

The Home

A BREAD LESSON.

Quaker Oats Biscuit.—Pour two cups of boiling water over one cup of any kind of steamed rolled oats and let it stand one hour. Add one-half cup of molasses, one-half level tablespoonful of salt and one-half yeast cake dissolved in one-half cup of lukewarm water; then add four cups of flour, beat thoroughly and let it rise. Beat again and then shape into biscuits. Let rise in the pan and bake in a hot oven. The dough will be soft and somewhat difficult to handle, for this reason it is more convenient to bake it in gem pans or muffin tins.

Entire Wheat Bread.—Entire wheat flour is made of different grades of fineness and is much better than graham flour. Put one tablespoonful of shortening, two tablespoonfuls of molasses and one and one-half level teaspoonfuls of salt into a bowl. Pour on one cup of boiling water and one cup of scalded milk. When lukewarm add one yeast cake dissolved in one quarter cup of lukewarm water and flour, using one cup of white flour and enough entire wheat flour to knead. After kneading put the bread back into the bowl, cover and let rise until it doubles its bulk. Shape into loaves, let rise again and bake in a hot oven about 50 minutes.

Dinner Rolls.—Put one-quarter cup of butter, two tablespoonfuls of sugar and one teaspoonful of salt in a bowl and pour on two cups of scalded milk. When lukewarm, add one yeast cake dissolved in one-quarter cup of lukewarm water and three cups of flour. Beat thoroughly, cover and let rise until light, cut down and add flour enough to knead. Let rise again, shape, place in buttered pan, let rise a third time and bake in a hot oven 15 minutes.

General Notes.—The standard for bread varies with individual opinions. It must be light, sweet, and well baked, but one taste will prefer the loaf mixed with milk and another may like water. The amount of shortening and sweetening may also vary. When bread is set to rise, wet the hand and rub over the top to prevent a crust from forming. Never use a bowl with a lip as this allows the air to enter. Set the bread bowl in a pan of warm water, keeping the water at about 100 degrees. Home-made yeast has a less number of yeast plants in a given quantity than commercial yeast cakes. Bakers call bread stale that is 24 hours old, but as a rule home-made bread is considered fresh until it is 48 hours old. Stale bread may be used for thickening soups, for chocolate puddings, in brown bread in combination with sour milk, and for crumbing various articles to be fried. Avoid sour bread by using a small quantity of yeast if the bread is mixed at night and a larger quantity if mixed in the morning. The latter method is the safest as then the bread can be watched more carefully. When bread is raised just right there is an alcoholic fermentation; if the bread is allowed to stand longer, acetic fermentation sets in and sour bread results. If for some important reason, bread cannot be attended to when it is ready for kneading, set it in the refrigerator and check further fermentation. Bread dough should be kneaded until soft and elastic to the touch and covered with blisters. Small rolls are more acceptable than large ones. In addition to a Parker House roll which is folded over, finger rolls, braids, twists, knots, tiny rolls like a jelly roll, made from a sheet of dough slightly buttered and rolled, and cleft rolls, can be made from the same dough and give variety. A heavy crash cloth is preferred by many to the wooden board commonly used. Sprinkle a little flour on the cloth and knead the dough as usual. A marble slab is objectionable for bread as it chills the dough and checks fermentation. Bake bread thoroughly so that it has a good, sweet crust.

A VALUABLE FRUIT.

