaranteed. Eggs in season. Write at once to

A. W. NICKOLS, Box 637, Indianapolis, Ind.

Buff Plymouth Rocks

Exclusively.

Vigorous, farm-raised birds, bred for size and laying qualities. Incubator eggs a specialty, \$5 per 100, \$3 per 50, \$1 per 15. Circular free.

Sunny Slope Poultry Farm.

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EXCLUSIVELY

Good for Eggs. Good to Eat. Good to Look at.

W. P. Rocks hold the record for egg-laying over every other variety of fowls; eight pullets averaging 289 eggs each in one year. I have bred them exclusively for twelve years and have them scoring 94 to 96 1/2, and as good as can be found anywhere. Eggs only \$5 per 15; \$5 per 45, and I prepay expressage to any express office in the United States. Yards at residence, adjoining Washburn College. Address

THOMAS OWEN, Sta. B. Topeka, Kans.

LEGHORNS.

ROSE COMB BROWN LEGHORNS, exclusively. Cockerels and hens, each \$1.00; six \$5.00; twelve \$10.00. B. F. Evans, Wiley, Kans.

50 FINE COCKERELS, S. C. B. Leghorns. Suitable for farm flock; \$1 each. S. McHarg, Wakita, Ok.

FOR SALE—White Leghorn cockerels, very fine birds. Price \$1 and \$1.50. Eggs in season. Mrs. Lena Osborn, R. 3, Emporia, Kans.

R. C. B. LEGHORN cockerels and pullets; also Mammoth Pekin ducks, \$1 each. Eggs in season. Mrs. J. E. Wright, Wilmore, Kans.

ROSE COMB BROWN LEGHORN cockerels \$1. If not satisfactory return at my expense. Frank Dunable, Clay Center, Kans.

FOR SALE—1575. C. W. Leghorn cockerels at \$1 and \$2 each. If you wish to improve egg production in your grade hens, get a few of these cheap, pure-bred cockerels, or improve your flock of White Leghorns by buying one of the \$2 birds. R. B. Wilkinson, Tongonoxie, Kans.

FOR SALE—Scotch Collie pups and Rose Comb Brown and White Leghorns; S. B. Hamburg cockerels. Chas. W. Gresham, Bucklin, Kans.

PURE-BRED S. C. B. Leghorn cockerels \$1 each, six for \$4. Mrs. F. E. Town, R. 3, Haven, Kans.

Grand cockerels from prize winners of the Famous Witman strain of S. C. Brown Leghorns. Prices from \$1.50 to \$5.00 each. Special prices on doz. lots. L. H. Hastings, Quincy, Kans.

STANDARD-BRED SINGLE COMB BUFF LEGHORNS—Headed by first prize pen, Chicago show 1906 and took six first prizes and first pen at Newton, 1904. Eggs, \$3 for 15. S. Perkins, 801 East First Street, Newton, Kans.

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Know what you buy in S. C. W. Leghorns and B. P. Rocks. Every bird we use for breeding or offer for sale has been scored by Judge C. H. Rhodes of Topeka. Send for catalogue and prices. The Eleanor Fruit and Poultry Farm, A. Oberndorf, Rop., Centralia, Kans.

TURKEYS.

MAMMOTH BRONZE TURKEYS—From best strains of blood. Have two pens. Toms and hens extra large with fine markings. Toms \$5, hens \$3. Mrs. A. D. Watts, Route 2, Hallowell, Kans.

BOURBON RED and Slate turkeys and Buff Wyandotte chickens, gobblers and cockerels for sale. John Stone, Medicine Lodge, Kans.

number of small flocks, scattered over a farm and allowed to roam at will.

There is, therefore, much to be said in favor of the system of chick-rearing in coops and confined runs, and there is nothing to prevent their being as strong and healthy as free-range birds, provided that due care is taken with feeding, cleanliness, removal to fresh ground and general management.

Differences in the Characteristics of Hens.

F. O. WELCOME IN POULTRY.

No two hens on earth are exactly alike in all respects. This is due to a fixed law of nature. Nature never makes exact duplicates of anything. Some hens never lay during their molt—other hens lay well throughout the entire period and keep in full health and vigor. Housing, feeding and care should be the same in both cases.

Some hens habitually lay "a litter of eggs" and then "go broody," or cease laying for a time, repeating the operation several times during the year—other hens (regardless of breed) lay right along, never skipping more than a few days at a time, for ten, twelve or more months "on a stretch."

Some hens produce nearly 100 per cent of fertile eggs while other hens in the same flock rarely or never lay a fertile egg. In many cases, the number of eggs produced by each hen seems to have no bearing whatever on the matter of fertility.

Some hens persist in laying thin-shelled and non-shelled eggs although supplied with plenty of oyster shell, grit and bone—other hens lay perfectly-shelled eggs although deprived of those materials for a long time.

Some hens continue to lay right through the coldest winter weather in cold houses and without careful feeding and care—other hens never lay in winter unless more warmly housed and skillfully "fed for eggs."

Some hens gradually reduce the size of their eggs as they approach the end of a "laying period"—other hens lay full-size eggs to the last.

Some hens that produce dark or medium brown eggs when beginning to lay gradually exhaust their supply of coloring material and their eggs grow lighter and lighter as laying continues—other brown-egg hens keep up the standard of color to the end.

Some hens produce pullets that resemble their dams in appearance and performance—other hens do not.

Some hens always cackle after laying—other hens do so seldom or never. Some hens cackle much and lay little; resembling the barking dog that never bites. Incidentally, let me remark, many barking dogs do bite.

Some hens want a drink of water as soon as they quit the nest after laying, other hens seldom drink at that time.

Many hens prefer corn to other grains—some hens prefer wheat when they have the choice.

Some hens decline to eat oats—other hens eat oats readily, even greedily. Probably any hen may be taught to eat oats.

Some hens that are very active lay infrequently—other active hens lay regularly and abundantly.

Some hens are very "cross" when broody—other hens are exceedingly good tempered at that time.

Some hens do not resume laying for a long time after being "broken up"—other hens begin to lay again in a few days.

Some hens lay every day for three or four days and then skip one day—other hens lay one day and then skip three or four. Some hens lay every day, fifty, sixty or more days in succession, with no skips.

Some hens become very ragged and dejected when they molt—other hens in the same flock may keep fully clothed, productive and in perfect health throughout the entire period. They are not "hung in the molt" either.

Some hens produce 200 or more eggs in one year or less in conditions of housing, feeding and care that are, apparently, far less favorable to that end than those that obtain where

other hens produce half as many or less.

Some hens produce eggs that are very similar to each other; so much so that one may readily learn to identify the layer by the individuality of her egg—other hens produce eggs that vary more or less in size, shape, and general appearance.

As one facetious farmer said: "There is just as much difference in some hens as there is in people, and sometimes more."

Most of the differences referred to have been observed by the writer. When one stock has been bred, competently, for years for uniformity, such



H. W. Chestnut, Centralia, Kans., has been breeding White-faced Black Spaniels exclusively for eleven years, and the above is from a photo of one of his birds.

differences as those noted here might be less numerous and less obvious, but I fancy that they exist in some degree in all large stocks and in most small ones.

There are of course, certain general characteristics which are possessed in common by all hens, and others which typify the different breeds and varieties but each bird has a distinct individuality and no flock may be depended upon to respond uniformly to any one set rule of feeding and care. Neither is any one justified in the narrow conclusion that the habits, temperaments, and performances of such birds as he has know are necessarily typical in all respects of the hens of other people.

Such narrow views no doubt are directly responsible for a great many of the perplexing and misleading theories that are advanced by poultry men as well as amateurs and novices.

Nature is continually producing sample hens where qualities are very desirable. If breeders desire to fix such qualities—make them characteristic of a larger proportion of their stocks—why may not that end be attained, in time, by careful selection and breeding? There is nothing constructive, nothing that makes for improvement and progress in that spirit which notes the usual and commonplace and says: That is nature's way and can not be improved upon.

Lice, Mites, and Success.

