

## THE FARM

## THE LAZY FARM HORSE.

How to Make Him Draw Exactly His Part of the Load.

The question is often hotly discussed whether, when two horses work on an "even" without any harness, the lazy horse that lags behind should draw just one-half of the load, or more, or less than half. The truth is that either of the three may be true, according to how the harness is adjusted. The harness is adjusted in three ways: 1.—If all three clevis holes, a, b and c, are equally distant from each other and are on a straight line, and if the clevises are freely on their pins, each horse will draw exactly half of the load, no matter which one is ahead. Fig. 1 shows this. If the line of the clevis holes, a, b and c, is not a right angle with the central line of draft, m, n, both horses will be nearer that line, but both will be equally distant from it, drawing in lines a, p and q, parallel with m, n. Hence each will draw half of the load.

2.—But if, as in Fig. 2, the three clevises are at unequal distances from the moving machines and the central point

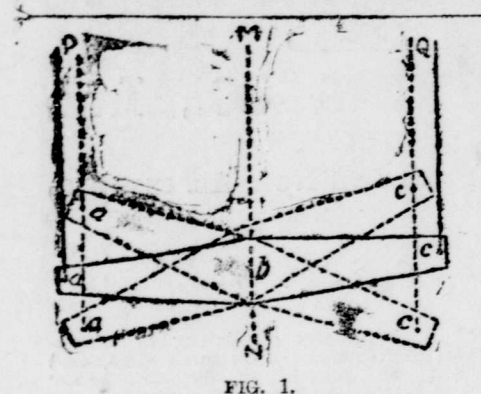


FIG. 1.

of draft (or fulcrum), b, is behind, and the fulcrums, a and c, are in front of the center, then when both horses are even, as in the upper position shown in Fig. 2, each draws half. But when the lazy horse is at a lag behind (middle of Fig. 2), he throws his line of draft, c, q, further from the middle line of draft, m, n, than the line of the other horse, b, p. That is, the lazy horse has by his harness given himself the long end of the lever.

If, however, the free horse lags at a bottom of Fig. 2, his line of draft, a, r, is thrown further off from the center line m, n. That is, he gets the long end of the lever. For, in this last case (bottom of Fig. 2) a line drawn from a to b would make a right angle with the line m, n while a line from b to c would form a sharp angle with the center line of draft m, n and of course c would be nearer to that line.

3.—But if the center hole b for the main clevis were ahead of the middle

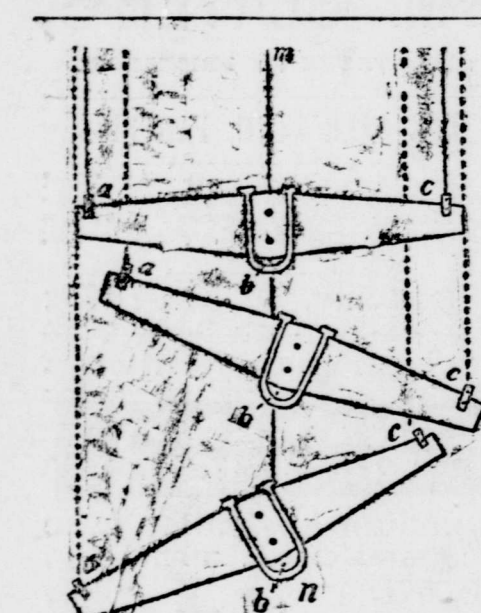


FIG. 2.

line and the end hole a and c were behind the case in Fig. 2 would be exactly reversed, and the lazy horse by lagging behind would give himself the short end of the lever and must do the least work. This can be inferred from Fig. 2 without a separate set of illustrations.

Of course, the only correct way to have the three holes (fulcrums or points of draft) a, b, c exactly on a line. Then each horse draws exactly his half of the load, no matter whether he forges ahead or lags behind.—Ohio Farmer.

