

HINTS FOR THE COOK.

Bits of Useful Information About Broiling and Frying.

Of great help to the woman who wishes to broil steak or chops, when she is baking bread or cake, is the knowledge that she can do this without cooling her ovens by unscrewing the top of the stove. With proper care meats may be broiled—not fried—in a frying pan so that they will be quite as juicy and nutritious as though they had been grilled over the coals. The mode of cooking is simple. The frying pan should be put on the stove until it is hissing hot. If the meat has very little fat on it the pan may be rubbed lightly with a bit of butter no larger than a hickory nut. This is to keep the meat from sticking when it first goes in. The pan should be so hot that the albumen on the surface of the meat will coagulate the moment it touches the pan. By this the juices are sealed in the meat, and this may be turned and cooked in the pan as it would be on the gridiron until it is done to suit the taste of the eaters. Fish may be broiled in the oven, if this is very hot, nearly as well as over the fire. Both with fish and meat the after-treatment should be the same—a transfer to a hot platter and plentiful basting with butter. An added savouriness may be given by rubbing the platter with onion or with garlic, and working minced parsley into the butter used in basting.

Garlic, so much dreaded by those who have used it too much or not at all, is a valuable article when employed in moderation. It cannot be handled as carelessly as onion, but if it is rubbed on the inside of a salad bowl, or of the dish in which the salad dressing is mixed, its flavor will be found both delicate and delicious.

The problem of how to whip cream without changing it into butter is one that has troubled many housekeepers who like this simple and popular sauce for puddings and fruit. The secret of success is to have the cream churn, which may be a glass egg beater, and the cream ice cold. One excellent cook always fills her cream churn with ice and puts it in the refrigerator for half an hour or more before using, while the cream, too, is kept on ice. Given sweet, rich cream, the whipping under these circumstances cannot fail to be successful. In the same coldness of utensils and ingredients lies the secret of a quickly-mixed mayonnaise.

In cooling cream or milk the danger of curdling is much reduced if a pinch of soda the size of a pea is added. There is also risk of curdling milk if it is salted when it is put over the fire. The salt should go in the last thing.

When greasing pans for cake or muffins or a griddle for frying cakes it is a common mistake to use too much fat. The greasy crust that means an attack of indigestion for the person who eats it may be avoided if a flat paint brush is dipped into melted fat and the pan lightly brushed with this. It has the added merit of reaching the cracks and corners that sometimes escape the touch of the time-honored greased paper or cloth, which coats the cook's fingers more effectually than the pan to which it is applied.—Christine Terhune Herriek, in Harper's Bazar.

Mumbled Eggs.

Allow a nice plate of hot buttered toast for each person. Place these on a hot dish and keep them hot. Suppose you are preparing the dish for four persons. Place one-half ounce of butter in a pan and put it on the fire to melt. Finely chop three ounces of ham (or ham and tongue in equal proportions) and one-half teaspoonful of parsley. Put these into the melted butter, add a little pepper, and if required a little salt as well; stir all well together and put a good layer on each piece of toast. Next melt three ounces of butter in a clean pan. When it is ready break four eggs quickly on to it and stir one way with a wooden spoon until the mixture becomes of the consistency of butter; then spread it on the pieces of toast on top of the ham mixture. Serve very hot.—Boston Globe.

Tomato Bouillon.

Put one can of tomatoes with 1 1/2 quarts of stock over the fire; add one tablespoonful of chopped onion, two bay leaves, four whole cloves, one level teaspoonful of celery seed and a half teaspoonful of pepper. Cover and cook 20 minutes. Strain through a sieve. Beat the whites of three eggs until partly light, add them to the tomato, bring to a boil and boil rapidly for five minutes. Strain through two thicknesses of cheesecloth. Reheat, season with two teaspoonfuls of salt and serve with tiny cubes of toasted bread (eroutons).—Mrs. S. T. Rorer, in Ladies' Home Journal.

Prune Toast.

Cook sweet California prunes slowly for a long time until tender and the juice rich and thick. Rub through a colander to remove skins and stones, and if the pulp is thin cook again for a time until it is about the consistency of marmalade. Moisten slices of zwieback with hot cream and serve in individual dishes with a large spoonful or two of the prune dressing on each slice.—Good Health.

WATERTOWN ARSENAL.

Where Uncle Sam Makes Ammunition for Large Arms.

The Manufacture of Gun Barrels and Projectiles Demands the Utmost Precision and Nicety—The Latest Disappearing Carriages.

[Special Boston Letter.]

There is an old Latin proverb—si vis pacem para bellum, "if you want peace prepare for war."

