

**Stable Ventilation, Floors, and Water Supply.**

J. G., Antigonish Co., N. S.:—“(1) In planning for my new barn, to be erected next spring, I have been considering various systems of ventilation, and that spoken of in your paper as the Usher system pleases me the best, but I do not quite understand how connection is made with the outer air. It seems to me that the connection would have to be made on the bank side of the barn. How are the pipes arranged after passing through the wall into the ground? I do not think that I can get tile larger than 6 inch. Would that be large enough, or would a wooden box do? (2) I want to put a cement floor in the stables 100x40 feet. How many barrels of cement would it require? In making a cement floor I understand the bottom must be of small or broken stone. Now, in making gutters behind the cattle six inches deep, if there has to be several inches of broken stone under them it would require a very great quantity of stone to fill up to the platform where the cows stand. In order to lessen the quantity, could not the gutters be lowered by digging out the ground under them? How does cement answer under horses—will not the shoe calks cut it up, and will it not dull the calks? Would it not be better to cover it with plank? (3) A recent issue was of very great interest to me, as I have been thinking of putting up a windmill. The only thing I am afraid of is the very high winds we often have here. Will they stand a very heavy blow? Would they be all right if thrown out of gear? Could I put a windmill upon my barn to pump water from a well 150 feet distant and 30 feet deep? Instead of putting it upon the barn, would it not be better to put it at the side of the barn between the driveways, and have it connected with shafting inside?”

[1. The plan of ventilation referred to consists in placing a 4 to 8 inch tile under the feed alley floor and extending through the walls, admitting fresh air from the outside with 1-inch lateral pipes leading from the tile to the parting blocks in center of double stall feed manger, where the fresh air is distributed, one pipe serving the two animals. End of pipe is covered with wire gauze to keep out dirt. If one side of basement is banked, the tile usually admits air from the exposed side of barn. Most so-called “bank barns” are now built on the level, and floor of alley, for convenience in feeding, etc., is usually higher than ground outside, so that the tile will come out above ground. The principle of this system of ventilation is that the heated air of the stable rises naturally through feed chutes and the like, and cold air flows in through the tile and pipes to supply the vacancy made. 2. Cement floor for stable 100x50 feet would require complete 60 to 70 barrels of cement. In addition to the stalls and mangers, that quantity would also floor the feed alley and drive or passage way behind the cattle, which, for economy, many simply leave as a good solid clay floor from gutter to wall. Broken or cobble stones under floor are not absolutely necessary, though if they are plentiful on your place they will help to fill up bottom. A couple of inches coarse gravel, well rammed down, will answer, followed by the cement concrete, used as often described in these columns, or in pamphlet issued by Isaac Usher & Sons, Queenston, Ont. The trenches behind the cattle may be lowered by digging out the ground under them as suggested. For cattle manure gutter we would put in an 8-inch drop, and slant bottom slightly upward to drive or passage way behind. One of our staff has had such a floor in use with great satisfaction for seven or eight years. Some horses are apt to pound holes, particularly with front feet, if sharp shod, unless that part is particularly strong and hard. We noticed one stable floored by bedding center of stall with smooth round cobble stones, just coming to surface, which stood well. Another plan suggested is to lay the bottom with 4 or 5 inches cement concrete, and bed into it about three 2x4 scantlings, crosswise, and on these spike planks with half to one inch space between, running lengthwise of stall back to edge of cement concrete gutter about two inches deep and two feet wide. Plank should have slight fall back toward gutter, and the space between planks allows for water to run back, keeping the bedding dry, and can be scraped out occasionally. Still another plan is to have a plank floor or grating that can be lifted off the cement bottom to be thoroughly washed out occasionally; but the former is, perhaps, preferable. By all means have the cement concrete bottom first. 3. Properly erected, there is little or no danger of windmills blowing down, though we have seen some inferior mills wrecked in a heavy windstorm. Water cannot be lifted by suction more than thirty-three feet under most favorable circumstances; and, to be safe, experts on this subject do not advise more than twenty-seven or twenty-eight feet. This does not include the distance from cylinder to water, only the lift in height. After the water gets to cylinder it can be forced to any height or distance, only requiring the power to do so. Nowadays mills are usually placed on the barn for grinding purposes, and if you have a good well outside the water can be brought inside either by having the cylinder in the dry well under barn and iron (galvanized preferable) piping to the well, or by putting pump in well, using jerk rods (as are used in pumping several oil wells) or with cable wire and triangles; and a third method is with pulleys and an endless cable. By any one of these methods water can be forced to any distance or elevation required, even raising it from the bottom of hill, and can be stored for use in elevated tank in barn or elsewhere.]