**American Corn for Mexico.**  
Owing to the removal by the Mexican Government of import duties on corn for the two states of Vera Cruz and Tlaxcala, and owing to the scarcity of grain there, large shipments are being made from this country, chiefly via Mobile, Ala., which has facilities for shipping to Mexican ports. One steamship company has been ordered to the security of the Gulf of Mexico. For August and September the total reached 1,500,000 bushels. What these figures mean is shown by comparison with the total shipments to Mexico for the year ending June 30, 1900, the aggregate being 1,677,633 bushels. In the year previous the total was only 170,611 bushels. The corn sells for \$2.80 a bushel in Mexican money.

**The Nature of Sandy Soil.**  
Sand has a great power for the transportation of water. It will convey water quicker than any other soil, but it will not hold as much. A clay soil will hold more, but water will pass through more slowly. Sandy soils take in all the rains that fall, and if there is a subterranean supply within ten or fifteen feet of the surface, it seems to have a power to pump the water up to the roots of the plants. If, however, there is no such supply, the higher temperature of summer will usually increase the temperature of the top sandy soil and gradually dry it out faster than a fine, clayey soil. Clay will hold more moisture and hold it longer than any other form of soil, but it must be protected by surface cultivation.—Rural World.

**Celluloid for Surgical Splints and Corsets.**  
One of the latest uses for celluloid is for surgical splints and corsets. Hitherto plaster of paris has been used, but great objection was found to it from the fact that it was too absorbent. Both Dr. E. Kirsch and Prof. Landauer, who are well known in Germany, advocate the use of the celluloid. The substance is dissolved in acetone, and made into a splint which fits the body, by taking a plaster cast of the part to which it will be applied, and lining the cast with felt. The felt is then rubbed and stiffened with the celluloid, and a support of great toughness and strength is thus provided.

The value of the British ships and cargoes lost every year at sea is about \$7,000,000.

## IMPROVING GRASSES.

Why Our Farmers Should Bring Native Species Into Cultivation.

One of the best lines of work in connection with the development of improved forage conditions is that of bringing our native grasses into cultivation. More than 20 per cent. of all the grass species of the world are natives of the United States, the number ranging upward of 700, and I think I am not wrong in saying that there is no other continent on which there is a greater number of native forage plants than the United States. Nearly all of our cultivated forage plants are of foreign origin, and if it were not simply a matter of public interest, it ought to be one of public sentiment, to preserve the coming generations of American farmers those native species which have added so much to the wealth of the land in the past. The species of the grazing regions in the west and southwest, and for that matter, in every part of this country where sheep or cattle are raised, are best adapted to the conditions under which such grasses grow, and it is folly to think that better forage may be introduced from Europe or Asia or Australia, where climate and soil are entirely different. The fall and winter meadows and mountain slopes, the grama and buffalo grasses of the southwest, and the blue stems of the eastern prairie belt, cannot be improved upon.

We must go out into the fields and meadows and select, care for and propagate the thrifty grasses and native clovers, just as the horticulturist selects and propagates his finest varieties of fruits, or the florist his most perfect and most highly developed flowers. Every cultivated grass, every cereal, every fruit or flower, has been developed up from just such small beginnings, and when we take into consideration the importance of the grazing industries, the great amount of money invested in them, and the vast yearly income from these sources, we must adopt the conclusion that such a line of work is an exceedingly important one.—United States Department of Agriculture.

## EXHAUSTED FERTILITY.

A Good System of Rotation is the Best Restorer of Worn-Out Soil.

The following conclusions by one of our experiment stations apply everywhere: The continued cropping of soils to grain crops only without any system of rotation, or other treatment, is telling severely upon the original stock of half-decomposed animal and vegetable matters, and nitrogen. Soils which have produced grain crops, exclusively, for ten or fifteen years, contain from a third to a half less humus and nitrogen than adjoining soils that have never been plowed. Soils which have been cropped until the organic matters and humus have been materially decreased, retain less water and dry out more easily than when there is a larger amount of organic matter present in the soil. Soils which are rich in humus and organic matter produce a larger amount of carbon dioxide that acts as a solvent upon the soil particles and aids the roots in producing food. One-half of a cubic foot, heavily manured with well rotted manure, contained nearly a quarter more water during a six weeks' drought than the other half that received no manure. The supply of organic matter in the soil must be kept up because it takes such an important part in directly, in keeping up the fertility of soil. A good system of rotation, including sod crops, and well prepared manures, will do this, and will avoid the introduction and use of commercial fertilizers which are now costing the farmers of the United States over \$5,000,000 annually.