Only a short time ago a bright and shining light in the galaxy of writers on matters pertaining to poultry came out with the statement that entirely too much stress was being placed on the detrimental effects of lice and mites as pertaining to the profits to be derived from the poultry business, that it would be far better to show up the profitable side of the question. My observations have led me to believe that there are always ten persons ready to go into the business where there is one with the sticktoitiveness necessary for a successful poultry-raiser, and the nine who start in with their inflated ideas as to the easy profits which are supposed to be fairly force themselves upon the would-be poultry-raiser, are not only a detriment to themselves, but are a great hindrance to the poultry cause. And far better would it have been had the obstacles in the way been shown up even in a magnified form with a full knowledge of what must be contended with and yet to go in with a determination to succeed is of lasting benefit to the cause, for I be-

WYANDOTTES.

SILVER LACED WYANDOTTES Exclusively—Sixteen years winner of first prizes and specials. Fine cockerels for sale. Mrs. J. W. Gause, Emporia, Kans.

WHITE WYANDOTTE hens and pullets 75 cents each. White Holland toms \$2.50, hens \$2. Cockerels all sold. Mrs. E. F. Ney, Bonner Springs, Kans.

FOR SALE—Golden Wyandotte cockerels; also a few M. B. turkeys. Cockerels \$1 and \$1.50. Eggs in season. A. B. Grant, R. 9, Emporia, Kans.

B. P. ROCKS, PARTRIDGE WYANDOTTES—Birds of royal breeding. Low prices for 30 days. Mrs. Minnie K. Clark, R. 9, Lawrence, Kans.

BROWN'S WHITE WYANDOTTES—Ahead of everything; stock for sale; eggs in season. I have the English Fox Terrier dogs. Write me for prices and particulars. J. H. Brown, Clay Center, Kans.

AT PANIC PRICES—50 white Wyandotte cockerels, 10 pairs white Guinea, 1 pair W. H. Turkeys, 1 yearling Tom, 10 Indian Runner Drakes, 50 Poland-China hogs. Mrs. L. D. Arnold, Enterprise, Kans.

Silver Laced Wyandottes

EXCLUSIVELY

I have a few very fine Silver Laced Wyandotte cockerels for sale. They are from my blue ribbon winners at the State shows. They are extra good and will be sold reasonable.

Mrs. J. W. Gause, R. 10, Emporia, Kans.

BLACK SPANISH.

FOR SALE—White-faced Black Spanish. Hens \$2 each. Cockerels \$2 each. pullets \$1.50 each. Chas Hobbie, Tipton, Kans.

WHITE-FACED

BLACK SPANISH

Choice hens, cocks and cockerels for sale at prices that will sell them.

H. W. Chestnut, Centralia, Kans.

BUFF ORPINGTONS.

ORPINGTONS—1,000 to sell to make room. Catalogue free. W. H. Maxwell, 1996 McVicar Avenue, Topeka, Kans.

CHOICE Buff Orpington and B. P. Rock cockerels. Collie pups and bred bitches. Send for circular. W. B. Williams, Stella, Neb.

S. C. Buff Orpingtons

Good enough for any show, the kind that win and pay on the farm. If you want the best stock, send for my catalog. It is free.

W. H. Maxwell,
1996 McVicar Ave., Topeka.

RHODE ISLAND REDS.

ROSE COMB RHODE ISLAND RED cockerels and cocks \$1.00 each. Exhibition stock \$2.00 up. First prize cock, Kansas State Show, \$10.00. Eggs in season. Mrs. M. A. Rees, Emporia, Kans.

Indian Runner ducks and S. C. Rhode Island Red cockerels for sale. E. E. Jansen, Route 3, Geneseo, Kans.

NEOSHO POULTRY YARDS—Rose Comb R. I. Reds; some good cockerels for sale. Also Angora rabbits, snow white and pink eyes. Prices reasonable. J. W. Swarts, Americus, Kans.

PURE-BRED R. C. Rhode Island Red cockerels at reasonable prices. A. L. Scott, R. 1, Larned, Kans.

FOR SALE—Rose Comb Rhode Island Red cockerels; Duroc-Jersey boars; one registered Red Polled bull. I. W. Poulton, Medora, Kans.

S. C. RHODE ISLAND REDS

A few choice young birds for sale. I do not sell birds for less than \$5.00, from this up, and guarantee your money's worth.

BARRED ROCKS

are still my favorite bird and breed, and after 10 breeding them feel competent to pick you a bird for \$5.00 worth the money—male or female.

Address, HARRY WRIGHT TOPEKA.

BLACK LANGSHANS.

BLACK LANGSHANS—Extra fine. Cockerels \$1.50, pullets \$1. Mrs. Geo. W. King, Solomon, Kans.

PURE-BRED WHITE LANGSHANS for sale. Hens \$1.25, pullets \$1 each; also a few Silver Spangled Hamburg cockerels. Mrs. John Cooke, Greeley, Kans.

BRAHMAS.

FOR SALE—Light Brahma and B. P. Rock cockerels; also Pekin ducks. Eggs in season. Miss Ella Burdick, Route 8, Emporia, Kans.

LIGHT BRAHMAS—None better east or west. Pens of 4 hens, 1 cockerel, average better than 90 points. \$10 per. Cockerels to head your flocks. Write J. T. Edsen, Schaffert, Iowa.

Light Brahma Chickens

Choice pure-bred cockerels for sale. Write or call on

Chas. Foster & Son Eldorado, Kans. Route 4

LIGHT BRAHMAS.

FOR SALE—Light Brahmas, 100 pullets, 25 large, well-marked cockerels, sired by bird that won first at Topeka Poultry Breeders Association, February 25 to March 2, 1907. Will be pleased to book your order now for eggs and baby chicks.

Mrs. A. P. WOOLVERTON
Route 8, Topeka Kans.

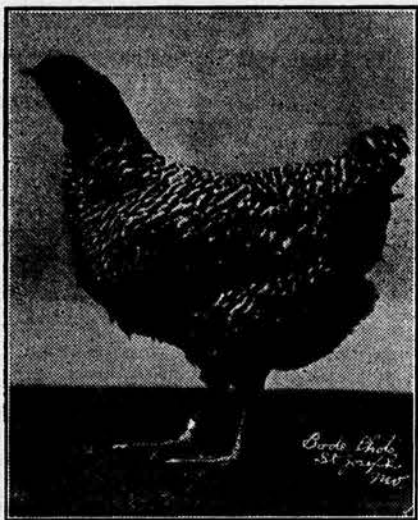
MINORCAS.

COCKERELS FOR SALE—R. C. Black Minorcas White Wyandottes and W. P. Rocks. R. F. Meek Hutchinson, Kans.

INDIAN GAMES.

FOR SALE—A lot of high-scoring Cornish Indian Games. Apply to J. S. Sexton, Rocheport, Boone County, Mo.

lieve there is a future to the business, broader and more far-reaching than the most optimistic of us have dared to hope for. But this high ideal of business can never be attained by ignoring the fact that success is only achieved by the most persistent warfare upon insect pests. So desperate are my convictions on the subject that I am fully satisfied that at least three-fourths of all diseases of poultry may be attributed to lice and mites. In fact, if one's fowls are kept free from this class of vermin they will need no medicine of any kind. A bird that is kept free from insect pests is so strong and vigorous that it is no easy matter for them to take cold. If they chance to roost in a draft this same



This pullet was given the blue silk badge by the American Barred Rock Club for being the best colored pullet shown at the Kansas State Poultry Show and at the St. Joseph, Mo., show of 1907. Bred and owned by A. H. Miller, of Bern, Kans., who has some fine pullet-bred cockerels from this bird, for sale.

vigor enables them to throw off any evil effects, while on the other hand a bird that is fairly eaten up with lice or mites, its vitality is at such a low ebb it is already harboring a disease and is only biding its time a little before it absolutely succumbs to the wasting effects of this condition of affairs.

This being the season of the year in which roup is the most likely to get in its deadly work, I would give a word of caution. The young chickens which two or three months ago required only a small house to give them protection are so grown that in many cases more room must be provided for them or they will be so crowded as to cause many of them to become overheated in the early part of the night, then later they get chilly and a cold results. Then, too, a little neglect on the part of the attendant allowing their quarters to become filthy together with their crowded condition, furnishes the greatest of facilities for the propagation of the insect pests, and the combination makes an ideal disseminator of disease. As a preventive, keep their houses clean, and for chicks that have not learned to go on the perches to roost, make platforms by nailing laths on, 2 by 4 or 2 by 6, set up edgewise, leaving spaces of 2 or 3 inches between the lath, and make this platform large enough to cover the floor of the house within 3 or 4 inches of the wall on all sides. This will put a stop to their crowding and they will soon learn to go on their perches. Remember that in this climate it is necessary to keep up a continual warfare on the lice and mites.

