THE AMERICAN PRESBYTERIAN, THURSDAY, JULY 26, 1866.

Rural Economy.

ORCHARD CATERPILLAR.

The vast numbers of these caterpillars. in many parts of the country, admonish orchardists to destroy them before they make such progress again as they have the present year. Some apple trees have been entirely stripped of leaves, not only rendering a crop impossible, but checking the growth of the tree at the most important period of the year, and rendering it liable to injury by winter, and retard its vigor in future. It is not too soon now to commence the destruction of the eggs which have been recently placed upon the young twigs. As they are usually on the projecting shoots near the outside of the tree, the practiced eye will quickly detect their pre-sence, and a single clip of a pair of orchard shears placed on the end of a pole, and worked with a cord, will bring them to the ground. This is much easier than the more laborious and more uncertain process pounding, and crushing after the caterpillars are half or wholly grown, for no individual escapes when the little ring of eggs is taken off entire. In the autumn. after the leaves are fallen, pass around again and clip out the remainder. By going through the orchard at least two or three times, there is lesss chance for any accidentally hidden rings to escape. A cloudy day should be selected, so that the light may not dazzle or injure the eye; and after some practice, it is surprising with what quickness any one may detect these rings on the twigs by a glance over the apple tree. Cherry, pear, and other trees should he examined in the same way. A careful attention to these instructions any time before the coming spring will completely clear orchards of this pest, and the owner will have the satisfaction, as he passes the trees, of seeing them full of healthy foliage, without the annoyance of witnessing these huge nests on denuded branches .- Country Gentleman.

BREAD FOR THE BONES.

Bread and butter are the only articles of food of which we never tire, from early childhood to extreme old age. A pound of fine flour or Indian meal contains three times as much meat as one pound of butcher's roast beef; and if the whole product of the grain, bran and all, were made into bread, fifteen per cent. more of nutriment would be added. Unfortunately, the bran, the coarsest part, is thrown away; the very part which gives soundness to the teeth and strength to the brain. Five hundred pounds of flour gives to the body thirty pounds of bony element, while the same quantity of bran gives more than one hundred and twenty-five pounds. This bone is lime-the phosphate of lime--the indispensable element of health to the whole human body, from the want of the natural supply of which multitudes of persons go into a general decline. But swallowing phosphates, in the shape of powders, or in syrups, to cure these declines, has little or no effect. The articles contained in these phosphates must pass through nature's labortary; must be subject to her manipulations lu alembics specially prepared by Almighty power and skill, in order to impart their peculiar virtues to the human frame. In plainer phrase, the shortest, safest, and most infallible method of giving strength to the body, bone and

stock of this class, a new, or rather an improved, breed suited in all repects to our much as the Durhams, Jerseys, Herefords are English? "The usual plan practiced by most of our

farmers, indiscriminately raising calves for future profit for cows or bulls, has given us a mongrel breed of no particular value; but were a different course pursued, and were we as careful as the stock breeders of other countries. I see no reason why we should not have as good milkers and as good feeders as Durhams or any other class of fancy cattles

discrimination is used in breeding, we can ing the bottom has got, not more than a improve our cattle very much, even if we do not equal the foreign breeds.

"Let every farmer therefore select from his herd and the herds of others, the very and let the butchers have the others. By pursuing this course for three or four years, he will certainly see a marked improvement with sheep, pigs, and everything else. Am I not right?"

CARE IN SAVING SEED.

It may not be generally known that seed saved from cucumbers, melons, squashes, etc., growing close to the root of the plant, is more valuable than seed saved from that grown midway, or near the ends of the vines. If you would preserve the earliness and perfection of your varieties, select your seed from the fruit first grown and developed. Such seed contains more capabilities to produce perfect vegetables again. It receives the nearest and fullest supplyof life-force from the roots. In its lockedup germs are written more emphatically the original qualities and characteristics of its parent fruit. The principle applies to all forms of vegetation. Seed sown from lateral branches soonest deteriorates. Cab. bage seed saved from stumps is worthless. The seed selected from the central stock shooting up through the head is premium. and none else The Limas nearest the earth on the stalk, the tomatoes nearest the. root, are best. Seed saved from vegetation thinly grown is preferable. The best seed corn is saved from hills containing a single stock. Other ears may be as fair, but experience teaches that greater productiveness is enfolded in one than the other. Lettuce and radishes, and most other garden vegetables, require transplanting to produce the

HOW TO KEEP ICE.

finest quality of seed.