**Farm Notes.**  
If we do not study our farms so that we know what parts of it are adapted to growing crops, or if we do not keep abreast of the times in using machinery and in the improved methods of cultivating our crops, our farming will be a failure. We are all very apt to be imitators instead of inventors.

It is very difficult to keep soils fertile if they are kept under cultivation this difficulty is increased, as the sand both blows and washes away when exposed to winds. For this reason many owners of sandy fields keep them seeded with grass or clover as much as possible, only plowing them when the seedling runs out. According to the just issued annual report of the United States Land Office, there was during the past year a decrease in original land entries of 591 in number and 142,388 acres in area. In recapture there was an increase of \$79,207. The total area of land entries of all kinds made during the year was 13,174,070 acres. There are 600,049,071 acres of public land still unsupplied, exclusive of Ohio, Indiana, Illinois, Alaska and military and Indian reservations. There were patented during the year to aid in the construction of railroads 15,837,843 acres, an increase of over 7,000,000 over last year. There remain railroad allocations unpatented amounting to 14,195,736 acres.

One cause for hard times in buying \$2 worth when we have only \$1 to pay with. Overestimating what we are going to get out of a crop, and not being careful enough about expenses, plus us in a position that is embarrassing. It is much better, and the only safe way, to market our product and buy accordingly, than to buy, and sell our produce afterwards; the former will cause less disappointment and more satisfaction. The successful business-man always profits by his mistakes, because he is careful not to make the same ones over again. Do we farmers follow this rule? Every man must answer that question for himself. When dashed by success it is easy enough to remember how we have succeeded, but we are prone to overlook our faults, or wherein we have erred. We all make mistakes, and surely the only way to make a correction is to take a retrospective view of the past, and see what can be done in making as few as possible in the future.

**The Cherry Orchard.**  
Professor Budd of the Iowa station says that cherry orchards do best when planted thickly in rows running north and south and giving a wider space between the rows to admit the sun and allow free circulation of air. Orchards where the rows were 24 feet apart and the trees 10 feet apart in the row have done better than those planted in the usual way. He also thinks root grafting of the cherry is better than budding, setting them in the ground to the top end of the scion, which enables roots to be thrown out directly from the scion.

It takes each year 200,000 acres of forest to supply cross-ties for the railroads of the United States.

## LIVE STOCK

## HANDSOME SHEEP.

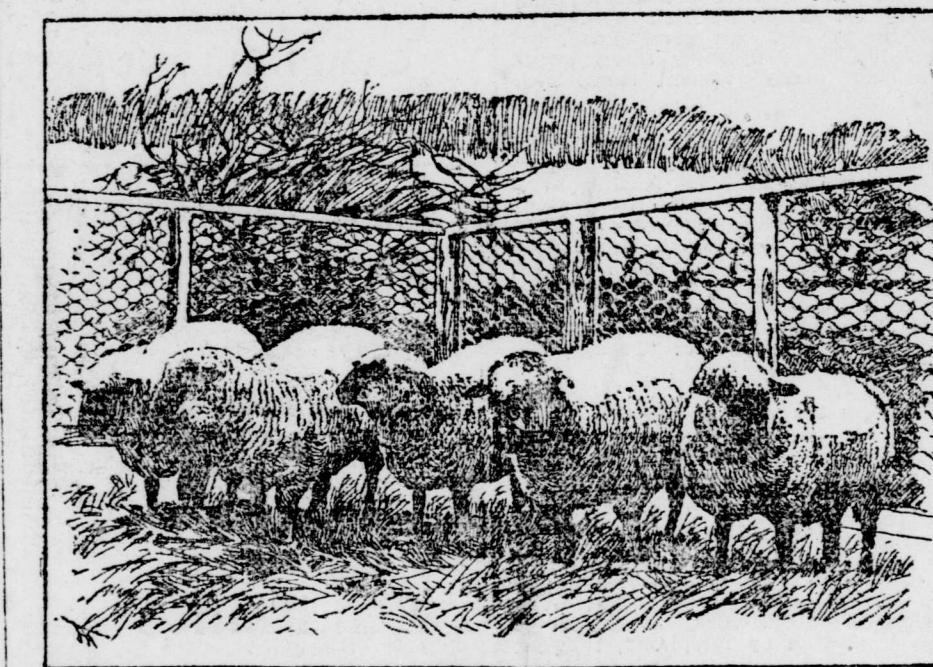
Price Hampshire Down from the New York Live Stock Show.