California. J. M. WRIGHT.

Turkey-Raising.

After many years of varied experience with turkeys, learning as much by my failures as by my successes, I now look forward to each new experience with confidence and pleased expectation. From my failures I have learned to use as mothers, birds over not under, a year old. Two- or three-year-old birds are those selected. Young turkey hens will lay more

eggs, but their chicks are disappointing, lacking stamina and ready to topple over with the least provocation. A young gobbler, but a well-developed one, not too long-legged, with a broad, shapely body, and unrelated to the hens is the next desideratum.

The eggs should be brought in daily, for fear of frosts and chill. If you keep over four hens there will soon be a basket of eggs ready for foster mothers. I find the Buff Plymouth Rocks are large and quiet sitters, willing to be placed where you wish them to be and seldom leave their eggs long enough for them to become chilled. I like to give one turkey hen a setting of eggs, and three or four chicken hens nine or ten apiece at the same time. Afterwards the little ones will all go in a flock to the pastures or grain fields and prosper. When taken from the nests we dust them thoroughly with insect powder and bring them to the kitchen to become acquainted with us. They like a low wide box and a light warm cover throw over them.

When they are two days old I begin to feed them a little. Stir a beaten egg into a tin cup of sweet milk and break into it bits of stale bread and let it form a custard pudding in the oven. Then a big newspaper is spread in the sun on the south porch; it is sprinkled with clean sand, bits of charcoal, crumbled egg shell and here and there around the outer edges bits of the custard. They will eat sparingly at first, but there is no use of wasting food unnecessarily. Every two or three hours they are fed by the same formula, and then they will flutter around for exercise and go back to be hovered in the box. At night they are given to their well-dusted mothers. Generally there will be one egg unhatched in a nest, which will keep the setters contented while the little ones are absent. In two or three days the baby turks will climb all over you, if you will let them, and would love to doze under your apron in your warm lap. I want them tame so they can be picked up and dusted at least once a week as the weather grows warm. Now we will give a brood of a dozen to each hen and the rest to the turkey—about twenty or so. Two hens and the turkey will manage them all. A small flock of sheep has been turned into the cherry orchard to graze the grass and loaned me two or three wagon boxes, with a shelter across one end of each, for the little fellows. Go all around and see there are no hollows where a little explorer can crawl through or they will stray off and come to grief. I feed the mothers well with corn so they will not devour the tid-bits of the little ones. After ten days I begin to add cottage cheese to the egg diet—not hard, dry curd, but made soft and creamy as for the table—no hard boiled eggs for me. It is no trouble to prepare their food daintily and they thrive upon it wonderfully.

If I have a nest of hens' eggs a hen has set upon just a few days and they smell all right I save them for the custard pudding. Every day they have their sand, their broken egg shells and drinking vessels cleaned and so placed that they can not drabble themselves in the water. When they are two weeks old I begin to bake corn bread and add to their egg diet—cornmeal mixed with buttermilk, a little soda and always a spoonful of meat drippings or lard, so it will be short and crumbly. The corn bread and soft cottage cheese, after they are two weeks old, will give them a balanced ration, and how they will grow, and how bright and alert they will be. The wagon-boxes must be changed often to clean turf. When the little turkeys can fly over the boxes they are mature enough to go strolling across the fields, and the quarters may be given to later hatches. They will begin to come home, their crops full of insects, but still they are glad of a little corn bread which always awaits them.

The past summer has been very unfavorable for turkey-raising in Ohio, but our grounds are alive with beautiful, well-grown birds, so well nourished they stood the chills of cold rains in their younger days. The fav-



1st prize Cockerel Kansas State Show, '05

orable prices awaiting turkey-growers will enlist the young people in the attempt to grow a crop another year and this is why I have hoped to help them to success by following a track that has been so prolific of success to myself.—JANE B. WING, Champagin Co., O., in Breeders Gazette.

National Poultry Show.

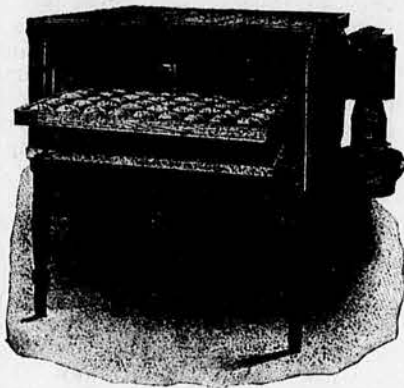
The twelfth annual poultry show of the National Fanciers' and Breeders' Association will be held January 22-29, 1908. Liberal cash special and general prizes will be offered.

The second annual meeting of the American Poultry Association, Mid-West Branch, will be held in the club rooms of the show.

For premium lists and other information address Fred L. Kimmey, secretary, 105-113 S. Clinton St., Chicago, Ill.

Fairfield Incubators and Brooders.

In this issue appears the advertisement of the Nebraska Incubator Company, which manufactures the Fairfield Incubator, which is constructed of California red wood and other first-class



materials with special attention given to quality in every part entering into its make. The manufacturers believe there is not a better made machine on the market, and with the assistance of such an expert of W. E. Riggs, one of the most practical incubator men in the West, in the factory, the firm expect to double their output during the coming season. They are quite anxious that every one interested in incubators or poultry supplies should notice their advertisement and write them for full particulars.

Poultry Associations.

December 23-28, El Reno, Okla., Canadian County Poultry Association, L. G. Adams, Secretary.
December 23-28, Cherryvale, Kans., Geo. Behner, Secretary; J. O. Davis, Judge.
December 26-28, Trenton, Mo., L. A. Tracy, Secretary.
December 31 to January 4, Dodge City, Kans., F. A. Etrick, Secretary.
December 30 to January 1, Eureka, Kans., Greenwood County Association, Chas. Osborn, Secretary.
December 31 to January 3, Bedford, Kans., D. C. Mohler, Secretary.
January 1-4, Holton, Kans., Jackson County Poultry Association, Thos. A. Fairchild, Secretary.
January 2-4, Plainville, Kans., Chas. R. Cook, Secretary.
January 6-11, Topeka, Kans., Kansas State Association, Thos. Owen, Sec.
January 14-18, Kansas City, Mo., P. H. DePree, Secretary.
January 14-17, Edgar, Neb., The "Big Four" Association, Chas. A. Cottle, Sec.
January 15, Anardarko, Okla., John Pfaff Jr., Secretary.
January 20-25, Lincoln, Neb., L. P. Luadin, Secretary.
January 22-24, Lenora, Kans., Lenora Poultry and Pet Stock Association, John S. Regeater, Clayton, Kans., Sec.
January 27 to February 1, St. Joseph, Mo., E. L. McDonald, Secretary.
February 1-5, Oskaloosa, Kans., N. R. Nye, Secretary.
February 4-7, Leavenworth, Kans., N. R. Nye, Secretary.
February 10-14, Atchison, Kans., W. Mangelsdorf, Secretary.

Special Sale

Of My Barred Plymouth Rocks

Special holiday bargains until January 1, 1908. I will give a \$5 cockerel for \$3.50; a \$3.50 bird for \$2.50; a \$2.50 bird for \$1.75; a \$1.75 bird for \$1.25. These cockerels are sired by my prize males which have won at the State Shows.

Cut this ad out and send with your remittance. This offer and ad will not appear again. Satisfaction guaranteed.

A. H. Miller, Bern, Kans.

TOULOUSE GEESE.

FOR SALE—Toulouse geese; Pekin, Rouen and Muscovy ducks; turkeys; Rocks, three colors; Leghorns, three colors; Wyandottes, three colors; Houdans; Game; S. S. Hamburg; Buff Cochins; Orpingtons; Rhode Island Reds; Bantams; Pearl and White Guineas; hounds and rat terriers; all kinds of fancy pigeons. Eggs in season. Write for free circular. D. L. Bruen, Platte Center, Neb.

PEKIN DUCKS.

Pekin Ducks **SCORING 95-97**
Barred Rocks **SCORING 88-93**

I breed only high-grade stuff. If you want this kind I can please you. Write for prices, which are reasonable.

