FORTHE FARM AND HOME.

Exercising Bulls.

Bulls need exercise in order to attain their best development. They are commonly kept inactive and without training, and so become vicious and dangerous, as well as losing in part the power to get strong and vigorous calves. A bull that is worked in the yoke, or is trained in some other way, is seldom ugly or dangerous, and is likely to beget calves of greater vitality than when made sluggish by confinement. Valuable thorough-bred bulls sometimes receive necessary training and exercise, but lower grades seldom have any attention of the kind, though they need it in an equal degree.

Foot Rot in Sheep.

Professor Stalker, of the the Iowa Agricultural College, gives to the *Homestead* the following cure for foot rot in sheep: "The following will apply to the majority of cases of simple foot rot: —All loose flakes of horn should be carefully pared off and the hoofs trimmed to a proper shape. The foot should be thoroughly cleaned and done up in a tar bandage. We simply put on tar and bandage with a bit of strong cloth. If there is much ulceration, a chronic sore having been formed, touch the surface with a solution, one part sulphuric or hydrochloric acid and three parts water. Dress as above. The animal should be kept where as little wet and filth as possible will reach the feet.

The Butter Won't Come.

There are several reasons why butter won't come when churned. The most frequent one is the cream is too sour. This may happen from too long keeping the cream, or too warm a place, or from the food. When the fall season changes the pasture it may have the effect of producing acidity in the milk instead of its usual alkalinity. It will very probably remove the trouble to give the cow two ounces of epsom salts in a pail of bran slop twice a week for two days running, putting a little molasses or a teaspoonful of ginger in to disguise the taste. This will remove any acidity of the stomach, and bring the tone of the system. The next time the cream acts in this way, after it foams up, pour in two parts of cold water, in which a teaspoonful of saltpetre and one of salt have been dissolved. Long churning oxidizes the butter and makes it rancid.

Wells.

A never failing well, or spring, near the house and the barn, is a good desideratum, and it should be found in every pasture. In the drought of the past summer, when so many wells have failed, some farmers have learned to thought it may appear to be so to the their cost the value of a good supply of pure water. They have had to draw it from a long distance for family supply, and daily to drive cattle, miles to the nearest river or spring. This has taken a great deal of time and labor, and the cattle have grown thin under the scourge of scant forage, and thirst. The lesson is, to dig the well a few feet deeper, at whatever cost. Take up the curbing if there is soil at the bottom, and dig deeper. If there is rock at the bottom, drill with a two-inch bore, six or eight feet deeper, and explode giant powder, or dynamite and send the rock in every direction. This will often reach some seam, and let water rush in. If the drive well has failed, get a new pipe, and drive it down several feet deeper. It is much cheaper to drive an iron pipe for a few feet more a day, than to drive cattle long distances for water.—*American Agriculturist.*

Classification of Soil.

Professor Johnston classifies soils according to their clayey or sandy proportions, thus:

1. Pure clay from which no sand can be washed.

2. Strong clay or brick clay, which contains from five to twenty per cent of sand.

3. Clay loam which contains from twenty to forty per cent. of sand.

4. Loam, which has from forty to seventy per cent. of sand.

5. Sandy loam, which has from seventy to ninety per cent. of sand.

6. Light sand, which has less than ten per cent. of clay.

Sandy soils, then, are those which consist mainly of grains of sand, or silica, or flint, and are called siliceous soils. Nature never bestowed upon man a soil of greater capability of being made lastingly fertile than the sandy, light soil of New England.

Gravelly soil needs no description, though there are rich gravels and poor gravels, depending upon the rocks of which they are composed and the substances which are mixed among them. Clay soils consist largely of alumina; that is, having such an abundance of clay that it is called the "clay metal." Clay itself is a compound of silica (sand), acid, alumina, and water. It also contains potash, soda, and lime. It forms a compact, fatty earth, soft to the touch, sticky in a moist state, and very hard when dry.

Chalky soils have been formed from rocks in which lime was abundant.

Peaty soils need no description, although they differ very widely.