**Grasses for Gravelly Hill.**

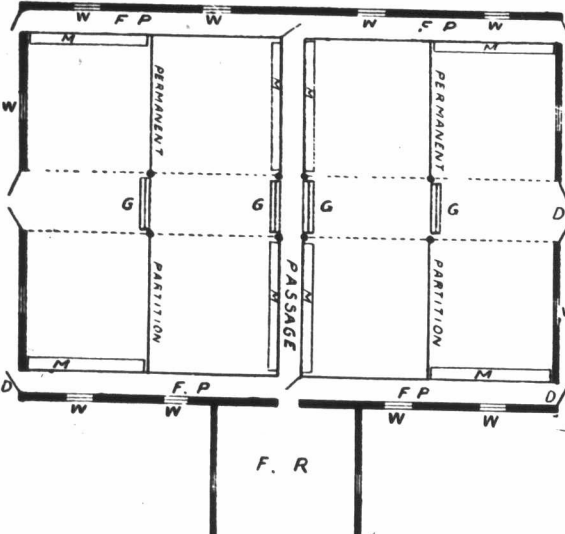
R. S. SUTTON, Durham Co., Ont.:—“What is the best mixture of grasses to use in seeding down a gravelly hill for the purpose of pasturing sheep?”

[We take it that clovers are included in the question, as a permanent pasture for sheep would be very deficient without them. Considerable attention has been given this subject at the Ontario Experimental Farm during the last eighteen years, and the formula laid down as one of the best for permanent pasture in 1893 was as follows: Orchard grass, 4 pounds; meadow fescue, 4 pounds; tall oat grass, 3 pounds; timothy, 2 pounds; meadow fox-tail, 2 pounds; lucerne, 5 pounds; Alsike, 2 pounds; white Dutch clover, 1 pound; and yellow clover, 1 pound. These are all hardy and yield well throughout the season. Some of them, however, are not particularly suited for a sheep pasture, and should therefore be sown in less quantity. We would, therefore, drop out tall oat grass and half the orchard grass, and would sow from 2 to 3 pounds of white Dutch clover along with the other remaining sorts. We would recommend sowing the seed with a light seeding of barley or spring wheat. It will be well to give the gravelly hill a good coat of well-rotted manure, so that a vigorous growth of the grasses and clovers may follow their germination.]

**Plans for Cattle Barn Wanted for Feeding Steers Loose.**

S. MARTIN, Oakland Municipality, Man.:—“I intend to build a barn to hold one hundred cattle and twelve horses, the cattle to be in pens (of about twenty, loose) to be built on the level, no bank being available. I would be pleased to get through your paper the best plan of barn for convenience in feeding, etc.”

[We would refer Mr. Martin to back numbers of the ADVOCATE (especially May 15th, 1897), where from time to time plans of barns of many designs have been illustrated. This is one of the advantages of keeping the files of the ADVOCATE, and for this purpose we now have an excellent and cheap binder. Although not knowing of a barn laid out for feeding all the cattle loose, as suggested by our correspondent, there is no reason why such should not be built to give entire satisfaction. We would suggest the following, which, of course, could be modified to suit circumstances:



Feed passages along outer sides, into which hay and coarse fodders or mixed feeds could be dropped by chute from barn floor above. Water troughs above mangers, supplied by gravity from tank or other supply. Walls carrying driveway bridge to barn floor are utilized for root cellar or feed mixing room. Permanent partitions as indicated or where desired, with gates (G) connecting these permanent partitions, which, upon being thrown open, would leave clear passageway through the center for taking out the manure by stone boat or truck. Ventilate properly and supply abundant light. Either end could be arranged for horses with dividing partition run to ceiling, with doors instead of gates separating from cattle, still leaving center passageway to be opened through.]

**Top Dressing Fall Wheat.**

SUBSCRIBER, Perth Co., Ont.:—“I have a field of fall wheat that was small last fall. Would you advise to cover this with manure in March? Let us hear from some of the readers of the ADVOCATE.”

[It would certainly be advisable to protect young wheat by spreading on a light coating of loose, open covering, such as clover chaff or fresh manure from the horse stable. This practice is made a rule on many fall wheat growing farms in the month of February so as to hold later snow-falls.]

**Gold Mining Machinery.**

A. B., Middlesex Co., Ont.:—“Will you kindly inform me in your next issue where a free milling mill for gold could be obtained and the probable cost. By so doing you will oblige an old subscriber.”

[The London Engineering Co., of London, Ont., manufacture all classes of mining machinery. Mills of about 15-stamp and upwards cost from about \$8,000 and upwards, or for about \$2,000 a 5-stamp prospecting mill can be secured.]

**Raising Water from a Stream—Feeding Cattle Loose.**

A. STOCKTON, Wellington Co., Ont.:—“I have been a subscriber only since Dec. 1st, but can say it is money well invested. I have received some very useful information; in fact, I think the ADVOCATE has come to my home to stay. I have some questions to ask, hoping to receive answers through your valuable paper. 1. What would be the best plan to get water into my stables from a spring creek which runs within about thirty rods from barn? The stable is about six or seven feet higher than bed of creek. There is only about 1 1/2 or 2 feet of fall above the point where the creek is to be tapped. 2. I have been very much interested in the experiments of feeding steers in loose box stalls, and would like to know how they are kept from crowding each other away from the feed, also how many head should be together. What size of box stalls would be best? How are the droppings kept out of the mangers?”