Chas. E. Smith, R. 6, Hiawatha, Kans.

CANARY BIRDS.

IMPORTED HARTZ MOUNTAIN AND ST. ANDREASBERG CANARIES
For particulars address DEER LAKE PARK, SEVERY, KANSAS.

SCOTCH COLLIES.

SCOTCH COLLIES—Pups and young dogs from the best blood in Scotland and America now for sale. All of my brood bitches and stud dogs are registered, well trained and natural workers. Emporia Kennels, Emporia, Kans. W. H. Richards.

Scotch Collies.

Fifty-seven Collie puppies just old enough to ship. Place your orders early, so you can get one of the choice ones.

Walnut Grove Farm, Emporia, Kans.

MISCELLANEOUS.

\$4 yearly profit per hen guaranteed by using Little Gem Hatcheries and my Bifold System. Satisfactory proof free. F. Grundy, Poultry Expert, Merriamville, Ill.

AGENTS—To sell and advertise our Poultry Compound; \$35 weekly; rig furnished. Franklin Manufacturing Company, Norwalk, Ohio.

—FOR—

Poultry Feed and Supplies

—SEE—

D. O. Coe, 109-111 E. 5th, Topeka
(After January 1, in the new building, 119 E. 6th)

BEE SUPPLIES

We can furnish you bee and all kinds of bee-keepers' supplies cheaper than you can get elsewhere, and save you freight. Send for our catalogue with discount sheet for early orders.

TOPEKA SUPPLY HOUSE,
7th and Quincy, Topeka, Kans.

FURS, HIDES, JUNK

To be sure of a Square Deal Ship to
B. S. BARNARD, Iola, Kans.

If prefer selling large lots at home advise accordingly. Will call, don't delay. Write today for price lists and shipping tags.

HIDES, FURS, JUNK

A. GOLDBERG, Iola, Kans.

References: Allen Co. State Bank, Iola State Bank. If you wish to sell large lots at home, write me and I will call. Write today for price lists and shipping tags.

BALMOLINE The Corn Husker's Friend
and Nature's Perfect Healing Salve, for Man or Beast. Druggists, or by mail. Trial box 4c. 2 oz. 25c, 6 oz. 50c. **THE BALMOLINE CO.,** Sta. B., Abilene, Kans.

Farmers' National Congress.

(Continued from page 1286.)

do with the abilities given us except what we do to influence what our children do with their abilities. True, real education has more than anything else, probably more than all things else, to do with one's success and happiness and one's usefulness as a social unit. Education is always basic. Education is far more than memory, than knowing things. It includes skillful, trained use. It can be gotten outside of schools. But schools are designed to educate and the right sort of schools will always be the best means of education. I do not believe that any subject that will come before you will surpass agricultural education in importance. The program has been arranged for its thorough discussion by men eminently qualified to discuss it. Hence I shall only call attention to its importance and to the downright silliness of no agricultural instruction in our country schools. When we think about it we will see that the lack of agricultural education in our country school can be due only to our inattention, our thoughtlessness, our unreasoning, lazy holding fast to a course of instruction that may once have been right, but that long since should have been changed. We have too much tradition and too little common sense in the management of our schools. What use under the blue of heaven have most of our boys and girls for a great deal of that which is taught them? And while they are wasting time on things of no use, they are not taught at all that which would be of most direct use to them and which pertains to the noblest and most useful occupation of mankind. As I look back I can see that at least one-half of the little time that circumstances permitted me to spend in school was wasted, except in so far as my mind was exercised and developed; and it could just as well have been exercised by studies that also would have been directly useful. As an example, I spent a good deal of time on the higher mathematics; and in all my life I have not had the least use whatever for them. I suppose that today I would not know a logarithm or a cosine if it came up and shook hands with me. And I never had, from the beginning to the end of my schooling, the least instruction in anything that would have been specifically useful to me as a farmer or a publisher. Now that is equally true of the schooling being given this very day to ninety per cent of the millions of farmers' children. Why really, I must repeat that it is silly and ridiculous. And then it is so extravagant! And so unjust to the children! In justice to ourselves, in justice to our children, in justice to the Nation, we ought to equip our boys and girls for the greatest usefulness and happiness. Our best crop is our boy and girl crop. Truly Ruskin was right in thinking that among our National manufactures that of souls of a good quality is a very lucrative one. To develop to the fullest its capabilities for useful occupation and to enrich its own mind and soul and to benefit others, will best bring to the child and the man the durable satisfactions of life, its profound and permanent happiness. But if our schools do their part in that, the course of study must be radically changed. This congress can project its influence into the school system of the rural communities of the United States and it can not do anything more important, more fundamental, or more worthy of your careful consideration.

CONCLUSION.

In conclusion, permit me to sound for one moment the personal note. This is the twentieth consecutive session of the Farmers' National Congress that I have attended. By odds youngest in years of all the delegates at the first session I attended, I am now the oldest delegate in point of attendance. I have attended more sessions and have served this congress in a greater variety of official capacities and for a greater aggregate of time, than anyone else. I do not say this to boast, but that you may see that I may well indeed be solicitous about this congress to which I have given

so much time and labor. I can say in all honesty that whether serving you as assistant secretary or secretary, as acting treasurer or men of your executive committee, or as president, I have always put the interests of the congress before my own. I am profoundly grateful for the honors you have bestowed upon me and for the kindness you have always shown me. I believe that it is best that at this time, rather than later, I should say these things, and thank you most heartily and sincerely for all you have done for me. When, at the close of this session, I shall be divested of all connection with this congress, I will have somewhat the feeling of the boy let loose from school, but my interest in this congress, and my concern for its welfare, will not be one whit lessened. The past of the Farmers' National Congress is something of which to be proud; its present is indeed satisfactory—complete harmony among its officials, the largest attendance of delegates in its history, and a determination on the part of all to make it yet more useful and influential. It has cost much effort and labor on the part of its officers and members, must self sacrifice every years of its existence, et me urge you in all earnestness to keep well what is built up. While it is wise that the president should step down into the ranks, it is also wise that those whose earnestness and ability have been proven should be retained and it is certainly wise that you should select with the utmost care the new men to be put in official harness. The work that builds up this congress is done between sessions as well as at sessions. The men that build up this congress are men willing to work for nothing rather than men with the gift of ready speech. As one to whom you have been indeed kind for a score of years, as one that has labored hard, if not always well, for this congress, let me admonish you, earnestly indeed, so to govern your personal conduct while here, and to exercise such care and thoughtfulness in your action on reports and resolution and in the selection of your committees and officers, that this session may be the starting point of the most rapid advance in the history of this congress in all that will make it of use and advantage and honor to its members and the farmers of this, our dear fatherland, the best and dearest country in all the earth.

Stock Interests

Indigestion Due to Many Causes.

DR. DAVID ROBERTS, WISCONSIN STATE VETERINARIAN.

Indigestion may occur from many different causes, as costiveness, a too liberal supply of milk; too rich milk; the furnishing of the milk of a cow long after calving to a very young calf; allowing the calf to suck the first milk of a cow that has been hunted, driven by road, shipped by rail, or otherwise violently excited; allowing the calf too long times between meals, so that, impelled by hunger, it quickly overloads and clogs the stomach; feeding from a pail milk that has been held over in unwashed (unscalded) buckets, so that it is fermented and spoiled; feeding the milk of cows that have been kept on unwholesome food; keeping calves in colic, damp, dark, filthy, or bad smelling pens. The licking of hair from themselves or others and its formation into balls in the stomach will cause indigestion in the calf.

Home-Cured Meats May Be Sold.

Can a farmer cure meats of hogs and cattle on the farm and sell it in the local market, without inspection of the Government? Could he sell to retail stores for a gain, and would there be any limit to the products from his own farm? I have about sixty head of hogs to sell, and would like to dispose of the meat in that way.

CHAS. HOBBS.

Mitchell County, Kansas.

A farmer may cure meat of hogs or

Special Want Column

"Wanted," "For Sale," "For Exchange," and small want or special advertisement for short time will be inserted in this column without display for 10 cents per line of seven words or less per week. Initials or a number counted as one word. No order accepted for less than \$1.00.

