cattle to cold winds and the ordinary cattle car nimals which have been helter of feeding-stalls ced in cars, into which during their long trans a naturally bad. Not h frequent concussions vay trains are unprovide ings, or when cattle cars g others loaded with min goods. To convey can ut any precaution again y serious shock to the a a cruelty and a serious in f the animal, and come o the healthfulness of h laughtered under sucho

the whole system of the by railway needs reform ving cattle along the me hought of. But the ne ought into accordance w ests of railway compani which railways afford, h required for the anima must serve for the genen c. to whom their healthi point of view an easy matte s, whilst in another it in ty, and demands the atte ho detests cruelty to mi rly when perpetrated on copalian.

me to work the land, a drain it. Winter is the les, to make manure, and ill facilitate the work ofth . In the spring, while t oose from the effects of the n can be dug with one thin n the fall. When the plan tiles on hand, a good de e done in the five or in fore we need to plow h ites that Harris has under in. In reply, Mr. Ham , and the disease is conke to communicate the d en of the most intelligence own and post office when Underdraining will b k for the next quarter di er draining is needed—si happened to see a fan is of it did not need drain rmanent improvement a is work is done. I recom ant expenditure of money the capital to drain the once, would find it to the a year or two principally there are few such ma rain a few acres each year ne time and money. On the work thoroughly as is ere is scarcely a man whole farm is drained where could induce every reade and never to let a year of the same a few rods of ditch, had accomplished something

ins if you can not get tiles re they can be obtained ce, are far cheaper and bet stone drains that work ver three brush drains that de but I have one stone drain o, and several brush drain ut I have not a single tile t do good service. I have t deep enough, but I good outlet. Some of my ot "underdraining on the ot always easy to persuade g ditches deep enough ! The only cure for this re agricultural papers, and d Farmer's Clubs.—Amer

FARM IMPLEMENTS.

etroleum will make a good mence with. To cover this hould be used, mixed with of oil. For color, use red Paris green, Prussian blue, oxides of iron (commonly mineral paint.) The green colors,

ICE HOUSES.

This being the season for storing ice, we would call the attention to what is known as the "Stevens plan" for erecting a cheap house and storing ice, from Hali's Journal of Health for December:

For one family, make a house twelve feet

each way, by setting twelve posts in the ground, three on a side: board it up, eight feet high, on the inside, so that the weight of the iee shall not press the boards outward: dig out the dirt inside, six inches deep, and lay down twelve inches of saw-dust: pack the ice in a pile nine feet each way, filling the space of eighteen inches betwen the ice and the boards with sawdust or tan bark, with the s.me thickress on top: make an old fashioned board roof, leaving the space above the ice of en for ventilation. Have a small entrance on the north side of the roof. If the ice-house can be located on the north side of a hill, and a small stream of water introduced slowly through the root, on a very cold day, so as te make its way detween the pieces of ice, the whole mass will freeze solid; or a pile of snow could thus be made into solid ice, and would last from one winter to another.

RECIPES FOR CURING BEEF AND HAM.

We give the following selected recipes, thinking some of our readers may be beginners in this work, or, it may be, have forgotten their formulas.

For every 100 pounds of beef, 7 lbs. salt, 2 oz saltpeter 1½ lbs brown sugar, 4 galls. water. Boil and skim, and pour over the meat when cold. If properly packed, that amount of water will cover the meat. For pork, pack the hams and shoulders together. To every 100 lbs. take 8 lbs. salt, 4 cz saltpeter, 1 lbs sugar, 4 galls water. The hams and beef for drying may be taken out after four weeks. To keep the meat after warm weather, the pickle will have to be boiled. The following proportions are for one thousand pounds of meat: Mix 2½ lbs. saltpeter, finely powdered, bushel fine salt, 3 lbs. brown sugar, ½ gall. molasses. Rub the mest with the mixture; pack with skin down. Turn over once a week and add a little salt. After being down threeor four weeks, take out, wash, and hang up two or three weeks, until it is dry. Then smoke with hickory wood three or four weeks, then bag, or pack away in a cool place—not a cellar—in chaff or hay.

Another way of curing hams, said to be very good, is first to take out all but the straight bone, then lay in a cellar to cool for a day or two. Heat the salt used in a pan on the stove until you can just handle it, and rub the hams well with this and return to the cellar. Repeat the operation three or four times with intervals of three or four days between each, and the euring is complete. In summer put the hams in a brine to keep.