Those persons who have no refrigerator for keeping ice may wrap a large piece of an insulated telegraph conductor in its inice in a flannel sheet, or any large woolen terior, without damaging its integrity, has cloth, or dry blanket, and put it in a large hitherto proved impracticable. This year, box, or tub, with the butter-plate on one as we have said, great improvements have side, the cream-pail on the other side, and been made in the plan and apparatus for the water-pitcher containing water and a testing the electrical condition of the line. small piece of ice on another side. The The Telegraph Construction and Maintewriter has often kept a piece of ice weigh- nance Company have secured the profesing only a few pounds for more than two sional services of those eminent electridays in this manner. When a small piece cians, Prof. William Thomson and Mr. is required for making ice-water, the flannel Cromwell Varley, who are now the consult may be laid back on one side, when several ing electricians of that company. fragments may be removed with a sharp chisel and hammer, and the flannel wrapped. water, as water will melt it rapidly. When

there to prevent our raising from selected imminent risk of loss to which the Aga- | paying out machine; and by careful v third of their width, and reefed in toward the axle, so as virtually to reduce them to a third of their diameter. This diminution

of both surface and size will, of course, have a very material effect on the question " Of one thing I am sure, that is, if more of speed, and even after the careful cleansknot an hour over the speed of last year is expected this time.

"Some old lengths of last year's cable have been stowed away on board the Albabest calves from the very best cows, to raise, ny and Medway. The Irish shore end is coiled on board the William Corry, which ship will leave with the Great Eastern. We much underrated the strength of this of brushing, swabbing, winding, thrashing, in his stock. Not only with cattle, but latter ponderous coil in a previous notice. The limit of its breaking strain has never been ascertained, but it is enormous. The outer covering is formed of wires, or rather by an inside arrangement which is not iron bars, almost as thick as ordinary pokers, and it weighs upwards of twenty tons to the mile-nearly double the size and strength of the largest submarine telegraph ever made. The ships which are, to take fuel to the Great Eastern to Berehaven are already started, and the whole squadron will sail from the Medway on Saturday next. The tide on that bay will suit perfectly, but as the channel is devious and the Great Eastern deep, she will only go at a very slow speed till past the Downs, being carefully piloted so far by a Government vessel, which will precede her. At Berehaven she will fill up the rest of her coal while the William Corry is laying the shore end from under the cliffs at Valentia.

> "This labor over, the splice will be made, and the Great Eastern will commence her work. For the first 100 miles from shore, the new cable will be used, but down the gentle incline, into deep water, known in deep-sea nomenclature as the Irish bank, 300 miles of the cable of last route to Newfoundland, the new cable only will be employed. The entire voyage out, if no accident occur, is expected to occupy not more than ten days. There is to be an important alteration in the plan of electrical operations this year. The expeditions of 1858 and 1865 proved, what is now well of 1898 and 1805 proves, that there is no TELEGRAPHIC INSTITUTE difficulty in merely laying a wire rope across the Atlantic, but to lay such a rope with

"Last year the tests for determining the condition of faults, and also the strength around it again. The piece of ice, after it of earth currents, were performed on board is enclosed in the flannel, should be laid on ship. This year actual tests will be made pieces of clean wood, to keep it out of the at both ends of the cable, and a continuous exchange of the results will be telegraphed the flannel becomes saturated with water, from one to the other, the information which the shore can give the ship being of

memnon was exposed in the storm of 1858 ing of the dynamometer, never letting it by a similar apparatus will not be sorry to go beyond 60 or 65 owt, and controlling climate, the roughly American, just as hear that the Great Eastern will sail with- the power accordingly, the cable, which out one this time. On all vessels where it | can bear a strain of seven tons, will not has been tried it has never been of the break, and the fault will be got on board slightest use, and always a source of more or more surely, and possibly in a shorter time. less serious apprehension. In backing over than a 'silky salmon' of thirty pounds the cable, therefore, the Great Eastern weight can be landed by an expert angler will use her paddles only. The floats of with a rod and line that could not bear six-these latter have been reduced by about a teen pounds."