The illustration shows some beautiful Hampshire Down sheep brought at the New York live stock show by Major O. J. Smith, president of the American Breeders' Association. The animals are among the finest of their breed ever imported into this country. The picture is from a photograph, which was a very successful one.

The sheep were exhibited at the show by Mr. John Milton of Michigan, an importer and breeder. Mr. Milton's lambs in the fall are larger and heavier than those of his neighbors, even when the breed is the same. He says the reason of this is that he always plants rape for spring pasture for the lambs. He plants the rape at the same time that oats are sown. It sprouts and grows rapidly, and in scarcely more than a week's time is large enough for the lambs to nibble at before any other kind of pasture is available. We hope this hint as to the usefulness of rape will not be lost on other lamb raisers.

The Hampshire Down sheep originated three-quarters of a century ago in Hampshire, England, in a cross between the Southdown and a native white faced sheep which had heavy horns and was larger than the Southdown.

In the course of years the Hampshire Down became what it is now, a sheep larger than the Southdown and by as odd happening one with a blacker face than the Southdown. The horns have been bred off. The body is massive and compact. The lambs frequently weigh 100 pounds at a year old. The fleeces are of six to eight pounds weight, and wool being longer than that of the Southdown, but not quite so fine. A fleece



HAMPSHIRE DOWNS.

more close, soft and compact than that of a good specimen of Hampshire Down is hard to find indeed.

The Hampshire is a most profitable mutton breed. The large size of the lambs makes them peculiarly valuable. The meat is not so fat as that of some other breeds, but is just fat enough and is juicy and well flavored. A fine flock of these gentle, docile animals, with their black faces, thick, almost white, coats and rounded, broad bodies, are as picturesque an object in the landscape as one would see in many days' travel.

**To Make Most Profit Out of Pigs.**

On our farms we make a good deal of pork, and by careful watching we have found that the way to make the most profit is to crowd the pigs with all the food they can digest and assimilate from the day they will eat until they will kill at 150 to 175 pounds and then put them in market and give the feed to other pigs.

If pigs be fed on skim milk, wheat middlings and a little linseed, with a run on clover pasture or in an orchard, or if in winter they have plenty of clover hay and mangolds, or even turnips, the feeder need not be afraid of their getting too fat. They will make a rapid growth, but it will be largely lean meat, tender and juicy—just what is wanted these days.—J. S. Woodward.

**Daisy Dish for the Hog.**

The best approved delousing for the pig's pen is composed of 3 bushels wood ashes, a bushel of charcoal in small pieces, one-half bushel slaked lime, a bushel of fine sand, 3 pounds sulphur, 5 pounds sulphur, one-half pound copperas and one-quarter pound saltpetre. Pulverize the last named two, thoroughly mix with the rest in a bin or box and keep in an open trough where the hogs can have free access to it. All hogs require something of this sort as an aid to digestion and to counteract the acidity of the stomach. When running at large, they find a supply in their rooting, but when confined it must be provided for them.—Philadelphia Ledger.

**By the Way.**

A Bradford (England) expert, to whom was submitted for inspection an Angora fleece from California, is reported to have pronounced it superior to Cape or Asia Minor fleeces and to have said that if we can produce wool of that quality we can get the highest prices in the world.

The Utah experiment station is devoting a good deal of work to the solution of the hog problem. The hog problem is how to produce pork at a profit at present prices. The solution is in the lines of breeding and feeding. Those interested in the subject should write to the director of the Utah station at Logan, Utah, for bulletin 40.

T. C. THORNHILLS.—Watches Clocks and Jewellery all sorts and all kinds neatly repaired and cleaned at lowest charges. Umbrellas, Parasols covered. Skates sharpened. 492 Talbot street.