Ripe, uncooked apples are among the most valuable of our fruits. It has been said that any man who can and will eat two good-sized apples in the course of every twenty-four hours will never have gout, and if this destroyer of comfort has already fastened its fangs in his system, apples will vanquish even the most persistent form of this legacy of luxurious living. Raw apples are much to be preferred for health reasons to those that are cooked. Heat makes chemical changes and destroys or deactivates an acid that seems to act directly on the lime, salts and earthy matter created in the system by gouty and rheumatic conditions. As a next alternative baked apples are commended. Baked-apple pudding made with graham flour sifted is excellent and healthful. Baked sweet apples and cream are a dish fit for a king. Sour apples are good if not too acid. They sometimes sour the cream, in which case they may cause distress, especially if eaten by delicate children. Bread and milk, or well cooked Johnny-cake and milk,

with sweet or mildly tart apples cut in pieces like dice, are a popular supper-dish in many households. As a substitute for butter, apple-sauce and marmalades of various sorts may be used to great advantage and if furnished in sufficient variety, children soon come to like them much better. Of dried and evaporated apples it may be said that they are merely substitutes for fresh fruit, which should be put up in cans. More of the delicacy and flavor of apples is allowed to evaporate with the moisture. Those put up in cans are much more satisfactory in every way. Good ripe apples and their products in sauces and the like may be eaten at almost any time with great benefit, save by the few, who by reason of some constitutional peculiarity, find them unwholesome.

ALWAYS ACCEPTABLE.

A gift which will always be acceptable to one's feminine friends, is a needle and pincushion, such as the novelty here shown. From cardboard cut the diagonal and circular pieces for the two cushions and cover these with figured or plain silk or satin. The tiny bag is for the owner's thimble and the emery is one of the kind that can be bought in any notion store and then covered with silk. Pink silk faces the thimble bag, and the cushions are



bound with tiny silk cord and finished with little bows of pink satin ribbon. The material used for covering the cushion in the design illustrated was green silk, but blue silk with white ribbons or gray silk with pink ribbons are pretty combinations.

When only a small Christmas remembrance is desired, embroidered bookmarks are a favorite gift. Use ribbon, silk or satin, about two inches wide, and fringe the ends, buying only the delicate shades or a deep royal purple. For embroidered designs on book markers, violets, forget-me-nots or other small flowers are appropriate.

ASCENT OF FIRST BALLOON.

Thirty-One Thousand People Witnessed the Sighting in 1783.

The balloon, as a successful contrivance for aerial navigation, even with all modern improvements, has up to this remained in statu quo. The most recent of the machine has been in connection with experiments in science, though a voyage has just been made by Mr. Spencer from the Crystal Palace across the English Channel. The contrivance itself cannot be termed an entirely modern invention, inasmuch as so far back as the last quarter of the 17th century a learned priest of the Jesuit Order, Pierre Francoise Lana, published a folio volume on a proposed method of aerial navigation. This project was enthusiastically taken in hand by a Paris firm of rich paper manufacturers, but it was not till several years after this that the idea itself may be said to have proved quite feasible; On August 26th, 1783, 31,000 people crowded the Champs de Mars to see the ascent of the new wonderful chariot through the air. At five o'clock the boom of a cannon shot announced that the experiment was about to commence. To the utter amazement of the vast multitude of spectators, the inflated globe, liberated from the bonds which held it in restraint, rose with such extraordinary velocity as, in the short interval of two minutes, to reach an altitude of close upon five thousand feet over the earth. As soon as the balloon was observed piercing cloud after cloud, shouts of wonderment rent the air. Owing to some mistake in inflation the silken sphere burst open, and fell in fragments to the earth. The first balloon ascended by burning a heap of damp straw, intermingled with wool, beneath the machine. Such a contrivance, of course, touched merely the fringe of the experiment, till in 1783, after repeated trials, it was discovered that by rarefying the air, and then filling the balloon, it rose without any difficulty. The Duke of Argyll, president of the Aeronautical Society of Great Britain, tells us in his able volume, the "Reign of Law," the secret of failure so far. A balloon, says his Grace, is incapable of being directed, because it possesses no active force enabling it to resist the currents of air into which it has plunged, and because, if it had such a force, it could find no fulcrum or resisting medium against which to exert it. A balloon becomes, as it were, part of the atmosphere, and must take its chance in space or go with the air wherever the current travels.

HINTS FOR THE FARMER.