Alluvial soils are formed by deposits of sand, loam, and gravel brought down by rivers. They are often very rich, being composed of a multitude of thin layers of mud in which all sorts of fertilizing materials are mixed. Loamy soils contain a large portion of decayed matter, humus or muck, as it is called. Woody fibre in a state of decay acquires a dark color and ultimately becomes mould. Loam contains a variety of ingredients, as clay, sand, lime, in addition to humus. It is a loose, friable description of soil, easy to cultivate, and as to texture is the most desirable description of land for purposes of tillage.—*New York World.*

Farm and Garden Notes.

Indian corn should be fed sparingly to fowls with white plumage, as it gives the feathers a yellow tint.

One of the best modes of watering stock in winter is to have a cistern in one corner of the barn basement. If enclosed on all sides with a double wall it will rarely freeze in the coldest winters. The water that falls on a 30X40 feet barn will supply ten head of stock through the winter.

Where fowls are confined continually the earth in the yards should be loosened or spaded up frequently, that the birds may scratch. By doing this the ground is kept fresh, and the droppings are mingled with the soil, and at the same time it gives healthful exercise. Green vegetable that contain worms or the eggs of insects, as well as green food, should be cut into their pens. The finding of these gives fresh impetus to the scratching, and relieves the monotony of their daily lives.

At the New York State experiment farm the result of different methods of cutting and planting potatoes were very marked. Deep cut single eyes produced most and best marketable potatoes; but single eyes cut shallow were very inferior. Dr. Sturtevant's explanation of this is that the germ of the potato penetrates deeply into the potato. In shallow cutting much of this germ is destroyed and the plant correspondingly enfeebled. It thus makes all the difference how the potato is cut.

Eggs may be kept in good order for six months by dipping them into warm tallow, and after they are cool packing them in sawdust; cover with sawdust and make as nearly air tight as possible, and put away in a dry, cool place.

Ashes should never be thrown upon manure heaps, nor mixed with any kind of manure, as the caustic potash liberates the ammonia, which is very difficult to save. Therefore spread ashes immediately upon the land, whether grass or cultivated.

The use of carrots for feeding horses is quite common, but this root is not fed as much to cows as it ought to be. Some of the cows that have made the largest butter and milk yields on record are fed largely on carrots. A yield of carrots today is not an excessive ration, though it may appear to be so to the ordinary farmer. The crop is one that ought to be more used for this purpose.

Many farmers injure their farm implements more by exposure to the weather than by use on the farm. An implement which with good care would last twenty years, will, when exposed to the weather, become useless in five years or even less. A farm cart which, with good usage, would last almost a lifetime, will last only a few years when exposed to the sun.

Muddy stalks are often the cause of sickness among cattle, which is charged to "hoose-tail," or some other imaginary or obscure disease. Throw out all smutty stalks and burn them. They are not wholesome food, and the scattered smut will be very apt to infest the crops another year.

Provide bedding and absorbents in abundance, so that the animals will have a clean and dry bed every night, and to increase the farm capital—the manure heap. Scarcity of bedding and material to absorb the liquids means decreased capital and fertility.—*Mirror and Farmer.*

Recipes.

COCOANUT JUMBLES.—Half a pound of butter, one pound grated cocoanut, three eggs, one pound of white sugar, as much flour as will make a dough. Beat sugar and butter to a cream, add your eggs, well beaten, and cocoanut. Lastly, stir in the flour until pretty stiff. Roll out in strips about four inches long, join the ends and bake in buttered tins.

TOAST.—To prepare toast suitable for invalids, cut stale bread in slices half an inch thick, and trim off the crust; then hold it far enough away from the fire to dry it before browning it; it should be of a delicate brown color and quite dry in the middle of the slice; in this condition it is more easily digested than when made so quickly that the moisture of the bread remains in it.

GERMAN PUFFS.—Half pint milk, five eggs, two large spoons flour, two ounces butter; bake in small tins or cups; fill them half full; they require a quick oven; a few minutes will bake them; to be eaten as soon as they are out of the cups, as they will fall if allowed to cool.

HEAD CHEESE.—Clean the legs nicely and boil by themselves, so that when done there will be plenty of the liquor. Boil the upper head, minus ears, eyes and nose, with considerable lean meat, tenderloin is best, and when done remove bones and skin from head and legs; chop the lean; salt and pepper to suit taste; add the liquor the legs were boiled in, and last, but not least, a teacupful of vinegar and a teacupful of catsup to every gallon. When thoroughly cold it can be cut out in slices.