CATTLE

REGISTERED Holstein-Friesian bull for sale; 3 years old. J. E. Huey, R. 6, Sta. A, Topeka, Kans.

FOR SALE—Registered yearling A. J. C. C. Jersey bull, fit for immediate service; strong in the blood of Pedro, Combination and Exile; dam a 5-gallon cow. Price \$50, crated f. o. b. express office, Lawrence, George West Maffett, Lawrence, Kans.

FOR SALE—28 head of registered Aberdeen-Angus cattle. These are the good kind, and are mostly cows and heifers. I am changing my business and these cattle will be sold at bargain prices. Call on or write Frank Wasson, Clearwater, Kans.

WHO WANTS this richly-bred Holstein-Friesian bull? De Gerben Shady Josephine 4753, calved July 19, 1906. The sire of this richly-bred bull is a grandson of the old 12-year-old cow, Gerben, which made more butter at the St. Louis Exposition than any cow in the test. The dam of this young bull made 17½ pounds of butter in seven days as a 2-year-old on common feed. I also have for sale a few Poland-China boars sired by On The Spot 425655, his dam by Chief Perfection 2d. H. N. Holdeman, Meade, Kans.

FOR Red Polled bulls or heifers, write to Otto Young, Utica, Ness County, Kansas.

SPECIAL SALE—5 straight Cruickshank Short-horn bulls for sale at bargain prices for quality. H. W. McAfee, Topeka, Kans.

ABERDEEN-ANGUS CATTLE and Percheron horses. Stock for sale, Garret Hurst, breeder, Peck, Sedgewick County, Kans.

HORSES AND MULES.

FOR SALE—My stallions, jacks, breed mares and colts. R. E. Cowdrey, 112 Quincy St., Topeka, Kans.

FOR SALE CLYDESDALE STALLION at a bargain. Weelum McLeure 10217, in Vol. XI American Clydesdale Stud Book, color black, stripe on face, inside of left hind pastern white; foaled April 13, 1901, bred by Col. Robt. Holloway, Alexis, Ill.; has fine feather, sharp bony nose and splendid feet; weighs about 1800 pounds, kind and obedient, works single or double, a sure breeder, his foals show their ancestry, his sire was McAlara 5585 (7991); dam, Minuet 2d 5455, that won first prize at Chicago International. A rare opportunity to get a splendid stallion at a bargain in whose veins flows the blood of the renowned Danley (22), the matchless Prince of Wales (675), the mighty Druid (654), the noted Lord Lyon (489) and the famous Lochfergus Champion (449). An extended pedigree and photo will be sent on application for particulars. Address Wm. H. Stewart, Olean, N. Y.

PERCHERON STALLION FOR SALE—Owing to circumstances I am forced to sell my 7-year-old registered Percheron stallion. He is sound, kind, big, has a fine action and is a perfect show horse. Will fully guarantee him. Terms: Cash, approved notes, or will trade for cattle. J. B. Weldon, Eureka, Kans.

TWO JACKS FOR SALE—3 and 4 years old, Missouri bred. Address S. C. Hedrick, Tecumseh, Kans.

FOR SALE—One black team, 6 and 7 years old, weight 2600 pounds. Mr. and Mrs. Henry Schrader, Wauneta, Kans.

WINE.

10 PEDIGREED Duroc-Jersey boars and 40 bred gilts cheap. Chas. Dorr, Osage City, Kans.

FOR SALE—The great Poland-China herd boar Duke Ellington 117659, sired by Corrector, dam by Chief Sou 2d. Farrowed April 27, 1906. A splendid individual, no better breeding anywhere. Price \$75. J. H. Brown, Bassettville, Kans.

FOR SALE—Duroc-Jersey pigs, both sexes, March and April farrow, by Financier 46301. Raised for usefulness. Farmers prices; pedigree furnished. Also R. I. Red cockerels. Ben Warren, Maple Hill, Kans.

TWO HERD BOARS FOR SALE—Joe Cannon by Red Raven and out of Faust's Pride, a Kant-Be-Beat sow, and Colossal by Golden Rule, the boar at the head of Watt & Faust herd. Grant Chapin, Green, Kans.

Stray List

Week ending December 5.

Sherman County—Wilson Peters, Clerk. MARE—Taken up, July 31, 1907, by Eli Thompson in Grant tp., one gray mare, star in forehead and one white hind foot; valued at \$75.

For Week Ending December 19.

Kearny County—F. L. Pierce, Clerk. COLT—Taken up, November 14, 1907, by J. C. Elston in Hibbard tp. (P. O. Kendall), one black mare colt, white spot in forehead; valued at \$20.

Nemaha County—E. S. Randel, Clerk. COW—Taken up, November 27, 1907, by Joel Overmyer in Richmond tp. (P. O. Seneca), one red cow; some white on face and belly, one horn droops down, branded H. on left hip, crop off left ear.

Anderson County—M. J. Keeton, Clerk. HEIFER—Taken up by Thomas Mulkey, in Lincoln tp., one yearling or short 2-year-old red heifer, bush of tall white, some white in flanks, small horns; no marks or brands; valued at \$18.

cattle on the farm and sell it in the local markets of this State without inspection of a Government inspector, providing the curing of the meat is done in accordance with the standards adopted by this State. For instance, smoked meat, such as ham, bacon, sausages, etc., means that they be smoked with smoke from wood or corn-cobs. The use of so-called patent liquid smoke is prohibited, when such articles are sold in this State in the manner above indicated. There would, of course, be no objection to any farmer preparing meats with liquid smoke for his own consumption. That is a matter which concerns him-

MISCELLANEOUS.

FOR SALE—80 head of Shropshire ewes, bred to registered ram. Have rented farm; must sell. J. B. Kelley, Sterling, Kans.

SELL TOBACCO AND CIGARS locally or traveling; salary or commission; full time or sideline; good pay; promotion; experience unnecessary. Address Morotock Tobacco Works, Box B 49, Danville, Va.

WANTED—A boy or girl in each school district in Kansas, over 15 years old to earn a few dollars at home. No money required. Address M. C. Kansas Farmer.

FOR SALE—Splendid, paying, well-established dairy of 45 cows, and equipments, in edge of Florence. Must be sold cheap. Terms, 5 year lease of buildings, and plenty of alfalfa ground. H. R. Lutes, Florence, Colo.

A LARGE INCOME FOR LIFE is the desire of all. If you have money to invest or can make small monthly payments, write us for information. Manhattan Investment Co., 36 East 23d Street, New York City.

EQUIPMENT for the manufacture of Concrete Fence Posts. Territory assigned. Agents wanted. Address The Paragon Concrete Fence Post Co., 622 Minnesota Ave., Kansas City, Kans.

WANTED—Seed sweet corn. Barteldes Seed Co. Lawrence, Kans.

WANTED—By experienced agricultural college graduate, a position as manager of an up-to-date dairy farm. Preferably in Kansas or Colorado. E. E. Greenough, Manhattan, Kans.

WANTED—A second-hand traction engine, not less than 16 horse power. Dr. W. D. Barker, Chanute, Kans.

PURE-BRED STOCK SALES.

Shorthorns.

February 17—C. M. Garver, Abilene, Kans. Feb. 19—J. F. Stodder and others, Burden, Kansas; sale at Wichita, Kans. March 17—T. K. Tomson & Sons, Dover, Kans., at Kansas City, Mo.

Herefords.

January 8—E. R. Morgan, Blue Rapids, Kans. Feb. 20—A. Johnson and others, Clearwater, Kansas; sale at Wichita, Kans. February 23, 25, 27—Combination sale of Herefords at Kansas City, Mo., C. A. Stannard, Mgr.

Holstein-Friesians.

February 11—Henry C. Gillman, Sta. B, Omaha, Neb.

Poland-Chinas.