THE LIMIT IN DAIRYING.

There are some who believe that the limit of the cow's productive capacity has been reached, and that the record breaking animals can never hope to exceed what they have done already. As a rule, those who talk about the limit of the cow's capacity, and think that dairying cannot be further improved along this line, fail to consider often what is more important to them individually. Granted that the highest record for milk and cream has been scored it would still be a fancy of the brain to imagine that the productive capacities of any number of cows have been reached. Where we find one cow that even begins to approach the limit of her capacity we see fifty that have not begun to climb upward. Dairying is thus far from its limit. It cannot approach such a limit until more than a majority of the cows on the dairy farms have been graded up to their highest standard, and the minority show some effects of the improvement.

It is true we have made great progress in dairying in the past twenty years, but too much of this progress is confined to a limited number of people. The vast majority have advanced very little, they are still in the old rut, and will tell you that a living cannot be made in dairying. It cannot be according to their methods; neither can a living be made in any line of work or business to-day with methods employed that were in vogue twenty-five years ago. Only those who keep up with the times in dairying can hope to keep atop of the heap. It is not always an easy matter even then, for there are many local matters of a discouraging nature to overcome. These worry and irritate, and sometimes discourage those of faint heart. But if we continue everlastingly at it, and never yield to discouraging results and circumstances, we must come out right in the end because there are so many others who do succeed. What we need most of all is clear foresight, in discovering where it is the screw is loose. It may be in the markets or an unfavorable situation to them; it may be in our methods of feeding, which robs of all profits, and again it may be the low grade of stock with which we began. It is certainly slow and toilsome work to grade up a herd in which scrub stock predominates. It is better to reduce the herd, weeding out some of the poor stock, and put the money you get for them in one or two fine, well-bred animals. The results will be quicker and surer, and far more substantial.

KEEP SMALL FRUITS IN ROWS.

Why does the farmer who wants to raise raspberries or blackberries just enough for his own use, always set them out in a bunch? asks a writer. Of course he puts them in rows and all that, but they are soon in a mat and the grass and weeds are having it their own way with them. When I took up this branch of gardening the first thing I set about to reform was the berry patch, which was not only in the last stages of weediness, and grass, but was a terror from thistles. Not to mention the berry bushes themselves. Now, if any one should visit the farm he would notice a few long rows of berry bushes running one at a time the full length of the garden. If I care to I can hoe them out neatly once in awhile and never scratch, through it is probable that some straw mulch will do the work for me. The rows run north and south and will shade other garden crops very little. Here and there a plant left out gives space for passing through the rows. Strawberries had a hard time of it this fall where they had to be transplanted. My experience is that it does not pay to transplant them in very dry weather unless they are to have special care, both in setting and watering afterward. My new bed, which waited for rain till Labor day, and then was set carefully, was not thoroughly watered and would have died but for the rain that came about two weeks later. As it is most of the plants lived, but have made small growth. Apparently, nearly all the roots died, and they were rooted out usually well. They will get a good covering of straw this winter and it will be left in the rows when growth sets in again. I am in favor of the matted row system, and it is understood by me. Runners will be allowed to grow and when a new row is established it will be with a line and spade; all plants outside the very narrow row will be turned under. By changing the place of the row slightly from year to year new plants will be secured without transplanting and the farmer can keep control of his strawberry bed without much labor.

TEACH COLTS TO WALK FAST.

There is no pace so valuable or so much appreciated and so practically useful in a horse as a fast, fair, square walk, and there is nothing that will cause an animal to be driven harder and kept so continually on the other paces as a deficiency in this respect. Months of time and hours of patient, intelligent, effort are expended to make the horse a trotter, a high actor, a perfectly gaited saddle horse, but so far as the walk goes, he is generally put upon the market as

nature made him and rolls along at the pace his ambition dictates, commended by his owner as a wonder if he happens to walk fast, and sworn at and over-driven by every one if he chances to be lazy and slow. The fast walker is often made so by being put with a mate while breaking which happened to be a quick, free mover, and no farmer or breeder can be too careful in seeing to it that no colt of this is ever driven or led before a sluggish inactive partner.