IMPROVEMENTS IN LOCOMOTIVES. One of the most important improvements. yet to be mide in jobomotives is the gene-ral adoption d apparatus for superheatings the steam. With hot, dry steam, the ex-pansion gear deed hardly ever be made to out off later thin at one third of the stroke, while it could be made to work often from one eighth di the stroke. The condensa-tion in unprotected, outside cylinders, work-

ing at a rate of expansion, has been found to be enormous in some cases forty per cent. of the steam being so lost. At the same time, the outside cylinder engine is helieved to be with suitable superheating apparatus, preferable to the inside connec-tion. Probably no advantage is afforded equally available with outside cylinders, while the former is clearly heavier for equal power, has more friction, and is less susceptible of the correct counter-balancing, the line of motion of the reciprocating parts being at a greater distance from the

wheel. It is demonstrable in theory, and entirely borne out by practice, that as much as fif-teen per centry the fuel may be saved by heating the feed water by the exhaust steam to two hundred and twelve degrees. Less than one-sixthe of the escaping steam is than one-sixing of the escaping steam is required to impart one hundred and fifty degrees of heat to feed water at the ordi-nary temperature, and the arrangements for heating the feed water may be very simple. Increased care is being given to obtain pure vater also for boilers, impure

water causing's considerable loss by priming, and a great loss of heat whenever a scale of non-conducting material is deposited upon the tubes.



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DUTCH TILES; Gr,

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the constitution, is to eat and digest more of wheat, corn, rye or oats.-Hall's Journal of Health.

TREATMENT OF YOUNG STOCK.

Calves and lambs well treated will make better cows and sheep than if neglected and allowed to shirk for themselves. We know that sheep improve a good deal both in wool and mutton on good keeping. The same is especially the case with calves. What you want is not to fatten, but to keep up a strong healthy growth. At this season, good tender grass and a little milk, no matter if it is not all sweet, and a little oatmeal mixed in, will pay for itself in the thrifty growth which it will induce. A little extra care at this period of growth is sure to be rewarded at a later age. The treatment of calves, which we have often seen, such as turning them out to grass before they are old enough, and requiring them to eat what they know little about, or die, is cruel and wasteful in the extreme. There is no economy in neglecting young stock. They may live through it, but nature will demand her reckoning. The same may be said of colts. Sweet, pure pasture grass is the best, but if this is short, make muscle rapidly, and this gives. is what all young stock needs to thrive growing stock.—Plowman.

NATIVE, VS. IMPORTED_CATTLE.

"B." thus writes to the Delasare County merican :---- "I have been waiting a lull in he shower of communications which have put in a few words on native cattle. I erything American that is good; hence am an advocate for native stock.

"To what do the various breeds of cows hich are so highly prized/owe their excelnce? Is it not for the superior care hich has for generations back been taken summer. breeding them-choosing only the very est, and raising from them alone? And hy, if our famers pursue the same course, n they not succeed in securing a breed ual in all respects to the high-priced and

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run it through the wringer and dry it, as thereby arresting disease, and building up dry cloth is a much poorer conductor of heat than when it is wet. A wash-tub and bread made out of the whole grain, whether a clean flannel sheet, when only one or two persons require ice water, will subserve the purpose of a refrigerator costing fifty dollars. and very little of the ice will be wasted if the flannel be kept nearly dry.

While we are writing on this subject, it is proper to say that a water-pitcher, enclosed with a flannel sack, two or three thicknesses, and a piece laid loosely over the top, will keep the water cold and save the ice several hours longer than when no flannel is applied to it. Water-jugs, when carried into the field, if put into a sack, will keep the drink cool a long time whereas, if no flannel is applied, the drink will shortly become as warm as the surrounding air, and often unfit to drink .--Independent.

Scientific.