ECONOMY IN HORSE-SHOEING-A writer in the Western Rural, alluding to the frequent necessity of shoeing teams that are much driven in winter, says the best way to make the calks of the shoes to have them last, is to take steel from the worn-out sections of your reapers, which are always at hand, unless they have been carelessly thrown away, split the calks, and insert a small piece therein, weld it well, and sharpen so that the steel is even with the sharpened calk. In use, the iron being much softer than the steel, wears away much faster, and the steel being thin and strong will keep an edge or point as it may be, for a long time. True, blacksmiths do not like to do this, because of the business and profit in shoeing: but if one will not, another will: and you will find one shoeing thus, generally, wiil last all winter and save trouble and expense.

FARM House Cellars. - These are too often sources of disease or death. Farmer's families ought to be the most exempt of any from sickness which arises from uncleanly surroundings. Sometimes, oftentimes, in fact, a farmer's family is thinned fearfully by malarious diseases, even after frost is supposed to have rendered malaria innoxious from the sources whence it is ordinarily supposed to emanate. Too often the cause of these maladies lies in the cellar. Fruits and vegetables are stored therein and it must be warm and close to keep out the frost. Decay takes place, and gasses are evolved, which find their way to the upper rooms and poison the occupants. Children and weakly people are especially susceptible to their effects, and fevers, throat disease an colds prevail. The cellar should be used as little as possible as a store-house for vegetable matter, which may decay or change, and it should be well ventilated.

SORGHUM FOR FODDER.

At a late meeting of the Famer's Club, the subject of soiling being under consideration, Mr Ottis said he once planted an acre of Sorghum, which made a great growth, averaging ten feet in height. The stalks at the buts were nearly as big as his wrists. It was cured and fed to the cattle, and the animals ate it all up clean. They would leave any other fodder for the sorghnm, and chew the bits until they were all gone. He advised planting it like corn in rows and hills, and leaving it in shocks in the fie'd until wanted for feeding .- American Rural Home.

If any of our readers have sown sorghum seed by the side of the corn when sown for fodder, we should be pleased to hear the results. Our opinion is that it may be profitable. [Ed.]

THE CLOVERS.

The clovers form the basis of much of the best husbandry of the country. It is cultivated for four distinct purposes; for hay, for pasture, for

seed, and for manure.

There are two varieties of red clover, a medium height, and a very tall or sapling clover.

The medium is the variety most generally cultivated at the North for hay and for pasture, and the tall, or sapling is cultivated where manuring the land is the primary object. White clover is a pasture grass very much prized in the best dairy regions. The Alsike clover has been best dairy regions. The Alsike clover has been recently introduced, and is a medium between white and red clover.

white and red clover.

Red Clover is very fine, both for pasture and hay, and on good land yields from one to two tons per acre. White clover is not useful only for pasture for cattle and for bees, as it is of for pasture for cattle and for bees, as it is by small growth. Honey made from white clover is prized above that made from any thing else except Alsike clover, which is probably equal if not superior to white clover for this purpose, and is valuable for pasture, and will do very well for hay, but makes a light crop. If either is sown for bee pasture, the Alsike is to be presented in the property and is more valuable more honey and is more valuable. ferred, as it yields more honey, and is more val-

uable for cattle, on account of quantity.

The usual mode of sowing clover is to mix from four to eight quarts each clover and timethy seed together and sow on one acre, in the spring of the year, on ground sown with winter spring of the year, on ground sown with winter wheat, before the spring rains have passed. It is greatly benefited by using gypsum or lime on the ground after the seed is sown, as clover is emphatically a lime plant.

If the object in cultivating clover is to make hay it should be cut when it is in full bloom, and gyped in the cook, by letting, it stend for

and cured in the cock, by letting it stand for several days, opening it once or twice before drawing in. It is greatly injured for hay by standing until the blossoms have become dried up. In stacking or putting in the barn, care should be used so as not to put a great quantity together until it is fully dry.

