

six week old; in older ones, the best time is, when they exhibit desires for the male, as the ovaries are then more easily distinguished. The only implements used, are a sharp pocket knife, and a long straight needle, with strong waxed thread. Strong cords are fastened to the hind legs of the animal, by which she is to be suspended from a spike or a pin in an upright post.—The mouth may be tied to prevent squealing, and the fore legs held by an assistant. The operator then makes an incision, up and down, between the four back teats, commencing with the two back ones, cutting through the skin, the flesh and the muscles beneath, to the membrane which envelops the bowels. This must be divided carefully, that the intestines may not be wounded; and in doing it, the knife should be placed at the lowest point of the opening made, with the back of the blade inwards, and passed upwards until a slit, two inches in length, or sufficient to admit two fingers into the wound, has been made. The fingers are introduced, and the uterus grasped, which to the touch will appear like a wettempy bladder, partially flattened. The operator must retain his hold, at whatever point this is seized, gradually drawing it towards him, and working his fingers forward until one of the ovaries is felt, which he will recognize by its hard kernel-like feeling, and its colour, when he grasps it between his finger and thumb, and cuts it off as near the uterus as possible. The uterus must still be held, the other ovary sought for, and exterminated in the same way. Care must be taken to excise the ovaries completely, or close to the uterus, or the operation may prove ineffectual. The wound is to be sewed up; and the object is to make the wound unite on its inner part first, and as equally as possible. For the first stitch, the needle is placed on the belly, on the right hand side of the lower slit, and passed through the skin, &c. into the bowels, taking care that the point does not touch the intestines. The most of the thread is now drawn through, the needle made to enter beneath the outer skin, and passed into the bowels as before. Four such cross stitches, only drawing together the inner part of the wound, will be sufficient to place the inner edges of the wound in contact; and the outside is now closed by a similar series of stitches in the outer skin, when the ends of the thread are tied, and some tar calve rubbed over and around the wound. The animal should be kept fasting for some twelve or eighteen hours before the operation, that the intestines may not be distended.

It is somewhat difficult to describe such an operation, so as to be understood fully; but if a person chooses, he may, when pigs are butchered and hung up, make such experiments, when opening them, as will show the position of the parts, and enable him to operate without difficulty.—*Albany Cultivator.*

#### Farm Account—Farm Journal.

The season of the year has now come round, when, according to goodly custom, farmers as well as merchants and mechanics, are wont to adjust their accounts, and ascertain how they stand with their neighbours and all the world.—I trust the time has gone by when farmers keep their accounts by chalking them up behind the kitchen door, where they stood in daily peril from the broom or scouring cloth of the neat house-wife. Every one has, or should have a book regularly ruled, and every charge made at the proper time and place, then nothing is trusted to the memory. Thus, mistakes are prevented, and disputes are saved, and you are able to live with your neighbours in peace and quietness. I need not remind my brother-farmers that in the stormy winter days, of which we may expect many before spring, work comes on, when nothing can be done out of doors, they should drop in upon those with whom they have had dealing, and settle their accounts.

But there is one class of accounts which I think it exceedingly important for farmers to keep, which I presume are kept by very few.

I mean an account with the farm itself.—Charge the farm with all the manure and labour expended upon it; and, on the other hand, credit it with the crops of all sorts, which you get from it. If you make any permanent im-

provement upon your place, from which you do not derive immediate benefit, the amount by which it increases the value of your farm should be entered on the credit side. In this way you will know each year whether your farming has been profitable, and how much you have gained or lost. I knew a prosperous and intelligent farmer, now deceased, who not only kept such an account as I have been recommending, but he also kept a regular debt and credit account with every field on his farm. By this course, he knew every year not only whether he gained or lost by his farming on the whole, but he could also tell which crops were profitable, and which unprofitable. The experience of a man who proceeds in this way will be something.—The gentleman to whom I have referred, turned his experience to a good account. He was a skilful farmer, and when he died at a good old age, he left his children a productive farm and considerable money besides, which he had accumulated by his industry and good management. He told me that he should as soon think of omitting to keep accounts with those with whom he had dealings, as of omitting the kind of farm accounts I have just described. He attributed his success in his business more to this habit of keeping exact accounts, than to any other single cause.

Besides the accounts just spoken of, every farmer should keep a farm journal, in which the daily business of the farm should be entered under the proper date. In this he will set down when his various crops were planted or sown, when hoed, and when gathered. Here too, he will set down any observation which may occur to him, and the course and results of any experiments he may be making. He will find it very useful as well as pleasant, to refer each year to the journal of former years, and see what he was doing at the same season or date. General Washington kept a farm journal, and it will not be disputed that he was a good farmer, as well as a genuine patriot. If every farmer will annually fill a book with a farm account and journal, which have been the subject of this article, and will in subsequent years be guided by the experience which these books embody, I will guarantee that so far, at least, book-farming will be the best way of farming.