LADIES' DEPARTMENT.

Fashion Fancies.

Laugtry bonnets, gloves and slippers are the rage.

Roman striped silks are used for full-dress occasions.

Gilt and amber beads border new French hats and bonnets.

Arabesques of Satouche are the leading jacket and wrap garnitures.

Fancy feathers of every description are the rage for millinery use.

Telegraph, hussar, electric and royal are four very popular shades of blue.

Royal cardinal jackets are very fashionably worn over black skirts of silk, satin, or cashmere.

Scarlet cloth, with colors blown woven in it, is a light and comfortable fabric for winter underskirts.

Round and oval-shaped brooches are inspected now that every lady is supplied with long, slender lacepins.

White felt poke bonnets trimmed with white uncut velvet, white feathers and some gilt braid, are worn by young ladies.

Reds, very dark plum color, and golden brown are the shades most in vogue for velvet costumes for the promenade.

The leg-of-mutton sleeves have not proved successful, but the close coat sleeves are now slightly enlarged at the top to lift them above the armhole.

The Oriental baking most fashionable this winter is of mixed silk and worsted in fine camel's-hair shawl designs and of rich and subdued coloring.

Copper colored silk and velvet combinations in dress are among the most stylish of the season. Embroidery on velvet and quilt of gold braided gimps are the trimmings.

Plaids of every description, Roman, Tartan, Greek, Oriental and Stuart in every shape and size are worn for skirts, with over jackets of velvet or plush in a contrasting color.

Everyday decoration for towel and napkin has taken this form. The ends are drawn out at regular intervals, and then a design is worked in the interstices in colored threads either in herringbone, buttonhole, or cross-stitch, or by simply overcasting.

A new stitch is an open which is a sort of combination of feather and cross-stitch, and is very effective upon canvas. This consists in working a ribbon of varying length into and between each other, in every alternate one the thread being passed under the needle as it is drawn away to prevent a chain-stitch.

Ribbon bows quite an important feature in overall work to-day. Relief effects are produced by gathering ribbon about an inch wide at intervals and then forming it into the shape of a bud or flower and fastening it with a tiny metallic stitch in the centre of a round disk of velvet. Very pretty are the pansy effects in ribbon embroidery, with such natural work in ribbon carried out at the ends.

A Fashionable Shoemaker on Women's Feet.

"The feet of Americans are, as a rule, of smaller and lighter build than the feet of Englishmen, and have more arch and higher instep. I worked in the best London shops before coming to this country, and I know there are plenty of big feet among the English aristocracy. The feet of the American ladies are smaller than those of English ladies, but the American ladies are apt to distort their feet in a way that English ladies do not. Now, by rights the last on which a shoe is made ought to be three sizes larger than the foot. There are four sizes to an inch, so that would give three-quarters of an inch room to the foot. An Englishwoman will take such measurement, but if you make shoes in that way for American ladies you will have them left on your hands. You cannot make the shoe more than from a size and a half to two sizes above the exact length of the foot. 'Anything I can get my foot in I can wear,' they say, and so we give plenty of width between heel and ankle, so that they can slip their feet in, and they don't seem to mind how their toes are pinched together when the foot settles into the shoe. The result is the Englishwomen have a freer, easier gait than American women."

The Queen of Greece.

Queen Olga looks very Polish, although she resembles her aunt, the queen of Hanover. The Grand Duke Constantine was vice-emperor of Russian Poland when she was a child, which accounts for so much in her air and manner which reminds one of the Warsaw ladies. The face is very regularly proportioned, and yet not in the least classical. Her hair is still very fine, and curls naturally. It is drawn back from the forehead with a comb such as we see in the pictures of "Alice in Wonderland." The face is round in its front contour. It is lighted up by a pair of dark, beaming eyes, which have a soft and kindly expression. The queen is simple and natural. She looks at once gentle and a woman of spirit. In giving informal audiences she plays a good deal with her mops dog. Like the king, she is more and more struck each time she revisits France with the vitality of the French people, their happy activity (for, as busy as they are, they have time to look around them and seem to enjoy keeping their eyes open), and their extraordinary prosperity.

SCIENTIFIC SCRAPS.

