

A BOER GIRL IN THE NATIONAL COSTUME.

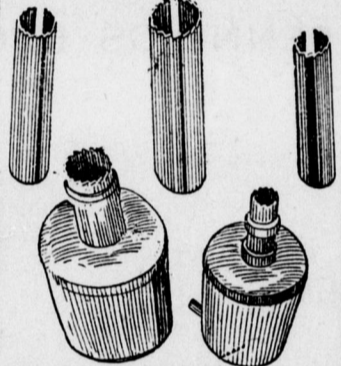


When young, Boer girls are handsome, tall and of good figure. Their eyes are blue, their hair light, their feet and hands large. Many Boer belles take 9s in men's shoes. They attire themselves as a rule in white muslin, gay with ribbon and brass jewelry.

THE PEARL-BUTTON INDUSTRY OF THE MISSISSIPPI RIVER.

PEARL buttons are made, for the most part, from freshwater mussel shells. In less than three years clam digging for this purpose reaches of the upper reaches of the Mississippi River has developed from an occasional pursuit into a science. The bivalves taken up resemble the salt water article as much as a rhinoceros resembles an elephant. They are not fit to eat, they look raw, even when some adventurous tenderfoot boils them, and they have a taste weirdly compounded of catfish and musk. They are in reality mussels, and they are wanted not for their meat but for the beautiful mother-of-pearl linings of the shells, from which buttons and hundred of fancy articles are made. A thousand men are engaged in this new industry, most of them working on

sort is apt to pay the searcher for his trouble. The pearls are common enough, but generally they are not larger than a mustard seed, and are



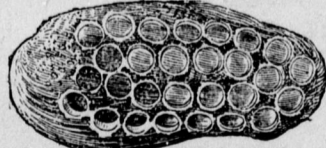
PEARL BUTTON SAWS AND SAW HOLDERS.

valueless. Not infrequently, one is found that will fetch in its raw state from \$4 to \$10, and instances are many of even greater treasure troves. Mussels are obtained with various



MUSSEL FISHING THROUGH THE ICE, MISSISSIPPI RIVER.

their own hook, and they make from \$40 to \$125 a month, according to their facilities and application. The shells when dried are sold by the ton to the local concerns that are known as button factories, though they do not often make buttons. They are in reality polishing shops and are fitted up with a vast number of steam driven wheels and brushes, emery circles, etc., for smoothing the interiors of the shells and grinding off the rough outer covering. This material is shipped East to factories where buttons are made, as well as hundreds of other useful and, in many cases, beautiful articles. Clam shells from the upper reaches of the Mississippi River are turned into shirt



"DEERHORN" MUSSEL WITH BLANK CUT OUT.

buttons, the big buttons, sometimes as big as a silver dollar, that are used on women's cloaks, cuff buttons, mother-of-pearl arabesques with which rashes and combs are to be inlaid, racks of pocket-knives, shirt studs, cheap scarf pins, buckles, ear rings, bracelets and even finger rings. It requires close examination by an expert to tell this mother-of-pearl from the genuine South Sea article, and here is practically no difference in structure or appearance. The most picturesque feature of the industry is the constant looking for pearls. Thousands upon thousands of clams are opened and examined carefully for every fair pearl that is discovered, yet a find of almost any

kinds of apparatus. Those which have been or are now in use are the hand rake, the tongs, the rake hauled by means of a windlass, the dredge operated by steam, and the bar with hooks. The last named, a very ingenious contrivance, came into use in 1897 and has largely superseded other appliances. It consists of a circular iron bar, six to eight feet long, with from thirty to fifty-four pronged wire hooks attached at regular intervals in strings of two or three hooks. This apparatus, which is used from a small boat and is hauled over the bottom by means of a rope, depends for its action on the habits of the mussels. They rest on the bottom, or partly buried in the mud or sand, with the free margin of their shells turned up stream and with their shells separated to admit the water, laden with oxygen and food. When touched they quickly close their shells, and if a foreign body is interposed between the valves, it is tightly grasped and retained. Anyone who has not witnessed the use of this apparatus can scarcely realize how remarkably effective it is. Often when the mussels are abundant, almost every prong will have a mussel on it, and two or three are sometimes caught on one prong. When the beds of mussels are compact, one man can take 800 to 1000 pounds in a day, and a case is reported where 2200 pounds were obtained by one man in ten hours. The average daily catch at present, however, is probably not over 500 pounds.

After sufficient ice forms on the river, there is considerable mussel fishing through the ice with "shoulder rakes" and "scissor rakes." For the use of these appliances, under such circumstances, a hole two to six feet square is cut through the ice.