In cultivating clover to manure the land, it

should be sown one year and then plowed in the next for wheat, or other crops, when it is in full growth. Light sandy soils without any organic matter in them will not produce clover or anything else; but such as contain a small per cent of organic substances, either vegetable or animal, or both, will produce cover and other grasses and grain, though in an imperfect de gree. If clover seed should be sown on light sandy soil, without animal manure, it should be accompanied with gypsum or lime, or super-phosphate of lime, which will add very much to its growth by furnishing sulphur to the plant. Gypsum is composed of sulphuric acid and lime, and all plants require these for growth.

In an attempt to cultivate clover on light andy soil much patience and perservance are essential to success, because the progress will be slow, yet if it grows but imperfectly at first and is buried in the soil and seed sown again the organic matter will be very much increased, and perseverance may terminate in satisfactory results. Clover, on account of its long tap-roots, is better adapted to inprove the soil than any other vegetable, because the roots bring up from the sub-soil various salts which are essential constituents of plant growth.

Curb can be cured if not of long standing, by using fomentations of hot water for twenty minutes, followed by a blistering continuent of biniodide of mercury and lard. Continue daily until a good blister is formed. As this is a very poisoneus substance, the greatest caution in using it is necessary.

TO TAN SHEEP-SKINS FOR WHIP LASHES.

Soak them in weak lime-water, to remove the wool, and then rubbing them with oil or grease with a pressure of a roller thicker in the centre than at the ends. They will absorb a large quantity of grease. Finish with chalk or whiting.

Pen makers are a had lot. They make the people steel pens, and then say they do write.

Mouths' Departmet.

ANSWERS TO PUZZLES IN LAST ISSUE. "A FARMER," Brantford, says he has found "A FARMER," Brantford, says he has found out the puzzles in our last, and sends the answers to them. 1st, the riddle is "a chair;" 2nd, entitled "often true," is "a fool and his money are soon parted;" 3rd, caution, is "be above making trouble in a family;" 4th, Geograp ical puzzle, is "Turkey in Europe;" 5th, illustrated rebus, "think before you speak;" 6th, "where is the enemy?" is a white lox; 7th, is "good advice—waste not, want not."

ACROSTIC. Farmers they plough, and they sow, and they

reap,
And grow corn for the poor and corn to keep; Reaping, and mowing, and saving the hay, Making a fortune for some rainy day. Early and late the poor farmer he digs, Rearing his cattle, his sheep, and his pigs. S. Wherry, Jr., Newry, Ont.

CROSS-WORD ENIGMA. My first is in snow, but not found in rain, My second in soul, but not in the brain, third is in knowledge, but not seen in lore, fourth not in the house, but is in the door, fifth in a whale, but not in a piece, My sixth in uncle and also in niece; My whole a nice city rising fastly to fame, When you make out the parts, you will then

RAISING YOUNG PIGS BY HAND.

know its name.



We all know there are improvements going on in agricultural affairs as well as in mechanical—improved plans of management, patent inventions, &c. We have often lost valuable little pigs, despite warm wrappings, a place by our fireside, and the efforts of wife and family to save them with a spoon and milk and sugar. We have seen the celebrated breeder, F. W. Stone, Esq., of Moreton Lodge, Guelph, take a little half-dead, half-frozen new arrival of the pig tribe, and, by what he termed 'his mesmerism,' start the little grunter off on a run. His process was to lay the pig down on the ground We all know there are improvements going process was to lay the pig down on the ground and give it such a rubbing as it never had, which put us in mind of a black barber shampooning one of his patients. The plan above illustrated may be novel to many; it certainly is a very elevating and sensitive mode, and will cause a pig to open its mouth (not an easy matter if you want te physic one.) We are not aware that there is any patent of this process, so all that choose may avail themselves of it. We think no further commendation on our part

MARY'S SMALL VITE LAMB. Mary had a shmall vite lamb, Mit fur so fine like silk, Und efery dime dot lamb vood shgweal, She'd give id bints of milk. He vas a nice und poody lamb He's frond name dot was Pede, Und ven dere vas some milk around

He vas bully on der cad. Dot lamb he used to play mit her, Und frisk, und jumb, und run, Und chase her all around der place By Golly, dot was fun!

She keebed a awful vile dot lamb, Und he growed, und growed, und growed Dill bymeby den he vas a rain, Und his leedle horns dem showed.

