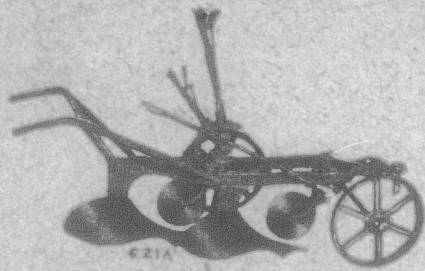


Famous Fleury Plows

Your Fall Plowing



May be done **RAPIDLY** and **PERFECTLY**. Use our latest-style, extra strong

Fleury Gang No. 27

May be had with wide, medium or narrow bottoms; and with Rolling Coulters, Straight Coulters or Skimmers and Coulter Shares—**EXACTLY WHAT YOU WANT.**

A **SAVING PROPOSITION**—one man and three horses with a **FLEURY GANG** will do the work of two men and four horses with two single Walking Plows.

TRACTOR PLOWING ADVANTAGES WITHOUT THE EXPENSE

THE **FLEURY GANG NO. 27** stands among Gang Plows where the famous **FLEURY SINGLE PLOWS**, that the farmers of Canada know so well, stand among all others—easily **FIRST**.
Illustrated Booklet upon request.

"Rapid-Easy" Grain Grinders

The famous Machines that do **MOST WORK** of **BEST QUALITY** with **LEAST POWER**

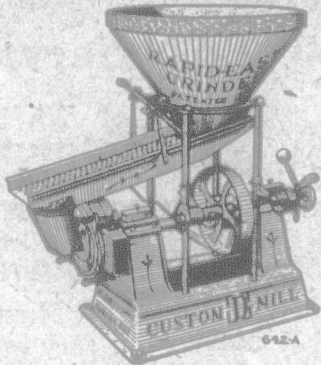
For Any Power

you may have, there is no Grinder like the

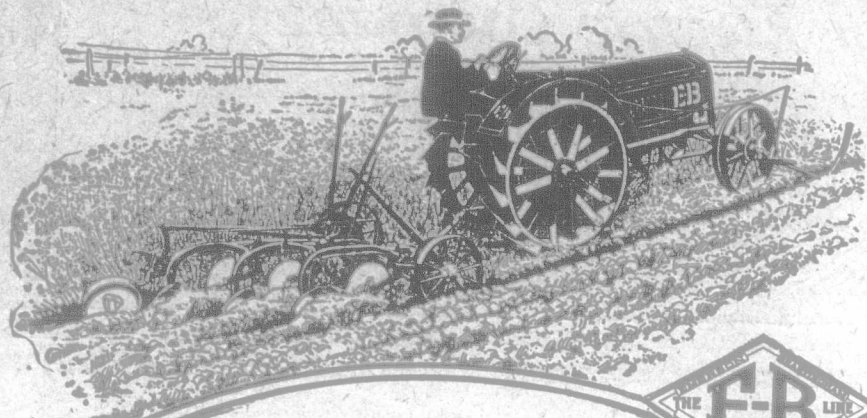
Famous "Rapid-Easy"

Sizes: 6 in., 7 in., 8 in., 10 in. for 2 1/2 to 12 horse-power. Larger sizes for Custom Work.

State your requirements. We will send descriptive circular and quote attractive prices.



J. FLEURY'S SONS, Aurora, Ontario, Canada



This Plow Saves Fuel For Canadian Farmers

This **E-B 102 Power-Lift Plow** is light draft, therefore does the work on less fuel. For the same drawbar pull, the **E-B 102 turns more soil**. The

E-B No. 102 Tractor Plow

also gives you the benefit of **E-B Quick Detachable Shares**. These shares are so easily applied and removed (5 seconds) that sharp-share plowing is a practical possibility at all times.

The wheels of this plow are made to carry the weight of the plow when in a working position

as well as for transportation. Notice the large 24-inch front furrow wheel with its oil-tight, dust-proof magazine wheel box which with the 26-inch land wheel carry the greater portion of the load close to the engine.

See your dealer about this plow—or write us at once.

Emerson-Brantingham Implement Co., Inc., Regina, Sask.
The John Goodison Thresher Company, Sarnia, Ont.

When writing advertisers will you kindly mention The Farmer's Advocate.

Our School Department.

The Story of an Egg.

BY PROF. W. R. GRAHAM.

Every one is familiar, with the size and shape of an egg; but very few of us stop to think how wonderfully it is made. We all know that the contents of an egg are enclosed in a shell. This shell appears, to be hard and solid, but this is not the case. True, it has much strength; but we find upon examination that it is full of little holes. These small holes allow the air next to the shell to get into the egg. Thus it will be seen that we should keep the egg in a clean place, away from dirty straw, such as we often see in the nest, also away from strong smelling substances, such as onions, otherwise, these strong odors, passing through the shell, will affect the taste of the egg, more or less.

Next to the shell, is a thin tissue. This tissue is made of two layers all over the egg, except at the large end, where they separate, forming a small open space called the air-space. This air-space increases in size as the egg evaporates or dries. The longer the egg is allowed to remain in the air, the more air will pass through the shell; and each little particle of air carries away with it some of the moisture of the egg and thus the contents dry up and the air-space increases in size. Sometimes eggs that have been left exposed to the air in a nice clean place for a year are found to have very little content; and that which is left is dry and almost hard. These tissues may be pulled off the shell, especially in the case of a hard-boiled egg.