## FALL AND WINTER COLTS.

Better to Change the Usual Order and Breed For Them.

The demand of the times is not so much for fewer horses, but for better ones. The efforts of the ranchmen to cheapen horseflesh and to monopolize the horse trade, as they did the cattle business, flooded the states with mongrels—half broncho and half beef—until the law of supply and demand turned them into the fertilizer factories and rendering tanks, to the benefit of the dealers in hides and tanbark and to the relief of the public. When the hide was worth twice as much as the living beast, the numbers were reduced with a speed that will be equaled soon by the smash up of bicycle factories—of which 131 of a total of 873 have failed in the last six months. The decadence of plugs has been as marvelous as it has been beneficial to the skillful breeder. The demand for superior horses is increasing. The country has been delivered from thousands of stallions whose get disgraced the sire and owner and brought both to ruin. The riddance of such brutes has cleared the field, so there is now a chance for breeders of enterprise to go up and possess the land with horses that will meet the coming demand for a higher style of animals.

The low prices have invited foreign buyers, who are taking only the best and such as the farmers of the states must breed for to meet the coming demand. The farmers who have taste in breeding and handling horses can produce a higher class of coach, carriage, saddle, cavalry and truck horses than it is possible for the plains to produce in droves. The plains and territories may control the cattle and sheep trade in the future, but from the nature of the animals the useful horse, trained for service, must come from the farmers and breeders of the states. The salable and valuable horse must have the handling that educates and fits for safe and pleasant use by the city buyer. Training and quality are essential for the good selling horse. The coming scarcity of such horses will force

of it. At the annual royal agricultural show in England some years over 500 Shires are entered in the various classes.

A full grown Shire is sometimes 17 hands high and weighs considerably over a ton. The one in the picture is in height 16.4. He was sold in England for the great sum of \$12,500. This shows the estimation in which the Shire is held at home. In America he is considered rather heavy and slow for everyday use, though for the heaviest trucks upon the docks and wharfs this horse would undoubtedly be in demand.

Very different is the French coaching stallion here shown. He, too, is a foreign animal.

The trimming of his mane seems peculiarly French. The beautiful French coaches present the largest type of car-

riage animal. They are 16 hands high and sometimes more. The cross of the French coaching stallion upon good sized American trotting mares would apparently produce the ideal carriage horse.

Last of all we offer you herewith the picture of an American horse, as purely American as any can be.

Ethan Allen III is a stallion of the pure Vermont Morgan blood, descended from Vermont Blackhawk. He is considered one of the finest living types of the royal Morgan blood. He is 15.2 in height and weighs 1,100 pounds. In color he is bay. His delicate, finely pieced head shows the Morgan life and spirit. Imported animals are well

enough, but we will put this Yankee against any one of them in all the qualities that go to make a perfect horse. We cannot have too much Morgan in this country. Bred for size, these horses can be made to fill the bill for any kind of driving purposes. They make exceptionally fine saddlers too. They drop dead in the traces before they will give up, and they are the kindest and most intelligent creatures.

The man who won the first prize for sheep shearing at the New York live stock show completed his task in 27 minutes and 2 seconds. There were others who made better time, but this man did far the nearest job. Moral.—It pays to do a thing well even if it does take a little more time.

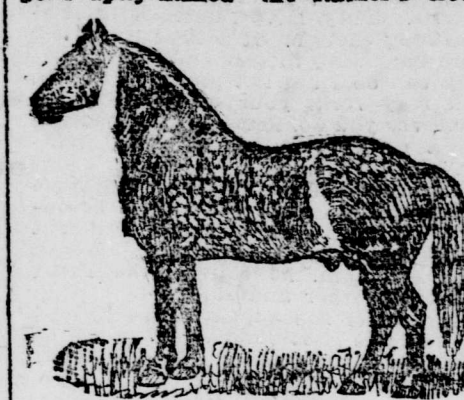
**Photography Artist!** Photography Permanent. Quainties so essential in first-class portraiture to be had every day at Frank Cooper's old established studio over No. 17 and 17 1/2 Dundas street.