THE ATLANTIC TELEGRAPH EXPEDI-TION. The London Times of June 28, in an

article on the expedition, says :---" All the final arrangements for the sail ing of this great mechanical and scientific a little oatmeal is excellent for them. Oats expedition were settled on Tuesday. The great ship is now receiving her last length at hand. Whatever the character of the strength and power and growth, and this of cable from the Iris, and the coiling of flaw may be, unless the electric tests dethis and the final closing of the tank, to monstrate its position to be remote from the upon. It is a great mistake to keep any secure it from accidental injury, will be outgoing part, the only thing that can be stock short of feed, but especially young completed by to-day. The directors and a done to find whether it be just on board or few invited guests then pay a farewell visit, and after that none will be allowed on board | the outgoing part as the mechanical circumany of the vessels of the wire squadron, save the representatives of the press and those actually connected with the work of he shower of communications which have een pouring upon you for a month or two, which, in less than four minutes, her padn one of those who believe in encouraging dles can be disconnected and made to work independently of each other, has been tried

"It was then attempted to put a very

powerful wrought iron guard over the screw, so that in backing astern with full power there should not be the least risk of the screw fouling the cable. For this purgh-fed imported cattle? We often find pose the great ship was trimmed down by tive cows excelling in their butter quali-the head considerably, in order to bring hitherto much adopted, but if properly ex-es, or as milkers; (an instance I know of her stern well out of water. After a while, hative cow making 174 pounds of butter however, it was wisely decided not to affix it be necessary to haul back the cable seven days, last summer;) and what is such a guard, and those who remember the

BALLARD'S

the highest importance to enable those on board ship to find out the position of a fault accurately and rapidly should any unfortunately occur. The principal batteries used for testing will be on board ship, and the shore will have to read off and decipher these indications without any other acces to the battery than what is afforded through the cable.

"Such information will be exchanged almost hourly through the cable as will enable those on the shore to know not only the position of the Great Eastern, and the amount of cable paid out, but also the electric condition of the cable, and the approxi mate distance of faults, should any unfortunately be discovered. It is worthy of remark, that during the manufacture of school property of the late A. Bolmar, lately occupied the 1860 cable, and its being coiled cn by the Pennsylvania Military Academy, designs rethe Great Eastern, several faults occurred. This year, there has not been a single one, which is a good omen of success for this great enterprise. Messrs. Thomson and Varley will remain some time at each end of the line after it has been laid, to work the cable with their new apparatus, known as the curb key. The best system of electric testing that has been brought into actual use, or even planned, cannot show within less than a mile the position of a fault, consisting of a very slight loss of insulation, unless both ends of the cable be just overboard, is to cut the cable as near stances will permit. "The electric test immediately trans-

ferred to the fresh-cut seaward end will intesting and laying the cable. Every part dicate instantly if the insulation be perfect of the remainder on board will show very closely the position of the fault, whatever its character may be. The engineers will **NORTWEST CORNER OF CHRSTNUT** and then be able to make proper arrangementa and found to answer admirably, and this then be able to make proper arrangements improvement is of the last importance in immediately for resplicing and paying out keeping the ship on the same spot while good cable, and for cutting out the fault from engaged in hauling up the cable laid last the imperfect part. But if this fault occurs between the land end and the fresh-out seaward end on board ship, proper simultaneous tests on board ship and on shore must be employed to ascertain whether the fault lies so near the vessel as to make it advisable to haul back the cable until it is got on board. This plan has not been hitherto much adopted, but if properly executed it is sure to be efficacious. If, then, steam-power must be applied to reverse the

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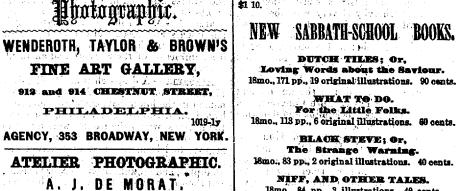
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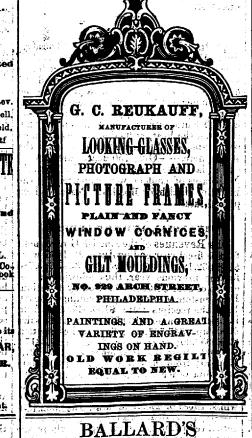
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