December 13—T. M. Chambers, Oswego, Kans. December 17—B. H. Colbert & Co., Tinsomings, I. T., at Wichita, Kans. January 18—Chas. E. Garrison, Sumnerfield, Kans. January 19—Chas. E. Hedges, Garden City, Mo. January 19—F. K. Oerly, Oregon, Mo. January 19—W. A. Davidson, Simpson, Kans., and Thos. Collins, Lincoln, Kans., at Glasco, Kans. January 20—H. B. Walters, Wayne, Kans. January 20—A. & P. Schmitz, Alma, Kans. January 20—H. K. Faulkner, Jamesport, Mo. January 30—C. W. Dingman, Clay Center, Kans. January 31—J. J. Ward, Belleville, Kans. January 31—W. R. Peacock, Sedgewick, Kans. February 1—Howard Reed, Frankfort, Kans. February 1—C. E. Pennant, New Hampton, Mo. February 4—R. E. Maupin, Patonsburg, Mo. February 7—F. D. Fulkerson, Brimson, Mo. February 8—W. T. Hammond, Portis, Kans., at Manhattan, Kans. Feb. 12—Charles Pilcher, Glasco, Kans., at Concordia, Kans. February 13—A. P. Wright, Valley Center, Kans. February 14—H. W. Phelps, Scottville, Kans. February 15—Logan & Gregory, Beloit, Kans. February 17—C. M. Garver, Abilene, Kans. Feb. 20—E. E. Axline and Knapp Bros., Independence, Mo. February 21—B. F. Ishmael, Laredo, Mo. Feb. 25—L. D. Arnold, Abilene, Kans. Feb. 26—W. H. Bullen, Belleville, Kans. Mar. 12—W. C. Topliff, Ebon, Kans.

Duroc-Jerseys.

December 20—F. L. Bailey, Bonner Springs (Dispersion). January 20—Shepherd & Mullins, Abilene, Kans. January 21—Jas. L. Cook, Marysville, Kans. January 22—Geo. Kerr, Sabetha, Kans. Jan. 23—E. H. Erickson, Olsburg, Kans. January 23—J. B. Davis, Fairview, Kans. Jan. 23—Samuelson Bros., Bala, Kans., bred sow sale at Cleburn, Kan. January 24—J. H. Wellenbruch, Morrill, Kans. January 25—W. L. Vick, Junction City, Kans. January 27—J. E. Joines, Clyde, Kans. January 28—Grant Chapin, Green, Kans., at the Agricultural College, Manhattan, Kans. January 29—J. O. Hunt, Marysville, Kans. February 4—B. N. Welch, Waterville, Kans. February 5—C. G. Steele, Barnes, Kans. February 6—J. F. Chandler, Frankfort, Kans. February 10—Pearl H. Padgett, Beloit, Kans. February 10—Ward B. Os. Republic, Kans. February 11—L. D. Paget & Segrist, Beloit, Kans. February 11—John M. Morrison, College View, Neb.

February 12—Kirkpatrick & Wilson, Lincoln, Neb. Feb. 14—John W. Taylor & Roy O. Williamson, Edwardsville, Kans. Combination brood sow sale. February 15—John W. Jones & Son, Concordia, Kans., bred sow sale. February 19—W. C. Whitney, Agra, Kans. Feb. 19—T. P. Torgarden, Wayne, Kans. February 20—J. L. Williams, Bellair, Kans., at Smith Center, Kans. February 22—Geo. Kerr, Sabetha, Kans. February 22—E. M. Myers, Burr Oak, Kans. February 23—J. B. Davis, Fairview, Kans. February 27—D. O. Bancroft, Owens, Kans. February 28—R. G. Solenbarger, Woodston, Kans. March 3—R. E. Mather, Centralia, Kans. March 4—Burt Finch, Prairie View, Kans., at Norton, Kans.

O. I. C.

December 17—A. T. Garth, Larned, Kans. January 8—John Cramer, Beatrice, Neb. February 1—Matthews Bros., Grant City, Mo. February 18—John Cramer, Beatrice, Neb.

Percherons.

Feb. 23—D. E. Reber, Morrill, Kans. Feb. 18—J. W. and J. C. Robinson, Towanda, Kansas; sale at Wichita, Kans. February 25—R. J. Ream & Co., Kansas City, Mo. March 12—R. J. Ream & Co., Denver, Col.

Jacks and Jennets.

March 3—Limestone Valley Jacks and Jennets L. M. Meneses & Sons Smithton, Mo.

Combination Sales.

January 8, 9, 10—Breeders sale of Registered Draft horses and trotters at Bloomington, Ill.; C. W. Hurt, Manager, Arrowsmith, Ill. February 12, 13, 14—Combination Sale Improved Stock Breeders Association of the Wheat Belt, Chas. M. Johnson, Secretary, Caldwell, Kans.

VARICOCELE

A Safe, Painless, Permanent Cure GUARANTEED. 30 years' experience. No money accepted until patient is well. CONSULTATION and valuable BOOK FREE, by mail or at office. DR. C. M. COE, 215 Walnut St. Kansas City, Mo.

self alone. The use of any kind of preservative other than salt, spices, vinegar, smoke, alcohol, and, until further notice, saltpeter, is prohibited in meat products when sold or offered for sale in this State.

Most of the liquid smokes upon the market are nothing more or less than pyroligneous acid, which is quite a different thing from smoke as recognized in the standards.

It is also presumed that all meats sold or offered for sale in this State shall be from healthy animals, and be cured while in a fresh and wholesome condition.

Farmers shipping meat outside the State are required to comply with certain restrictions by the Bureau of Animal Industry of the U. S. Department of Agriculture. In the main, these requirements are that the farmer must certify that the meats are wholesome, etc.

S. J. CRUMBINE, M. D.,
Chief Food and Drug Inspector.

His Advantage.

John and Willie are twins. Their best friend and playfellow is Archie, who is gifted with red hair and a hot temper. One day they quarreled and Archie started home in a huff. The unsympathetic twins called after him, "Red head! Red head!" Archie seemed not to hear until the insult was repeated, then he turned and called back: "Don't care if I am red headed. I ain't twins and folks can tell me apart."—Grand Forks Press.

Do you want to make a nice bunch of money without interfering with your regular business? If so, it may be that there is an opportunity waiting you as special representative of THE KANSAS FARMER in your locality. We pay cash. Just write us about this matter.

Program Missouri State Dairy Association, Columbia, Mo., January 10, 1908.

9.00 a. m. Music.
Address of President, Dr. Geo. C. Mosher (stock breeder), Kansas City.
Address, "Show Ring vs. Utility Type of Dairy Cows," Prof. W. J. Fraser, Illinois Agricultural College.
Paper, "Breeding Pure Stock and How to Make It Pay," B. L. Bean (farmer), Cameron, Mo.
Address, "The Cost of Neglect," Dr. D. F. Luckey (State Veterinarian).
Paper, "Improvement of Dairy Farm Methods," Mr. J. E. Roberts (farmer), Bolckow, Mo.

1.15 p. m. Music.
Address, "The Missouri Home," Hon. W. W. Marple, Chicago.
Paper, "My Experience with the Silo and Milking Machine," Mr. P. L. Lewis (dairyman), Crescent, Mo.
Address, "Herd Testing," Prof. W. J. Fraser, Illinois Agricultural College.
Address, "Is the Bull Half the Herd?" Prof. C. H. Eckles, Missouri Agricultural College.
Address, "Feeding Skimmed Milk to Calves," Mr. T. A. Borman, Topeka, Kans.

8.00 p. m. Banquet.
FRIDAY, JANUARY 10.

9.00 a. m. Music.
Address, "Abortion, Causes and Cures," Dr. J. W. Connaway (veterinarian), Missouri Agricultural College.
Address, "A Good Price for Milk and How to Produce It," Mr. J. A. Miles (farmer), Gray's Summit, Mo.
Address, "Southern Agriculture," Mr. B. H. Rawl (farmer), South Carolina.

Address, "Dairying vs. Beef-Raising for the Missouri Farmer," Mr. Geo. Bothwell (farmer), Nettleton, Mo.
Address, "Economic Dairying," Hon. J. C. Kendall, Dairy Commissioner, Kansas.

1.15 p. m.
Address, "The Work of the Dairy Division in the South," Prof. B. H. Rawl, Washington, D. C.

Address, "Our Duty," Mr. D. A. Chapman, State Dairy Inspector, Warrensburg.

Address, "The Rights of the Consumer," Hon. H. E. Schuknecht (deputy dairy and food commissioner, Illinois).

Address, "Work of the Dairy and Food Department," Mr. R. M. Washburn (Dairy and Food Commissioner, Missouri).

8.00 p. m. Music.

Address, "The Making of a Living and the Making of a Life," Mr. F. D. Tucker (farmer, teacher, and college president).