Judge Laird, of Saginaw, wife and family, have been spending a few days at the London Sanatorium, for the benefit of their health, and have returned home.

## HORSE TYPES.

Here Are Handsome Specimens of Four Noted Equine Tribes.

Taken all together the four samples of horseflesh represented in the illustrations show the points of the different families as well as any pictures we have seen.



PERCHERON.

There is a market for large and handsome drafts, the Percheron will be as good a "mutter" as the ordinary farmer can raise.

There is always a demand for these splendid grays in the cities, for express and beer wagons and for wholesale groceries that pride themselves on the looks of their teams. Grade Percherons, if large and handsome, also bring good prices.

The second illustration shows the heaviest type of draft horse, the huge Shire.

The Shire is the great draft horse of England, where things must be heavy and strong, even when there is no need



SHIRE.

of it. At the annual royal agricultural show in England some years over 500 Shires are entered in the various classes.

A full grown Shire is sometimes 17 hands high and weighs considerably over a ton. The one in the picture is in height 16.4. He was sold in England for the great sum of \$12,500. This shows the estimation in which the Shire is held at home. In America he is considered rather heavy and slow for everyday use, though for the heaviest trucks upon the docks and wharfs this horse would undoubtedly be in demand.

Very different is the French coaching stallion here shown. He, too, is a foreign animal.

The trimming of his mane seems peculiarly French. The beautiful French coaches present the largest type of car-

riage animal. They are 16 hands high and sometimes more. The cross of the French coaching stallion upon good sized American trotting mares would apparently produce the ideal carriage horse.

Last of all we offer you herewith the picture of an American horse, as purely American as any can be.

Ethan Allen III is a stallion of the pure Vermont Morgan blood, descended from Vermont Blackhawk. He is considered one of the finest living types of the royal Morgan blood. He is 15.2 in height and weighs 1,100 pounds. In color he is bay. His delicate, finely pieced head shows the Morgan life and spirit. Imported animals are well

enough, but we will put this Yankee against any one of them in all the qualities that go to make a perfect horse. We cannot have too much Morgan in this country. Bred for size, these horses can be made to fill the bill for any kind of driving purposes. They make exceptionally fine saddlers too. They drop dead in the traces before they will give up, and they are the kindest and most intelligent creatures.

The man who won the first prize for sheep shearing at the New York live stock show completed his task in 27 minutes and 2 seconds. There were others who made better time, but this man did far the nearest job. Moral.—It pays to do a thing well even if it does take a little more time.

**Photography Artist!** Photography Permanent. Quainties so essential in first-class portraiture to be had every day at Frank Cooper's old established studio over No. 17 and 17 1/2 Dundas street.

Judge Laird, of Saginaw, wife and family, have been spending a few days at the London Sanatorium, for the benefit of their health, and have returned home.

The man who won the first prize for sheep shearing at the New York live stock show completed his task in 27 minutes and 2 seconds. There were others who made better time, but this man did far the nearest job. Moral.—It pays to do a thing well even if it does take a little more time.

**Photography Artist!** Photography Permanent. Quainties so essential in first-class portraiture to be had every day at Frank Cooper's old established studio over No. 17 and 17 1/2 Dundas street.

Judge Laird, of Saginaw, wife and family, have been spending a few days at the London Sanatorium, for the benefit of their health, and have returned home.

The man who won the first prize for sheep shearing at the New York live stock show completed his task in 27 minutes and 2 seconds. There were others who made better time, but this man did far the nearest job. Moral.—It pays to do a thing well even if it does take a little more time.

**Photography Artist!** Photography Permanent. Quainties so essential in first-class portraiture to be had every day at Frank Cooper's old established studio over No. 17 and 17 1/2 Dundas street.

Judge Laird, of Saginaw, wife and family, have been spending a few days at the London Sanatorium, for the benefit of their health, and have returned home.

The man who won the first prize for sheep shearing at the New York live stock show completed his task in 27 minutes and 2 seconds. There were others who made better time, but this man did far the nearest job. Moral.—It pays to do a thing well even if it does take a little more time.