Den Mary used to gave him grass, Und oads, und beans, und corns, Und ven he was full ub mit dot, He'd bunk her mit he's horns. Bud Mary she don'd like him den,

He vas do shirong und shidoud, Und she voodn't had him in der house— She said, "Dot vas blayed oud. Von day dem vent to took a valk, Und he beginned to shgweal, So she selled him too a butcher's boy

To cud up into veal. Der boy he shnatched him by der shnoud, Und says: -- 'Your fate vas booked," Den shticked a knife by he's lefd ear,; Und new he's goose is sooked!

Great Western Railway.

Trains leave London as follows :--Going West. -12.50 p. m.: 5.25 p.m.: 2.45 a. m.: and 5.45 a. m.

Going East.—6.00 a. m.: 8.40 a. m.: 12.35
p.m.: 3.55 p.m.: and 11.25 p. m.

Grand Trunk Railway.

Mail Train for Toronto, &c., 7.30 a. m.; Day Express for Sarnia, Detroit and Toronto, 11.25 a.m.; Accommodation for St. Mary's, 2.45 p.m.

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allowed to run one year on credit. TERMS OF ADVERTISEMENTS.-10 cents per ine, Agate space. Display, 15 cents per line. Specials, 20 cents per line. Editorials 50 cts. per line.

charged if three months are allowed to run in

arrears, and 25 per cent. will be added if

To Secretaries of Agricultural Societies and Others.

"Anglo Saxon" may be engaged for the coming season to travel in any County in Canada, where the best inducements are held forth. His stock gained the lat and 2nd prizes at the last Provincial Exhibition, as they always have done for years past. He has already traveled in Middlesex, Elgin, Oxford, and Northumberland. He is too well known to require further remarks. Address—"Agricultural Emparium,"

Burlington.

Leaving the East and arriving at Chicago or Indianapo is, how shall we reach the West? The best Line is acknowledged to be the C., P. & Q., joined together with the B. & M. Railroud by the Iron Bridge at Burlington, and called the

the Iron Bridge at Burlington, and called the Burlington Route.

The main line of the Route running to Omaha, connects with the great Pacific roads, and forms to day the leading route to California. The Middle Branch, entering Nebraska at Plattsmouth, passes through Lincoln, the State Capital, and will this year be finished to Fort Kearney, forming the shortest route across the Continent by over 100 miles.

Another branch of the B. M. diverging at Red Oak, falls into a line running down the Missouri through St. Joe and Kansas City, and all Kansas. Passengers by this route to Kansas see Illinois, Southern Iowa, and Missouri,

sas see Illinois, Southern Iowa, and Missouri, and, by a slight divergence, can see Nebraska

Lovers of fine views should remember the Burlington Route, for its towns "high-gleaming from afar"—its tree-fringed streams—its rough bluffs and quarries—its corn-oceans stretching

over the prairies—its corn-oceans stretching over the prairies further than eye can reach.

Land-buyers will be sure to remember it, for they have friends among the two thousand who have already bought farms from Geo. S. Harris, the Land Commissioner of the B. & M. R. R. at Burlington, Iowa, or among the four thousand home-steaders and pre emptors who last year filed claims in the Lincoln land office, where "Uncle Sam is rich enough to give us all a farm.

HAVE YOU A COLD? HAVE YOU A COUGH? HAVE YOU BRONCHITIS? HAVE YOU THE ASTHMA? HAVE YOU ANY LUNG DIFFY-CULTY OR WEAKNESS IN YOUR THROAT?

READ THE FOLLOWING :-Mrs. Amy Kennedy, of Painsville, Ohio, says:—I have suffered with Asthma 24 years, and have been doctored by many physicians; as soon as I took the Balsam it relieved me; I cannot express the gratitude I feel for the benefit your Allen's Lung Balsam has been

Dr. Harris, of Middlebury, Vt., says: "I made been troubled with Bronchitis for two years, so affecting the organs of speech that I could not speak aloud for six weeks. I had "with it a severe cough and old night sweats; "I took two bottles of Allen's Lung Balsam," and an antimal angular

'and am entirely cured. Capt. Foster, of Port Burwell, Ont., says :-I have been troubled with a cough, at times very severe, for years past; I have found Allen's Lung Balsom to relieve my cough more readily than any other cough medicine I have ever tried. My wife also used it with the most continuous results. satisfactory results. The Balsam is sold by all Druggists. Price

\$1 per bottle. PERRY DAVIS & SON, GENERAL AGENTS, Providence & Montreal.