Grain in Kansas City.

Receipts of wheat in Kansas City today were 160 cars; Saturday's inspections were 91 cars. Shipments, 50 cars; a year ago, 92 cars. Prices were about 1c higher, with a fair general demand. The sales were: Hard Wheat—No. 2, 1 car 93½c, 6 cars 93c, 4 cars 93½c, 1 car 93½c, 7 cars 93c, 3 cars 94c, 4 cars 93½c, 5 cars 93c, No. 3, 1 car 93½c, 9 cars 93c, 4 cars 94½c, 2 cars 94c, 1 car 93½c, 1 car 93c, 3 cars 92c, 5 cars 91½c, 2 cars 91c, No. 4, 11 cars 93½c, 4 cars 93c, 1 car 92½c, 1 car 91c, 1 car 89c, 11 cars 88c, 2 cars 87c, 1 car 86½c, 1 car 86c, 2 cars like sample 85c, 2 cars like sample 82c; rejected, 1 bulkhead car 87c, 2 cars 82c; no grade, 1 car live weevil 90c, 2 cars live weevil 89c. Soft Wheat—No. 2 red, 3 cars 93½c (nominally 93½c @ 94½c; No. 3 red, 2 cars 93c.

REAL ESTATE

Shawnee County Kans.

\$40.00 per acre. Finely improved quarter, 4 miles from railroad station. Rents for \$400 cash. Tax \$40.00. Fine list of farms and Topeka city Properties.

H. C. BOWMAN,
42 Columbia Bldg., Topeka.

NOW IS THE TIME TO GET A HOME IN SUNNY COLORADO

They are coming here by the hundreds for health, happiness, homesteads and low priced lands. I locate homesteaders and sell land, in this, the most healthful climate in the United States. Elevation 3500 feet; better for lung troubles than higher altitudes. This is the coming wheat producing country of the middle west; one crop pays for the land twice over. Come over the Mo. Pac. Ry. and get off at Sheridan Lake, 14 miles west of the Kansas line and let me show you. S. R. Smith, Sheridan Lake, Colo.



(LOOK)

A good 480 improved, Butler, Co. Kans. 20 acre. A first class rental, free and clear, rents quick at \$6,000 per year; only \$40,000; will exchange for ranch. A \$13,000 livery, nets \$600 per month, will exchange for land, \$10,000 Sheridan cut-land, 1000 acre ranch central Kansas, for smaller or rental. A dandy 240 F. Kansas for smaller or rental. A good 640 wheat land, W. Kansas, \$10 per acre, for smaller or rental. Let me send you my list of farms and ranches, etc., for sale. Some will exchange.

FRANK GEE, Lawrence, Kans.

1 car 92½c, 2 cars 91½c, nominally 90 @ 93c; No. 4 red, 3 cars 88c, nominally 87 @ 90c. Spring Wheat—No. 2 white, 1 car 91c. Mixed Wheat—No. 3, 1 car durum 85c; No. 4, 1 car 88c.

Receipts of corn were 119 cars; Saturday's inspections were 87 cars. Shipments, 80 cars; a year ago, 20 cars. Prices were ¼c higher early, then lost the advance. The sales were: No. 2 white, 2 cars 50½c, nominally 50½ @ 52c; No. 3 white, 2 cars 50½c, 1 car 50½c, 8 cars 50c; No. 2 mixed, 1 car 51½c, 1 car 50c; No. 3 mixed, 2 cars 50c, 32 cars 49½c, 3 cars 49½c; No. 4 mixed, 1 car 49½c; No. 3 yellow, 1 car 50½c, 12 cars 50c.

Receipts of oats were 13 cars; Saturday's inspections were 87 cars. Shipments, 11 cars; a year ago, 7 cars. Prices were unchanged to ¼c higher. The sales were: No. 2 white, nominally 50½ @ 52½c; No. 3 white, 2 cars 51c, 1 car 50½c, 2 cars color 50c; No. 4 white, 4 cars 49c; No. 2 mixed, nominally 48½ @ 49½c; No. 3 mixed, 1 car red 49c, nominally 48 @ 48½c.

Barley was quoted at 60 @ 65c; rye, 70 @ 73c; flaxseed, 91 @ 93c; Kafir-corn, 83 @ 86c per cwt.; bran, \$1.01 @ 1.02 per cwt.; shorts, \$1 @ 1.05 per cwt.; corn chop, 95 @ 98c per cwt.; millet seed, nominally 95c @ \$1 per cwt.; clover seed, \$1 @ 16 per cwt.

The range of prices for grain in Kansas City for future delivery and the close to-day, together with the close Saturday, were as follows:

	Open.	High.	Low.	Closed to-day.	Closed Sat.
WHEAT.					
Dec.....	93	93½	93	93½	92
May.....	97½-¾	98½	97½	97½	96½-¾
July.....	89½	89½	89½-¾	89½-¾	88½
CORN.					
Dec.....	49½	49½	49½-¾	49½-¾	49-½
May.....	51½-52	52	51½	51½	51½-¾
July.....	52½	52½-¾	52	52½-¾	51½-¾

Kansas City Live Stock Market.

Kansas City, Mo., December 16, 1907.

Fairly liberal cattle receipts and an unsettled market prevailed in the cattle division last week, and prices declined 15 @ 35c on the various classes during the week. More moderate marketing prevails today at all points, 9,000 head here, and the market is about steady, with an undercurrent of strength that may develop into an advance later in the week if receipts are reasonably small. Some fancy Christmas steers sold recently at \$6.50, but only a few lots have exceeded \$6 with in the last week, and good to choice steers range from \$5.40 @ \$5.80, fair to good \$4.50 @ \$5.25. Fancy Christmas heifers have been lacking, and would have been well received, as different order buyers were looking for them to fill a call from Eastern killers. Choice heifers bring \$5 @ \$5.25, bulk \$3 @ \$4.75, best cows \$5, bulk \$4 @ \$4.40, veals about steady with a week ago, tops at \$6.50, heavy calves 25 @ 50c lower, at \$3.50 @ \$4.25, bulls \$2.50 @ \$4. Fleshy feeders declined 15c last week, stockers 20 @ 35c off, but the market on country grades is strong today, feeders \$3.75 @ \$4.50, stockers \$3.25 @ \$4.30, with exceptions both ways.

After a most erratic week, hog prices closed with a net loss of 36c per cwt. on Saturday last. Fairly good receipts at the Western markets today opened 10c lower, but demand increased, and late sales were steady to strong as compared with Saturday, top \$4.50, bulk \$4.25 @ \$4.45. Fresh receipts here today were 8,000 head, and 30 loads were carried over from Saturday. Shipper buyers continue to be an important factor in the trading, and as a rule lead in paying top prices. Run was 80,000 head last week, but packers are anxious to lay in a supply of packed meats and buy freely. The excited markets are the result of unprecedented activity of outside buyers, which proves most disconcerting to the local packers.

Sheep and lambs declined 25c last week, but that loss was small as compared with Eastern losses, and the prices paid here late in the week were fully up to Chicago prices. Run is 4,000 today, market strong, top lambs \$6.15, bulk \$5.75 @ \$6, wethers up to \$4.80, yearlings \$5.25, ewes \$4.35. Some range stock is still coming, which runs mainly to stock grades and sells at low prices.

J. A. RICKART.

REAL ESTATE

SPECIAL

in wild meadow. This is the last of a large ranch. \$25.00 per acre.

Ind. Telephone 1847. L. E. ANDERSON & CO, Topeka, Kans. 800 N. Kansas Ave.

Marshall County Farms

240 acres, 1½ miles to shipping point, 7½ miles to good town, fine 7-room house, with cellar and cistern, large barn, cribs, granaries, etc., all in first-class condition; 200 acres in cultivation, all good soil; 80 acres in wheat; 50 acres creek bottom; 40 acres in pasture, well-watered well and windmill, some timber, large orchard. \$60 per acre. One of the best farms in the county.

F. NEWSON,
Blue Rapids,
Kansas.

Eighty acres, Anderson County, three-fourths of a mile from Amlot. Four-room house, barn for ten head of stock, good soil location and water. Price, \$3,500. B. F. Fridley, Amlot, Kans.