It is estimated that the annual iron production of the world is 19,487,000 tons, and of this Great Britain, the United States, Germany, and France contribute 88.4 per cent.—the first two 64.3 per cent.

The blood of animals of an herbivorous nature that have been acclimatized in elevated regions has been found by M. P. Bert to be richer in oxygen than the blood of the similar animals inhabiting lands near the level of the sea.

An expedition under the experienced direction of Dr. Fischer is to explore East Central Africa, crossing the Snow Mountains and entering the Gallas regions. It has an eye to commerce as well as investigation, and the Hamburg Geographical Society has voted 15,000 marks as a grant in aid.

The blood of crabs and other crustaceans has been proved by M. Frederiq to have the same saline constitution and the same strong and bitter taste as the waters they inhabit. But the blood of oysters is very different. It has not the same constitution as the water, and thus shows a marked superiority over that of crabs.

The duration of the storm at any place depends upon the extent of the storm, and the velocity with which it advances. If the storm be only 300 miles in diameter, and advance twenty miles per hour, its duration at any place cannot exceed five hours. If the diameter of the storm be greater, or its progress less rapid, its duration at a given place will be increased.

An Italian has discovered that the hatching of silk worm eggs may be hastened by friction. The process consists essentially in brushing the eggs vigorously for ten or twelve minutes with a moderately hard brush, made preferably of coarse grass. In less than fifteen days the eggs thus treated will hatch out, with a product as healthy a one as if reared in the usual way.

Sights at Honolulu.

It is nobby, and the town is crowded with rulers of both sexes. As we return to the hotel we meet a string of fifteen ponies led with sugar sacks, driven forward by cobalt-hued natives, riding on Mexican saddles enveloped in a multitude of ox-tongue ropes for prongs, and cute-some cayenne-ish shades of laughing young women coming in from the country, riding a la mode, according to the custom of the place, with no consideration of our male environment, just as we do with exquisite British grace. They sit so well, and look so absolutely at ease in their manly attitude, that best is criticism is impossible. We try and try to discover that the gaiters and mule-ears levelled at our John. The young man carries on a running fire of comment or chaff against the fair equestrians who go by us. Judging from their sparkling eyes and ready retort his remarks are regarded as favorable indications of his approval. He favorably was a "catch" in the matrimonial market, and his dainty bungalow a coveted possession, raised him still higher in our estimation.

Finally, we land in the market-place, an open square, with long narrow booths open at the sides, forming rectangular passages for purchasers. Here elderly dames are purchasing poi and the simple adjuncts of their daily food. Quantities of uninviting-looking fish lie exposed on the stalls, advertising odoriferous staleness. Sweet potatoes and fruits are piled upon the ground beneath at the mercy of peripatetic poultry. We resist persuasion to buy or to eat. The octopus, we are informed, constitutes a Hawaiian delicacy, but we do not see any, and are chary of believing travellers' tales. As we pass along the streets we noticed several American ladies, radiant in Parisian toilettes, descending from their buggies at different shops. We learn that Californians frequently resort to Honolulu for rest and change. There are also resident American merchants in the town, which probably accounts for the vigorous life of mercantile proceedings. The fertile soil and sanitary climate, a heat well tempered by sea breezes and constant showers, make it a charming spot for a temporary residence. *London Society.*

Convict labor has been employed to such an extent in India that the general government has interfered and is taking measures to regulate it. Private dealers complain of the present competition, and greater losses which they anticipate from that cause in the future. Further introduction of steam machinery into the jails is prohibited, and steam machinery now used in those institutions is to be disposed of forthwith. Government departments, after jail requirements are met, are to be supplied by prison labor, but sales to private consumers are not to be encouraged.

Grape growing is considered to be ten times more profitable than wheat growing in California. It is estimated that the yield this season will reach 75,000,000 pounds of grapes, representing about 5,000,000 gallons of wine and 500,000 gallons of brandy.

Some French chemists have succeeded in solidifying petroleum, in which state it burns like tallow. The solidification is effected by adding to distilled petroleum 25 per cent. of the purified juice of plants belonging to the family of the *Euphorbiaceæ.*

The persimmon crop is very abundant in Virginia, and according to the old folks there is a sure sign of a cold, hard winter.

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