FEEDING APPLES.

Henry in his great work on feeding, does not mention apples save in one table where he gives them a very low nutritive value, making them below both turnips and whey. The value placed upon apples as a food is about 8 cents a bushel. There would be but little if any difference in sweet or sour apples as food. The acid of a sour apple is closely allied with the ferment of the stomach. The main question is not to overfeed, especially at the start, as it is possible to have a cow get drunk by eating too many apples. We should say that after getting the cow accustomed to the apple eating, a half bushel per day would be a fair ration. Feed in a manger, and fix it so that the cow cannot raise her head but a few inches from the manger bottom while eating apples, and there will be no danger from choking. Like roots, the chief value of apples is in their succulence—digestive aids.

FATTENING TURKEYS.

In fattening turkeys a very good mixture can be made of corn, oats and wheat. This is especially true where new corn is fed. Old, or thoroughly seasoned new corn will do very well. By mixing the three in about equal parts, a safe feed can be made that will be good for fattening stock and excellent for the breeders that are kept over. In feeding such a mixture it will not do to scatter it on the ground as a general thing, for the turkeys will pick out the corn and possibly the wheat, leaving the oats. Feed in pans or boxes.

The old-time turkey raiser does not need to be told that it will not do to try to shut the fattening turkeys up as one would chickens. The turkey must have range, and if properly fed it will wander but little, if at all.

A MODERN GIDEON.

How a British Officer Won a Victory Over the Hill Tribes of India.

Sir Harry Lumsden, a brilliant British officer whose career in India is related in a recent biography, was a fierce and dashing fighter, but he was also good at strategy, when discretion seemed the better part of valor. One of his earliest successes of this sort has been handed down as a tradition among the hill tribes that he defeated, and is still a popular story among them. He was at the time a young lieutenant, in charge of a small detachment of troops, and was confronted by an enemy of superior numbers. This hostile force was concentrated on the top of a steep mountain, whence it seemed impossible to dislodge it.

"At last," Lieutenant Lumsden wrote, "a villager came in and told me that although the enemy occupied the mountain-top all day, they were in the habit of coming to springs halfway down to cook and rest at night. Acting on this information, I sent for some herdsmen of the district, and showing them a handful of gold coins, promised to pay them well if they would take a bugler and some odds and ends up to the top of the hill after the enemy had retired for the night. A bargain was made, and next evening my little party was ready. The bugler was disguised as a shepherd, and the villagers—three in number—carried each half a dozen pots filled with powder, with fuses attached. These they were to take to the top of the hill and lay out in a row, and at nine o'clock, on a signal rocket being fired from camp, they were to light all the fuses, the bugler was to blow all the calls he knew and then the whole party were to make the best of their way back to camp.

When the time came, a star rocket shot up into the cloudless sky. Bang! bang! bang! went the powder-pots, the sound reverberating through the hills, in the still air, like salvos of artillery; while the shepherds sent some large stones bounding down the hillside.

"The enemy, concluding that by some mysterious agency the whole of our force had been conveyed up the hill above them, instantly took to flight, those in front firing back on later starters, and each little party thinking the neighbor a pursuing Sikh. We, in camp, were too much convulsed with merriment to attempt to follow, even if we had had any intention of doing so."

He gives one other curious detail of this clever little affair. When he told his native subordinate to call for a volunteer bugler for the attempt, the man answered, "No, you would then get a really good man. Let me pick you out a good-for-nothing, and then it will not matter if he is killed!" Volunteer or good-for-nothing, however, the bugler was certainly good for something as it proved, and he escaped alive and exultant, to receive the praises of his comrades.

HELPFUL ADVICE

I sent a dollar to a woman for a recipe to make me look young. What did you get? A card saying Always associate with women 20 years older than yourself.