LYON COUNTY FARM—80 acres, 70 cultivated, 10 pasture, 25 alfalfa, 6-room house, good barn, orchard and water, school across the road, 3 miles to station, 14 to Emporia. Price \$3,800. Write for list of farms and ranches. Hurley & Jennings, Emporia, Kans.

\$250 WILL BUY 80 acres; Christian County, South-east Missouri. Perfect title; terms \$10 monthly. W. M. B. Williams, Mt. Vernon, Ill.

FOR SALE—Fruit lands, farms and timber. Stock do well in this section. German truck farmers can make big money. I can loan your money on good security. Campbell, P. O. Box 663, Van Buren, Ark.

Farm Bargains in East Kansas

Write for new land list describing farms that are offered at bargain prices. Corn, wheat, clover and alfalfa land.

MANSFIELD BROS., Garnett, Kans.

MISSOURI FARMS FOR SALE

Everman has a farm for every man. Write for description and price list.

John W. Everman, J. Gallatin, Mo.

This tract of land contains 4,826 acres, and lays nine miles north of Dodge City, in the north part of Ford, and the south part of Hodgeman Counties. It is all fenced and cross-fenced; two good sets of improvements, consisting of dwellings, horse barns, cattle-sheds, granaries, etc., etc.; 175 acres now in wheat and rye; 45 acres ready for spring crop; the remainder of the land all in natural grass. Three school houses adjacent to this land. This ranch is watered by several of the finest springs to be found in Western Kansas. Sawlog Creek runs through the land, and has in it pools of clear standing water the year round. All of this ranch is the very best of wheat land, and about 500 acres is splendid alfalfa land. We will sell this entire tract for \$10 per acre and carry \$4 per acre of the purchase price five years at 6 per cent, or will sell it in quarters, halves or sections, at a reasonable price and on same terms. This is one of the finest tracts of land in this part of the state, being surrounded by well improved wheat and alfalfa farms. Your last chance to buy this tract of land.

FRIZELL & ELY, Larned, Kans.

A GREAT OPPORTUNITY.

Texas has recently passed new School Land Laws. Settlement no longer required in most counties. Ten million acres to be sold by the State, \$1.00 to \$5.00 per acre; only one-fortieth cash, and 40 years' time on the balance; low interest rate. Land equal to Oklahoma. Only \$12.00 cash to pay to the State on 160 acres at \$5.00 per acre. Greatest opportunity for homeseekers or investors. Send 50 cents for Book of Instructions and new State Law.

J. J. SNYDER, School Land Locator,
Reference, Austin Nat'l Bank. Austin, Texas

FOR SALE

Two good residences, well located in Topeka, worth \$4,500, to exchange for an 80 acre farm.

Good store building, grocery stock, etc., worth \$4,500, to exchange for a farm.

We sell and trade all kinds of Topeka properties; also farms and ranches.

Send us full description of farm you want to sell or trade.

GARLINGHOUSE REALTY CO.

Both Phones. 608 Kansas Ave. Topeka Kans.

HOME IN MANHATTAN.

480 acres, farm land, wild meadow, and pasture; improved, watered; 12 miles out, 8 miles to shipping station; price \$20 per acre. 160 acres—90 acres best river bottom, balance pasture; improved; \$7,000. 240-acre finely improved prairie farm for \$10,000. 320 acres best natural pasture for \$5,000. Over 40 farms in this vicinity. Lists in more than twenty Kansas counties. Best large stock farm and ranch list in the west. Over 75 city properties. Large suburban and rooming-house list. Good exchange list. Manhattan city properties, including livery and harness business and hotel, for land. Write today. New state map for 10 cents in stamps. MANHATTAN REALTY CO., 304 Poyntz Ave., Manhattan, Kans.

A RARE OPPORTUNITY.

To buy a poultry plant and butcher business combined. 6-room house, large barn with basement and shed, 2-story concrete poultry house for 400 laying hens, story and half incubator and brooder house, slaughter-house for beefs, with meat-market attached, building for killing calves and hogs another for rendering lard and making sausage, smoke-house for 100 hogs. All buildings substantially built of concrete or grout. Windmill with water piped to feed lots; Monarch scales for weighing cattle, hogs, hay, corn, etc. Bone cutter, cleaver cutter, feed grinder, sausage mills, kettles, ropes and pulleys, buggy, wagon, double harness, lots of lumber and feed. 7 corals in feed lots for cattle and hogs. Good railroad connections, 14 miles to Lawrence, 21 to Leavenworth, 40 to Topeka, 23 to Kansas City. Natural gas in residence, poultry-house, brooder house, and other buildings, 1000 feet gas pipe in all. Five acres of land and young peach orchard goes with this place. More land can be bought if desired. All in perfect running order and now doing a good paying business. Owner has other business to attend to. \$7,000 takes it, half cash or will take part in good real estate. Telephone connection, local and long distance. For fuller description see Poultry Dept. KANSAS FARMER, Nov. 21 issue. Come and see the place or write R. B. Wilkinson, Tonganoxie, Kans.

REAL ESTATE

Farm Bargains

In east Kansas. Write for new land list.

MANSFIELD BROS., - Garnett, Kans.

WASHINGTON STATE.

Little Fruit Farms—\$5 down and \$5 per month per acre in famous Yakima valley—cultivated—irrigated—planted and cared for. Send today for booklet. Oldest firm in state. Calhoun, Denny & Ewing, Inc, Dept. X, Seattle, U. S. A.

Norton County Alfalfa and Corn Farms.

We sell Norton County lands where wheat, corn and alfalfa grow in abundance. Write us for list of farms, and full particulars.

LOWE & BOWERS, Almena, Kans.

A Fine Kaw Bottom Farm

FOR SALE—A fine Kaw bottom farm with good improvements, about 40 acres of alfalfa, only five miles from Topeka, for \$90 per acre.

W. M. FORBES & CO.

107 West 7th St., - Topeka, Kans.

A Cheap Wheat Farm in Stanton Co., Kans.

160 acres level as a floor. Deep, black soil, ready for the plow. In German settlement south part of the county. Price only \$800.

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LEGAL.

First published in Kansas Farmer December 12, 1907

Publication Notice.

In the District Court in and for Shawnee County, State of Kansas.

Ansel M. Eldson, Plaintiff vs. Callista W. Eldson, Defendant. Case No. 24735.
The State of Kansas, to Callista W. Eldson, Defendant. Greeting: You are hereby notified that you have been sued in the District Court of Shawnee County, Kansas, by said plaintiff, Ansel M. Eldson, for a divorce, and that unless you answer or plead to the petition in said action filed in the office of the clerk of said court on or before the 25th day of January, 1908, the allegations contained in said petition will be taken as true and judgment rendered accordingly.

By FRED C. SLATER, his attorney.
Attest: R. L. THOMAS,
[SEAL] Clerk.

First published in Kansas Farmer December 12, 1907.

NOTICE.

Notice is hereby given that we, the undersigned commissioners hereunto duly appointed by the Honorable A. W. Dana, Judge of the District Court of Shawnee County, Kansas, will on the 16th day of January, 1908, proceed to lay off according to law for The Topeka-Southwestern Railway Company, along its route as now located from a point on said line, to wit: 55.1 feet north of the southeast corner of the southeast quarter of section two (2), in township twelve (12), south of range fifteen (15), east of the sixth p. m. to the west line of Shawnee County, Kansas, all lands, necessary for the route for said railroad and all such land as may be deemed necessary for side-tracks, depots, work-shops, water stations, material for construction, except timber, the right-of-way over adjacent lands sufficient to enable said Company to construct and repair its road and stations and a right to conduct water by aqueducts and the right of making proper drains and appraise the value of that portion of any quarter section or other lot of land so taken and assess the damages thereto, which said lands desired by said railway company are particularly shown by the map and profile of said Company's line of railroad in said county, filed in the office of the county clerk of said county. We will commence to lay off said route as aforesaid on the line of said Company's railroad, as located at said point on its line, to wit: 55.1 feet north of the southeast corner of the southeast quarter of section two (2), in township twelve (12), south of range fifteen (15), east of the sixth p. m. in Shawnee County, Kansas, on said day and will adjourn from time to time until our labors in this behalf are completed.

Dated the 12th day of December, A. D. 1907.
C. E. JEWELL,
ED. BUCKMAN,
WM. HENDERSON,
Commissioners.