[1. A hydraulic ram should work to perfection in this case. (See FARMER'S ADVOCATE, Feb. 1st, page 61.) A subscriber says a hydraulic ram can be bought and put in for less money than it would cost to dig a well, brick or stone it up, and purchase a pump. It would do its own pumping, and do it night and day the year round. Mr. Stockton being a new subscriber, we have sent him a copy of Jan. 1st, 1896, FARMER'S ADVOCATE, which can be looked up by old subscribers who desire information on this subject. Steers can be fed loose in box stall only when they have been deborned, when they feed at troughs as peacefully as do sheep. It is necessary to allow plenty of trough room. Mr. Thos. McMullan, Seaford, Ont., feeds twenty steers in a pen 35x22 feet, and thirty-two in a pen 34x65 feet, each having mangers on two sides of the pen. The troughs or mangers, 14 inches deep, 17 inches at the bottom and 20 on top, sit on the passage floors, which are elevated one foot from the floor, and droppings seldom fall into the mangers. W. C. Edwards, Rockton, Ont., suspends his steer troughs on ropes, and thus raises them as the manure accumulates.]

**Why Are Devon Cattle Not More Popular?**

C. F. BENT, Durham Co., Ont.:—“Many thanks for the premium silver canoe pin, which is very good for one new subscriber. I think every farmer should take your paper. I would not think of farming without it. I find it hard to induce people to take it; some would like to, but think they can't afford it. Others think they know how to farm without reading. We did not receive the 16th of August, 1897, number. If you could kindly send it to us I should be obliged, because we have all the ADVOCATES since I first became a subscriber. I should like to know what is the reason that Devon cattle are not popular in this country? I know when I was in England they were very popular with the men who supply the cities and towns in the south of England with milk. Long live the ADVOCATE.”

[It is somewhat difficult to understand why such a useful, really general purpose breed of cattle has not become more generally bred in this country, where special purpose cattle have never held a large place. There are no objections to them that we are aware of, but we believe it is a fact that very little has been done by their few breeders to popularize them in Canada. They are smooth, easy keepers, generally good milkers, and yield a good carcass of beef at a moderately early age. In our estimation they hold about the same place in the cattle world as Southdowns do among sheep. Will some one answer this question?]

**Removing Warts.**

SUBSCRIBER, Perth Co., Ont.:—“Please publish a treatment which will successfully remove warts from cows; are yearling cattle?”

[In cases where the warts are hanging they may be removed with the knife, followed by the hot iron to stop the bleeding; the daily application of nitrate of silver will remove them, as will also butter of antimony likewise applied. Another recommended remedy is to saturate the part with fresh lard once a day for three or four days, when they can, if small, be removed by the fingers; or, if large, by twisting or by using the ecraseur. They may also be removed by tying a silk thread tightly around the neck of the wart.]

**Seed Potatoes—Paris Green.**

CHARLES J. GOETZ, Waterloo Co., Ont.:—“I take notice that you are answering questions through the ADVOCATE, which is a good paper. 1. I would like to know whether it is advisable to plant small potatoes, say the size of a pigeon egg to the size of a small hen egg? 2. Do you think it well to cut a potato the size of a common hen egg through once? 3. Which way do you think best to plant potatoes, deep or light? 4. Would you advise planting in bottom of furrow or in the right of furrow? 5. Do you think four pounds of potatoes when the stalks stand about fifteen inches apart. I generally go over my patch twice a season, and use about four pounds Paris green each time, mixed with water? 6. Would you advise to hill up potatoes with plow or scuffler?”

[1. It has been decided by careful experimenters, after a long series of tests, that on rich, well-prepared, mellow soil, potato seed that will pass through a 12-inch sieve and not through a 14-inch sieve will give good results in a crop, but nothing

smaller should be highly fertile should be planted in all the young roots of the soil. 2. With seed plants obtained when deep, while seed well. Four in depth to plant is uniformly in to the crop, in the rows of Four pounds more than is quantity must to water is 1 pound of lime save the foliage ference which usually be acc be done when surface will no generally pref

S. P., Rivin trouble in ha will calve earl bring them in best way to se Which is the can be served About sows—rowing when litter?”

[We know to bring a calving. It is come in season in a week or probably in a conceive at having them to set up irregular in h renders her n tion does take cows when ti from the vul restlessness, any of these by turning bull, if one accept service in occasional service, but v believe that and that the quence. A s five to seven

**Should**

H. G. H., S bred) be as feeding them to run with t

[We have tion in the with their d entirely upon whether she Most breeders the calves to times a day and find tha and hay, and if the cows there could b calves. Tru vided the m heat which principle, but H. G. H. doe or dairy breo advise feedi pail on mill extracted, fo calves serves lay on flesh milk when t touched the that did not H. G. H. o question our

ENQUIRE walls for a boarded on material to b building it i cheapest mat think this pl would you re [We woul terial referre three inches