**Photography Artist!** Photography Permanent. Quainties so essential in first-class portraiture to be had every day at Frank Cooper's old established studio over No. 17 and 17 1/2 Dundas street.

Judge Laird, of Saginaw, wife and family, have been spending a few days at the London Sanatorium, for the benefit of their health, and have returned home.

The man who won the first prize for sheep shearing at the New York live stock show completed his task in 27 minutes and 2 seconds. There were others who made better time, but this man did far the nearest job. Moral.—It pays to do a thing well even if it does take a little more time.

**Photography Artist!** Photography Permanent. Quainties so essential in first-class portraiture to be had every day at Frank Cooper's old established studio over No. 17 and 17 1/2 Dundas street.

Judge Laird, of Saginaw, wife and family, have been spending a few days at the London Sanatorium, for the benefit of their health, and have returned home.

The man who won the first prize for sheep shearing at the New York live stock show completed his task in 27 minutes and 2 seconds. There were others who made better time, but this man did far the nearest job. Moral.—It pays to do a thing well even if it does take a little more time.

**Photography Artist!** Photography Permanent. Quainties so essential in first-class portraiture to be had every day at Frank Cooper's old established studio over No. 17 and 17 1/2 Dundas street.

Judge Laird, of Saginaw, wife and family, have been spending a few days at the London Sanatorium, for the benefit of their health, and have returned home.

The man who won the first prize for sheep shearing at the New York live stock show completed his task in 27 minutes and 2 seconds. There were others who made better time, but this man did far the nearest job. Moral.—It pays to do a thing well even if it does take a little more time.

**Photography Artist!** Photography Permanent. Quainties so essential in first-class portraiture to be had every day at Frank Cooper's old established studio over No. 17 and 17 1/2 Dundas street.

Judge Laird, of Saginaw, wife and family, have been spending a few days at the London Sanatorium, for the benefit of their health, and have returned home.

The man who won the first prize for sheep shearing at the New York live stock show completed his task in 27 minutes and 2 seconds. There were others who made better time, but this man did far the nearest job. Moral.—It pays to do a thing well even if it does take a little more time.

**Photography Artist!** Photography Permanent. Quainties so essential in first-class portraiture to be had every day at Frank Cooper's old established studio over No. 17 and 17 1/2 Dundas street.

Judge Laird, of Saginaw, wife and family, have been spending a few days at the London Sanatorium, for the benefit of their health, and have returned home.

The man who won the first prize for sheep shearing at the New York live stock show completed his task in 27 minutes and 2 seconds. There were others who made better time, but this man did far the nearest job. Moral.—It pays to do a thing well even if it does take a little more time.

**Photography Artist!** Photography Permanent. Quainties so essential in first-class portraiture to be had every day at Frank Cooper's old established studio over No. 17 and 17 1/2 Dundas street.

Judge Laird, of Saginaw, wife and family, have been spending a few days at the London Sanatorium, for the benefit of their health, and have returned home.

The man who won the first prize for sheep shearing at the New York live stock show completed his task in 27 minutes and 2 seconds. There were others who made better time, but this man did far the nearest job. Moral.—It pays to do a thing well even if it does take a little more time.

**Photography Artist!** Photography Permanent. Quainties so essential in first-class portraiture to be had every day at Frank Cooper's old established studio over No. 17 and 17 1/2 Dundas street.

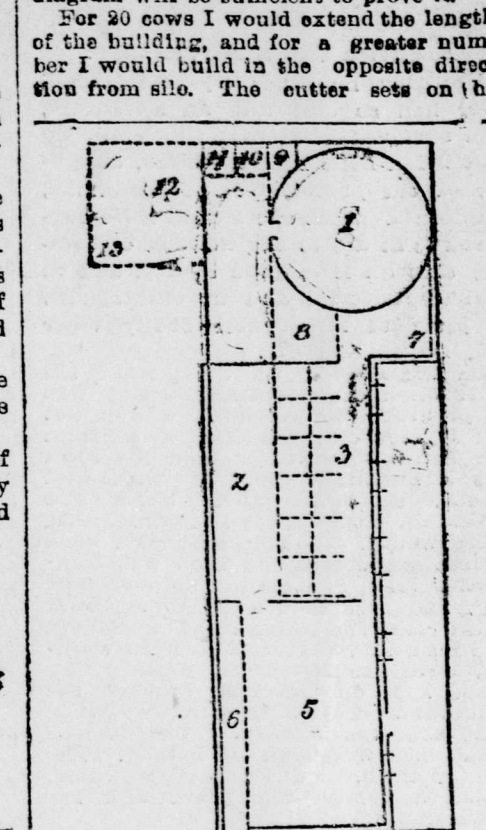
Judge Laird, of Saginaw, wife and family, have been spending a few days at the London Sanatorium, for the benefit of their health, and have returned home.