One thing more; every good farmer, I suppose, takes either this or some other agricultural paper. From that, he gets the experience of others. In return for the benefit he derives from that, let him occasionally contribute from the stores of his own experience, for the benefit of his brother farmers. He will thus have the satisfaction of feeling that he has paid a debt, and conferred a benefit on the community.—*Farmer's Journal.* AGRICOLA.

#### Gypsum.

This substance, called also Plaster of Paris, or plaster, is one of the many salts of lime, and is composed, when pure, of lime 33, sulphuric acid 44, and water 21, so that it is properly a sulphate of lime. Plaster may be considered as one of the most valuable of what are called the stimulating manures, and its uses, already extensive, is annually rapidly increasing. Fortunately, the supply of this valuable substance, is quite abundant in the United States, particularly in the central and western counties of New-York, where, in connexion with clover, it forms the great support of the staple crop, wheat, and gives an astonishing fertility to the soil. The *modus operandi* of plaster, or the manner in which it produces its effects, have been the subject of much speculation, and various theories have been proposed, most of which the advance of science has already shown to be untenable. Some have supposed that its action was to be attributed to the force with which it absorbed and retained water for the use of plants. Others have contended, that it acts by favouring the decomposition of animal and vegetable matters; but Davy showed that the mixture of plaster with these substances does facilitate decomposition. Chaptal supposes that its value arises from its stimulating properties, which are prevented from being destructive, like some of the other salts of lime, by the slowness with which it is dissolved in water. He says, "The solubility of plaster in water, appears to be of precisely the degree

most beneficial to plants: 300 parts of water will dissolve only one of plaster. Its action is, therefore, constant and uniform without being hurtful. The organs of plants are excited by it without being irritated or corroded, as they are by those salts which, being more soluble in water, are carried more abundantly into plants, producing upon them the most injurious effects." Another theory has been lately proposed by Professor Liebig, which is certainly very ingenious, and explains the action of plaster in connexion with the presence of nitrogen in plants, more satisfactorily than any thing yet advanced. Prof. Liebig was the first to discover that ammonia was a constant constituent of the atmosphere, and from this fact his theory is based. We quote from *Sullivan's Journal*: "This fertility arises exclusively from the fact, that the sulphate of lime fixes in the soil the ammonia dissolved in the atmosphere, which would otherwise be volatilized with the water as it evaporates. The carbonate of ammonia contained in rain water, is decomposed in gypsum, in precisely the same manner as in the manufacture of sal ammonia. Soluble sulphate of ammonia, and carbonate of lime are formed, and this salt of ammonia possessing no volatility, is consequently retained for the use of plants."

Gypsum is scattered by the hand at the rate of two or three bushels per acre, and its effects on the grasses are perceptible for three or four years. It is best strewn when the leaves are wet with a slight rain or heavy dew, and after the leaves of the plants begin to cover the ground. Some have objected to the use of plaster, that it produced greater crops at first, but that it speedily exhausted the land, and impoverished it.—Those who make this objection, probably took every thing from the land, and returned nothing to it, relying wholly on the plaster to keep up the fertility, a course manifestly erroneous.—Clover should always accompany the use of plaster, and when this crop is fed off or the land, and made part of the course of rotation, no deterioration, but on the contrary, an increase of the grain crops has taken place. The plaster mills of New-York, usually reduce the material to powder after only drying it in the air, but kiln drying at a moderate heat drives off the water of crystallization, and renders it more valuable to the purchaser, as it takes in this case a greater quantity of the active materials, the sulphate and the lime, to make a ton. Considerable quantities of earthy materials are usually mixed with plaster, giving it a dark colour, and on the proportion of these in the mass, much of the value is depending. Dried gypsum absorbs water rapidly, but it may be preserved many months without its properties being sensibly affected, if headed up in light barrels. Chaptal affirms, from his own experience, that though the baked plaster evidently produced a better effect the first year, the next three years the difference was almost nothing.—*Albany Cultivator.*

PULVERISED ALUM possesses the property of purifying water. A large spoonful stirred into a hoghead of water will so purify it, that in a few hours the dirt will all sink to the bottom, and it will be as fresh and as clear as spring water. Four gallons may be purified by a tea-spoonful.

NEW IRON should be very gradually heated at first, after it has become inured to the heat, it is not likely to crack.

BUCKWHEAT CAKES.—Have ready two cups; put one tea-spoon full of Tartaric Acid in one cup, one tea-spoon full of Soda in the other cup; add to each about two table-spoonfuls of cold water; stir it well. Make one quart of Buckwheat meal into a thick batter, with warm water; add the contents of one of the cups; stir it well; then pour in the contents of the other cups; stir that well also; add to the whole one table-spoonful of melted Butter and bake on a griddle nicely cleaned and greased with good lard. The batter is ready for use as soon as mixed.

BRITANNIA WARE should be first rubbed gently with a woollen cloth and sweet oil, then washed in warm suds and rubbed with soft leather and whiting. Thus treated it will retain its beauty to the last.