Now we come to the white of the eggs, or what is called the albumen. This is said by doctors to be a very good food; but we are particularly interested in its appearance. So let us break an egg in a saucer. Notice that the white on the outside is thin and watery; in a little further, we see a grey or whitish streak that extends all the way around the yolk or yellow portion, but does not touch it. You will also notice that at each end of the yolk and extending from this whitish portion is a knotted portion, like a little piece of white string. We wonder what these are for, and observe that they are simply an extended portion of this first white streak as mentioned. Inside the white streak is another watery portion. This comes in touch with the yolk. We shall now look at the yolk. Take your finger, or a blunt pencil, and try to turn it over, and you will notice that the covering of the yolk goes into all sorts of wrinkles and folds. So we find that the yolk is separated from the white by a thin layer of tissues or skin.

If you have been careful in breaking the egg you will notice a little round spot at the top of the yolk. This spot is about the size of a pea, and is called the germ spot; and it is from this that the chicken grows when heat and other conditions are properly applied.

To study further the structure of an egg, we will have one boiled hard, and after removing the shell and lining tissues, we will tear loose a small piece of the white at the larger end of the egg. Now, by continuing to pull the torn portion from the left towards the right, you will notice that this white has a spiral arrangement. This is generally considered as giving strength to the egg.

We will next examine the yolk. Take the yolk out, cut through the centre, using a very sharp knife and you will notice a small, flask-shaped portion of the yolk, which is soft and light in color, and that the neck of the flask extends to the outer edge of the yolk. Upon this the germ rests. The hardened portion of the yolk, you will notice, is arranged in regular rings around this flask. This flask-shaped portion is lighter than the rest of the yolk, and is, therefore, always uppermost. No matter how you turn the egg, this spot will be on the upper surface.

Let us ponder for a few minutes over the many things we have found in the egg content. The germ, resting upon a nice soft cushion in the yolk, the yolk covered with a thin skin, adjoining this a very thin portion of the white, and outside this a thicker portion. Now these two portions hold the yolk in position.

If a sudden jar occurs, the yolk, or chiefly the germ, is protected by the skin of the yolk. The thin white portion acts as a pad or cushion, and the thick white portion holds it steady. Those extended cords of the thick layer of the white act as the axis of the yolk holding it in position; and, as you turn the egg around quickly, you twist the cords similar to twisting a string, with the result that, as soon as the egg is steady, these unwind, and help to right the germ spot on the upper surface again.

No doubt by this time you are wondering, if this germ spot and the portion of the yolk under it are so light, why the yolk does not come right up against the tissues lining the shell. But nature has guarded against this by the thick layer of albumen, which always tends to hold the yolk in position. Sometimes when the egg is left for weeks in the same position, the thick layer is overpowered, and the yolk touches the wall of the shell. If the yolk remains against the wall any length of time, it appears to become fastened to it, after which you can not successfully hatch a chicken from the egg. Being fastened in one position, the germ cannot move properly in order to develop, the result being that the germ dies. You may say a hen sitting on eggs never moves them, but in this you are mistaken. The next hen you set put a large pencil mark on each of the eggs, and place the eggs under the hen with the pencil marks uppermost. Next day lift the hen and you will see that she has altered the position of the eggs.

We have to imitate the hen in running an incubator, in that we turn the eggs twice a day. But some one asks, what is an incubator? Well, it is simply a well-built box, heated by a lamp, and the heat evenly distributed over all parts of the interior so as to give the eggs the same temperature. This box is not exactly air-tight, for you know that if this little germ inside the egg is going to develop into a chicken at the end of twenty-one days, it must have air. This air, you will remember, passes through those little holes in the shell, the good air going in, and the foul air coming off in much the same manner as you breathe. Now, you will see we have this incubator ventilated in order to supply the little germ with pure air. There is another point we nearly overlooked that is the temperature.

If you will place a thermometer under a hen you will notice that it reads 103 degrees; so we try to run the incubator at that temperature.

If any of you would like to see that the germ-spot always stays next to the surface, you can readily do so by taking a lamp after dark and going to a hen that has been sitting four or five days. Wrap a black cloth around the lamp chimney but first make a hole in the cloth, much the same shape as an egg, and have the hole exactly opposite the blaze of the lamp. Put the lamp on a little box the hole facing you. Now very carefully remove an egg from under the hen, taking great care not to turn it over. Place your finger at the ends of the egg and hold the egg in front of the light coming from the hole in the cloth that is around the chimney. If the egg is fertile you will see a dark spot, and from this a number of little veins running in different directions. This is the germ, and it has started to grow. Now turn the egg slowly around, and you will observe that the germ moves as you turn the egg, always resting near the surface. It is best to take a white egg to see this as white eggs are clearer than brown ones and the germ is more readily seen through them. Should the egg appear clear, or no dark portion be seen, it is infertile, and will not hatch.

A neat coop with a wire front will improve your poultry exhibit. It is well also to have a small hinged door so the judge can take the birds out and examine them if he desires.

Someone is going to win at the school fair, will it be you or your neighbor? The answer depends on what interest you take in the event, and the amount of time spent in preparation for it.

FO
Gi
ju
to
W
ar
A
A
It
is
corp
ern
runn
eithe
miss
just
larg
rang
easy
in o
Sl
W
quot
TH
Sa
depe
free
you
and
son
out
G
60
Crea
Ship
your
pay
all
ex
supply
c
daily.
W
est
marke
Ontario
LONDON