Preparatory to being used, the mussel shells, as purchased from the fishermen, are sorted into sizes. An-

other preliminary step is the soaking of the sorted shells in barrels of fresh water for three to six days to render them less brittle. Even when only a few hours out of the river the shells become dry and brittle, and crumble or split under the saw. The next step is the cutting or sawing of the rough blanks.

The saws are of flat steel strips about two inches wide, and of various lengths corresponding to the sizes of the buttons. These strips after being provided with fine teeth along one of the sides, are accurately bent into a cylindrical form and fitted into heavy iron holders; the latter are adjusted to a lathe in which they revolve on a horizontal axis. As the blanks are cut they pass back into the saw and holder and drop into a box beneath the saw. After being polished, washed and dried, the buttons go to rooms where they are sorted into sizes and grades of quality, and then sewed on cards and packed in paste-board boxes.

What a Little Girl Thought.
"A party of friends of the late Vice-President Hobart were visiting Washington, and of course spent an hour in the Senate chamber. Among them was a little girl of ten who paid close attention to the proceedings. Two days afterward he met the child, who presently asked:
"Do you sit there every day listening to those old men talk?" "Yes, dear."
"Do you have to?" "Yes."
"I'm real sorry. It's an awful thing to be Vice-President, isn't it?"—Philadelphia Saturday Evening Post.

How the Boers Hobble Horses.



This is the way Oom Paul's men hobble their horses to prevent them running away at night. Every one of the Boer soldiers now fighting the British in South Africa is mounted, and a camp scene showing the ponies grazing while tethered in this way is quite picturesque. The custom is said to be a cruel one, and no doubt the Society for the Prevention of Cruelty to Animals will start a crusade against it in due time.

Apparatus for Opening Difficult Doors.

In a new invention a single cell is made to open the most difficult of doors, even at a distance of fifty yards. The apparatus can be fixed either inside or outside the door. It will also lift or shoot strong bolts. It works with a single-pressure of a knob. It is especially adapted for asylums or jails, where emergencies requiring just such an appliance are likely to arise.

Benefits of New Foods.

The introduction of new foods is an excellent plan for both the health and commercial prosperity of a nation. Nearly all of what are regarded as indigenous fruits and vegetables have been imported to us from other lands. Of the food plants now in use only pumpkins and a few grapes, plums and berries were originally found on the soil.

An Appalling Faint.

"I see it stated," remarked the Horse Editor, "that the monarch of Abyssinia may make trouble for England in South Africa."

"I don't think," added the Snake Editor, "that the Abyssinian Monarch will strike Menelik for the Boers."—Pittsburg Chronicle-Telegraph.

A HISTORIC FORTRESS.

Imposing Ruins That the Italian Government Will Restore and Preserve. The imposing ruins of the famous Castello Carpineti near Reggio d'Emilia, the Canossa of once on a time, perched on precipitous rocks, were to



CANOSSA CASTLE.

have been sold by auction recently, but the Italian Government stepped in and informed the heirs of the late Count Valdrizzi, the present owners of the castello, of the intention of the State to purchase the property. It was within the now dilapidated walls of the castle that Emperor Henry IV. humbled himself before Pope Gregory VII. in 1077, by waiting three days, barefooted and in sack cloth, for the papal pardon. Referring to this remarkable incident, Bismarck gave utterance to the now proverbial words, in his struggle against the supremacy of the ultramontanes in 1872, "To Canossa we shall not go." The castle was partially destroyed by the revolutionary burghers of Reggio in 1255, and during the centuries which have since elapsed the touch of time has gnawed mercilessly at the once almost invincible stronghold. Several of the halls and chambers of the castle are still intact, and both the Italian and foreign archaeological associations which were prepared to bid for the historical ruins at the proposed auction are now most anxious that the Italian Government preserve the castle from further decay in default of restoring it to its pristine condition.

Swapping Beasts in a Zoo.

Horse "swapping" is a dull and uneventful branch of industry compared with the gorgeous possibilities that are within reach of the animal men in Central Park in New York City. Who would be content with trading a spavined horse for a blind mare, when he hears of the trading that the folk in the employ of the city did during the last three months? They "swapped" a buck nyghau for two cassowaries, two zebras for five bald eagles, one buck nyghau for two llamas, and, final and crowning deed of all, they exchanged a hippopotamus for a select and valuable bunch of assorted beasts, consisting of one lioness, one tiger, two leopards, two pumas and two antelopes.

Faraday's Sympathy for Newsboys.