ENGLAND'S DEADLY RIFLE

IT HOLDS TEN LIVES WITHIN MAGAZINE

Simple and Most Effective Piece of Ordnance—The Manufacture of Magazine Firearms Brought to Perfection.

The rifle in use by the British forces is a marvelously effective weapon. It is the Lee-Metford and has been used for the past four years, replacing the old Martini-Henry rifle.

The Lee-Metford, which for rapid use of fire is practically a ten-chamber revolver rifle, consists of three principal parts. The stock, which is of the best Italian walnut, and is subdivided into the butt and fore end; the barrel and the lock. Of these the woodwork is, of course, the simplest of construction. By a most ingenious arrangement of the lathe the entire barrel is cut out of an oblong piece of wood with amazing rapidity, while the whole of the joinery needing only brisk sandpapering and polishing order to fit it for service.

The construction of the barrel is considerably more complicated. The Lee-Metford barrel is made from solid steel, bar of a circular section. The bar is, in the first place, considerably shorter and thicker than the shape it will finally assume, the necessary elongation being effected by bringing it to a white heat and passing it over a steam anvil, where in a few minutes it is rolled and hammered into the required length. In this way the clumsy looking block of mild steel measuring 2 feet by 11-1/2 inches, and terminating in a thickened section measuring about one tenth of its entire length.

A DIFFICULT OPERATION.

Next follows the process of boring the barrel, an operation requiring no little skill on the part of the workman. The boring is conducted by means of a pair of drills, working from either end and meeting in the middle. They are kept cool by means of a stream of soap and water, which is forced into the barrel by hydraulic pressure. As soon as the barrel is rough-bored it is polished ready to receive the rifling. The accuracy of the work of the driller and polisher will be best appreciated from a description of the test employed to check the workmanship.

The barrel is placed in a vertical position, and its lower end made tight. A close-fitting gauge is inserted at the top of the bore, which if the bore is not only perfectly straight but also mathematically correct, the gauge should not only pass through the bore but also rest on the base of the barrel, should drop easily through the same, from top to bottom, without wedging.

Before the barrel goes to the "rifler" it is inclosed in a strongly protected firing cell. Here it is repeatedly proved, with the aid of charges many times heavier than it will actually be required to carry in battle, the test which is again repeated after the process of rifling.

The process of rifling a barrel is that by which are cut the spiral grooves, which run inside the bore, from breech to muzzle, and are designed for the purpose of causing the projectile to rapidly rotate, gimble fashion, in its flight.

VALUE OF THE "TWIST"

For the benefit of the uninitiated it may be explained that this twist not only enables the bullet to cut its way further into its billet, but also gives it a much longer and more accurate flight. The grooves thus cut are seen in number, but the process by which they are produced is too technical for the unprofessional reader.

After polishing and "browning," the latter in order that no tell-tale glint of steel may betray the marksman to his enemy, the barrel is ready for attachment to the "body," "bolt" and "magazine." The "body" is that part of the rifle which holds together its component parts, the "bolt" is a small edition of the common or front-door bolt of our own houses, and, in addition to extracting the spent cartridge, contains the "striker," by which the cartridge is exploded. Most important of all, however, is the "magazine."

To draw a familiar simile, the main idea of the magazine mechanism is an extension of the principle of the metal ridges in, one by one, upon a special ridge of spring platform, which will always hold the last cartridge ready to hand. The chief difference is that whereas in the coin purse the coins are withdrawn by hand, the Lee-Metford magazine is emptied automatically. Its mechanism is provided with an ingenious mechanism which causes it to discharge its contents, one by one, as the preceding rifle as soon as has been ejected by the action of firing.

FOR MERCY'S SAKE.

His wife's name is Mercy. She keeps him busy, too. Doing what? Why, running on errands of Mercy.