## THE DAIRY

## DAIRY MANAGEMENT.

How to House Cows So They Will Pay for Themselves.

I will first quote the golden rule of dairying: Make the cow thoroughly comfortable by keeping her warm and satisfied with good food and pure water, and keep her clean and give her exercise. The man with only three or four cows can fix a warm place in or about his barn. But I will give a plan for ten cows which can be reduced for a smaller number or enlarged as much as desired, and yet be very handy and economical. For ten cows I should certainly have a silo. In this article I shall not give a detailed plan for building the cheapest and best silo, but may in the future. A stable should be light, well ventilated and warm. It should be so arranged as to be handy and save as much labor as possible. I think these points are stated in the following plan, and a look at the diagram will be sufficient to prove it. For 20 cows I would extend the length of the building, and for a greater number I would build in the opposite direction from silo. The outer ends on the



DAIRY BARN.

1, silo; 2, feed alley; 3, stalls; 4, manure shed; 5, penning-room; 6, rack for hay; 7, sawdust bin; 8, bran bin; 9, meal bin; 10, 11, meal; 12, cottonseed meal; 13, cage for cows, extending four feet above ground, over which are cutter and grinder; 14, position of cutter.

floor, up level with frame on wagon, making it easy to unload the heavy corn. You ask what all this has to do with the producing of milk. Well, you can't produce much milk in winter without good winter quarters. Though they need not be expensive, they must be warm and if really handy, one man can care for twice as many cows, and thus make the product cheaper.

The double lines in diagram represent double walls made as the wall of a house, and filled with cut straw or sawdust. I would have foundation of brick if able; if not, I would set walls on square logs laid right on the ground, but as the frame is without rafters, to logs so they may be easily replaced when rotten. Put the lining on like house weather boarding, inverted, so as to run the leaking dust into the wall. Concrete floors are as cheap as planked and much better. I would have a window 34x36 inches behind each stall; if in cold climate, have double sash on hinges, so you can throw manure out in shed. Also in front a larger window to same space, with curtain to regulate the light. Between stalls I use two little posts, one 15 inches from manger and the other 17 inches from that. They are sure of 2x4 stuff and are 34 and 34 inches respectively; this makes the best stall I ever saw.

The hay carrier and track can be moved from left to feed alley and made to carry a large box of feed along the alley to mangers, which is a great convenience. We have room for about all the different kinds of hay, ensilage and ground grain.

Give the cows a balanced ration of say one pound cottonseed meal, two pounds oil meal, five pounds bran, and if ensilage is not rich in gain, enough corn meal to make 40 pounds as rich as you want. A full crop of corn is out, but in all cases use your senses. Be wide awake and study the wants of each cow. Be quiet and gentle with them at all times and change the ration as many times a week as you have kinds of food, and have as many kinds of hay, fodder and ground grains as possible.

By means of pipes and buckets each stall shall be supplied with pure water all the time, and the penning-room also. Also a box of rock salt in each department for the cows to lick for amusement. Don't forget to give a meal or two in each day's ration; they will be raised cheaply, and although they contain but little that goes into the milk, they aid digestion and give tone to the system and appetite.

We think we can't do without clover hay (cut early). A little mash of cut clover and wheat bran, made real wet, is relished by every cow and has no equal for producing good milk. In the management of cows we turn them in the penning-room after milking at night, and put feed in the manger before we turn them in to milk them in morning. In every herd there are some very timid cows also some regular bosses; even if they are deborated they push and knock the timid ones around too much. We stall the bosses all