A writer in the Century tells this new anecdote of Faraday: The great physicist and his friend Hoffmann were walking one day together through the streets of London, where both were then professors, when Faraday stopped a newsboy and bought a paper. Hoffmann asked him why, with his house supplied regularly with all the papers he needed, he stopped to buy a paper from a boy in the street. Faraday replied: "I was once a newsboy myself and sold papers on the street."

FOR FARM AND GARDEN.

Removing Rubbish From Orchards.

During the summer a good deal of rubbish is apt to accumulate in orchards from the breaking down of limbs of trees from overloading or from storms. In such cases those limbs lying on the ground prevent the snow from lying closely on the surface and offer the most convenient harbors for mice. It is a good plan before heavy snow comes to remove all the rubbish from around fruit trees, and also the grass that often grows near the tree trunk while the tree is small.

The Moulting Period.

Hens do not moult at the same period every year. They begin a little earlier each season. A hen that moults in July of this year may moult in June next year, and the older they get the sooner they begin to moult. It is not desirable to have them begin before July, as the summer is the best time in the year for securing eggs. August is late enough if the hens are to get through by winter. The object should be to assist them with nutritious food and protect them from the weather. Separate the hens that begin to moult from the others, so as to be able to feed them in the best way. Tonics in the drinking water are unnecessary, but fresh bone pounded up will be found always beneficial.

The Pod-Spot.

The yellow or wax varieties of beans are subject to a disease that is called pod-spot or anthracnose. It begins by the appearance of small spots that are of a reddish brown color and are slightly depressed. As the pods grow, the centres of these spots assume a dark color and they may run together. It shrivels the pod and dwarfs and shrivels the beans. It is not usually prominent except in rainy seasons. It lies over the winter in diseased beans. If such beans are mixed with sound beans, when sending them to market, the fungus will spread rapidly. The same rust attacks melons, and hence melons should not follow beans that have had the disease, for the spores, like the spores of corn smut, are in the ground. If beans that have been pod-spotted are used for seed, the disease will appear upon the leaves as soon as the seed leaves appear and may kill the plant, and sometimes the largest proportion of the crop is killed.

One of the best preventives is to plant on high, light, well drained soil. In selecting seed beans, all that show signs of the disease should be rejected. When the plants are two weeks old, they will be benefited by being sprayed with a weak Bordeaux mixture, to which enough soap has been added to make a little suds. Repeat the spraying three or four times at intervals of ten days. If the pods are to be eaten the spraying should not be repeated more than once. Whenever the disease appears upon a pod or leaf, that pod or leaf becomes a centre of infection, and ought to be removed and destroyed. Burning is the best means of destruction.—Agricultural Epitomist.

Winter Care of Bees.

The latest method of locating the hives on the ground, each hive sitting on its own bottom board, is a much better way of wintering bees than the way of setting the hives on high fences, and perhaps a number of hives on the same platform. These benches set up thus on stilts are greatly affected by the storms, and the shaking thus produced is detrimental to the bees. The hives should be in such position that they may be kept free of any motion or jar, and when set close to trees the limbs of the same should not come in contact with the hives, but any limb that may be driven against the hives by wind should be removed. Windbreaks in winter are very beneficial to the bees and should in all cases be placed around the hives. High board fences are the best, but anything that will answer the purpose is better than none, and may be used but temporarily.

Evergreens are the most complete windbreak and should be largely used for not only bees but general windbreaks. They are both very useful and ornamental. Posts set in the ground with railings attached and corn fodder set up against this makes a good winter break for temporary purposes, but must be well excluded from stock of any kind. No stock of any kind should have the run of the apiary. Poultry will do no harm in summer, but should not be attracted about the bee hives in winter by the use of straw or anything of that nature about the hives. It is always best to have hives to face the south or east in winter, or rather to have the backs of the hives toward the storm. Heavy snows do no injury to the bees and should not be shoveled away from the hives. This is often done, and more damage than good results from it. Hives may be entirely covered with snow, and during a very severe spell of cold weather this is very beneficial protection to the hives.—A. H. Duff, in Farm, Field and Fireside.

Feeding for Milk, Butter and Flesh.

Selected milch cows at the Maine experiment station were fed two rations which differed widely in the amount of protein contained. W. H. Jordan reports that in both the timothy hay was the same and the weights of the grain were equal, but in one ration the grain consisted of equal weights of corn meal, gluten and cottonseed meal, while in the others it was all corn meal. The digestible material furnished was practically the same in both rations, though the pro-

portion of digestible protein was nearly twice as great in the mixed grain ration as in the corn meal ration.