MILLIONS WILL BE SPENT

PLANS FOR DIVERTING GRAIN TO THE CANADIAN ROUTE.

Steamers costing \$4,500,000 and a Dozen to be Constructed—Port Colborne Another Buffalo.

The plans originated by a syndicate of American and Canadian capitalists, which provide for the construction of large grain elevators at Montreal, Quebec and Port Colborne, and the construction of a fleet of steel vessels to transport grain from the upper lakes to the Canadian seaboard, are now practically complete, and in fact well under way. The elevators are to be of steel, and some of them will have a capacity of 3,000,000 bushels. Their construction involves a total outlay of \$4,500,000. Contracts are being awarded for the construction of a fleet of a dozen grain carriers, and these are to be ready by the fall of 1901, so that they may take part in that season's operations. Each of these vessels will cost from \$150,000 to \$200,000, and in dimensions will be the Bertram Shipbuilding Company of Toronto has received the contract for building six of the new steamers. Of the remainder, some will be built by the Hamilton Shipbuilding Company, some in the shipyards at Three Rivers and the rest on the Clyde. A representative of the syndicate left last week for the Clyde to give the necessary instructions to the contractors there.

The outside date for the completion of the vessels. It is hoped, however, to have two or three ready for operation next summer. It is not considered that even a dozen steamers will be sufficient to meet the immense volume which it is hoped to divert to Canadian waterways, and the view of the gentlemen who have engaged in the enterprise is that at the expiration of three or four years their fleet will be at least doubled.

The object of these plans, involving, as they do, an immense outlay, is to divert the grain-carrying trade which now goes by the Buffalo and Erie Canal route to New York into Canadian channels. This has been rendered possible by the deepening of the St. Lawrence Canals to a uniform depth of 200 feet. Hitherto the fact that vessels of large draught could not pass from the point of transshipment on the upper lakes straight through to Montreal has greatly handicapped the Canadian route. The completion of work on the St. Lawrence canals has removed this drawback, and now it is possible for grain-carriers of a draught equal to those which are seen on the Welland Canal to reach the seaboard through Canadian waterways. But the lack of a sufficient depth of water in the canals is not the only one from which the Canadian route has suffered. The want of elevators at the point where grain is transhipped from the upper lakes also at Montreal has been severely felt. Now this want is to be remedied under the proposed scheme of the largest capacity are to be constructed at Montreal, Quebec and Port Colborne. The last mentioned place is destined to play a most important part in the project, and will bear the same relation to the Canadian grain route that Buffalo does to the route via the Erie Canal.

PORT COLBORNE will be the point where grain destined for Montreal or Quebec will be transferred from the lakes vessels navigating the upper lakes to the canal freighters. Port Colborne has a harbor well adapted by nature for the anchorage of large vessels, but in order to make it still more accessible and secure the Government have determined upon the construction of a large breakwater, piers and other works. The erection of the big elevator contemplated by the syndicate referred to will complete the facilities needed.

The leading member of the syndicate is Mr. Connors, proprietor of the Buffalo Courier. That gentleman is largely interested in the grain-handling trade at Buffalo, but, in common with others in the same business, has suffered considerable loss and had his patience sorely tried by vexatious occurrences, such as the strike of grain-handlers, which paralyzed the movement of grain at Buffalo for a considerable time last summer. Mr. Connors came to the conclusion that the Canadian is the cheapest carrying route for western grain, and has given practical evidence of his views by actively associating himself with the present enterprise. Many of the Buffalo forwarders, while conceding the superiority of the Canadian route, have felt that it could only be made profitable by the vessels employed bringing return packages from the seaboard. This point has not been overlooked in the plans of Mr. Connors and his Canadian associates, and such arrangements are being made as will insure the fleet of grain-carriers an ample interior in commodities intended for the large receiving and forwarding warehouse at Toronto and cheap freight rates from the east during the season.

Parson—Do you take this man for better or for worse? Bride—He couldn't be better than he.

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