The general appearance of the cows showed less thrift while being fed the corn meal ration, though the body weight did not vary greatly. The nitrogenous ration produced from one-fifth to one-third more milk than the corn meal, and this milk was generally the richer in solids by 30 to 40 per cent. The ration fed seemed to have little effect upon the composition of the milk solids.

Throughout the experiment the proportion of fat steadily increased without regard to what the cows were fed, and no evidence was furnished in support of the claim that by changing the food of cows, more butter fat will be produced without an accompanying increased production of the other milk solids. Hence the most profitable food for butter production will also be the most profitable for the cheese maker or the milk farmer. The chemical tests did not show any appreciable difference in the butter made from the two rations. Corn meal needs the addition of more nitrogenous material to make it a useful food for dairy cows.

Pruning in the Fruit Orchard.

While the winter season is one of some leisure to the orchardist, it ought not to be one of entire inactivity, for their pruning to be done, and its proper performance is a matter of much importance, says Joseph Meehan in the Country Gentleman. The young orchard may need but little hard work, but it will need much head work, for on its proper treatment now will depend whether or not it is to afford pleasure and profit in after years.

The young apple orchard needs little more than the thinning out of branches where they are too thick, and the shortening in of others that may need it to give good shape to the future tree. It is by judicious work in this way in the early years of an orchard that well-formed, beautiful trees are developed. There is no gain in having branches too low. Prune them up to five or six feet, that getting about under them is practicable. Large bearing trees often need no pruning. Sometimes, where a branch is unthrifty, it is better to cut it out, to induce a new, healthy one to take its place. And where such large trees have not been well pruned when young, there may be large limbs which need cutting out that others may be benefited. When such is the case, saw off close to the trunk, and paint the scar to prevent decay.

Much the same rules apply to pruning the pear as to the apple, but as it makes more branches when young, it needs closer attention at that time. Very often good-sized trees are seen with far too many branches on them. The tendency of almost all pruners is to leave too many branches. Do not let them interlace each other. The time to cut them out when they show a tendency to do this is when they are quite small. Cut them off close to the limb they start from, that no buds will be left to start afresh. The large, round buds of winter are the ones that bear the flowers. Sometimes in pruning it is well to observe them, as it sometimes occurs that it is desirable a certain kind should flower the coming season. Bearing trees will often have their branches brought out of shape by the weight of fruit. Prune such crooked branches in such a way that a good outline will be kept up.

Peaches and apricots are little pruned, as usually seen, and yet few fruit trees are more benefited by it. Should there be no young wood there will be no fruit. Left to grow as they will, which is the usual way, what little young growth is made is at the extremity of long branches. Pruned a little every year, there is young wood over all the tree, from near the ground to the top. Do not let strong shoots go unpruned. Not only is a little pruning good; that of summer, performed while growth is still going on, is perhaps better. In regard to the plum, what has been said of the pear applies to it very well. Keep the branches from getting too thick. Fewer branches, permitting of more air and light to the remainder, would bring better fruit to many a tree. Watch the plum, to cut out diseased branches as soon as seen, be it winter or summer.

In the small fruit line a shortening in of the canes of raspberries and blackberries should be made, the former to about four feet and the latter to five feet. All old canes should be cut. Currants and gooseberries need little pruning except to prevent them carrying too many shoots, and to keep up a supply of young wood. The fruit is the best on strong two-year shoots, and the aim must be to keep up a supply of these. The English type of gooseberry does not produce as much wood as our native sorts; hence needs less pruning. Have known old bushes of currants and gooseberries to be the better for being cut down completely to the ground to give them an entirely new start. Grapes must be pruned in a way to have an abundance of young wood. There are those who prefer to have little else besides young canes from the ground each year. At the same time, if the last year's fruiting canes be well provided with side shoots it will prove satisfactory for another crop. Prune the side shoots back to within two or three eyes of the main stem. This cutting back decreases the number of bunches, but adds to the size of what are produced.

To enable a person to float in the water in an upright position a Massachusetts man has designed an apparatus composed of a belt to be inflated and placed around the waist, with a weighted rod attached to each leg to keep the flatter vertical.



A SEEMINGLY IMPREGNABLE POSITION THE BRITISH ASSAILED.

It is against such impregnable positions as this that the British have to go. In the fight around Colenso a heavy naval gun had to be taken up this almost unscalable hill, and in the face of a murderous fire from the peaks of a berg, behind which the Boer marksmen lay. It took twenty-six oxen to drag the gun up the rocky slope.