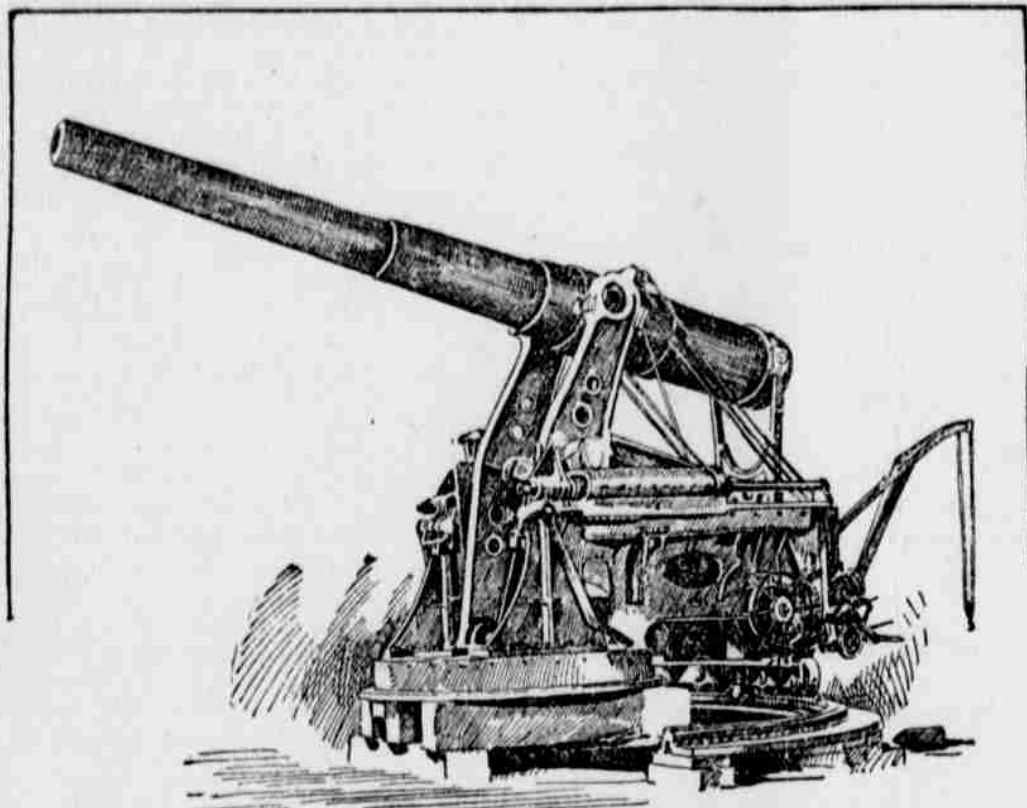
It has not been until very recently that our country has come to realize the truth of this saying. For 20 years after the close of the civil war, the American people shunned every act, legislative or administrative, that might suggest bloodshed. The terrible fury of that four-year conflict and the sad fact realized by all that it was a fight or brother against brother combined to effect an almost morbid disgust for anything suggestive of militarism.

In Europe, on the other hand, the two decades following the close of the Franco-Prussian war in 1871 were so fruitful of developments in military

put into operation some year earlier. The supply of gun barrels is therefore considerably larger than that of carriages, and consequently some of the latter are now being made by private parties. Thus a contract for 100 guns was let some four years ago to the Bethlehem iron works.

"It will take them just again as long," remarked Maj. Reilly, "to finish the job. The making of a big gun carriage is no mean undertaking. It requires tremendous machinery, all of which must be both made and manipulated with the most minute accuracy. The trouble is that the machines needed in the manufacture of guns can often be utilized for no other purpose, while most of the machines in other shops are serviceable in a great variety of work. Private concerns have therefore competed but little for the business, and it has been left to the government to build its own machinery and supply itself."

It is a fact that the Watertown arsenal uses some of the most gigantic machinery in the United States. For one it has the largest and best equipped testing machine in the world. It has a pulling strength of 800,000 pounds, while at the same time it is so delicately



EIGHT-INCH DISAPPEARING GUN CARRIAGE IN FIRING POSITION.

science and in the mechanical industries connected with it as fairly to revolutionize the entire art of war. Should European conflict break out to-day, the campaigns would be conducted in almost as different a fashion from those of '61 as the latter differed from the military engagements of chivalry.

In our country the clamor for coast defenses was heeded during Cleveland's first administration.

The building of men-of-war has since been undertaken on a large scale and our navy to-day is far more efficient than most people imagine. On the Pacific coast, San Francisco has been provided with as thorough fortifications as any European city could desire, and the Columbia river at Portland, Ore., has also been well fortified. Guns are now building for the Boston harbor, which is already fortified, and these will be so arranged that 132 projectiles filled with dynamite may be simultaneously showered upon a hostile fleet. Quite a number of cities on the Atlantic coast are in a position to rebuff the largest fleet that John Bull and Alphonso together could send across the Atlantic.

So far as the excellence of army equipments is concerned, the United States is fully the equal of European powers. In fact, it is generally admitted that we are making the best rifles in the world, while in the manufacture of large pieces for army service Germany alone can claim to be a rival, and none our superior. Nearly all



MAJ. JAMES W. REILLY, U. S. A.

the supplies are made by the government at its manufacturing arsenals. The navy has establishments at Washington, New York, Norfolk, Va., and Mare Island, Cal. The army's manufacturing arsenals are five in number. One located at Springfield, Mass., makes the infantry rifles; another at Rock Island, Ill., manufactures exclusively the horse equipments for cavalry and artillery; the barrels of artillery guns are manufactured at Watervliet arsenal, West Troy, N. Y.; Frankford arsenal, near Philadelphia, supplies the ammunition for small arms, and the gun carriages, as well as the ammunition for large arms, are turned out at Watertown, near Boston.

I visited the last-named place this morning. It is in charge of Maj. James William Reilly, who was sent there on February 1, 1892, when the capacity of the arsenal was first increased from that of a small shop to that of a gigantic manufacturing establishment. The arsenal at Watervliet, which made the barrels, had been

constructed that it will measure the thickness and tensile strength of a hair. Of the four kinds of cannon—mountain guns, field guns, siege artillery and sea coast defenses, the last is by far the bulkiest, and it is to the manufacture of these that the Watertown arsenal is devoted. The carriage is building for a cannon which will be the largest in the world, equal in size to the one exhibited by Krupp at the Chicago world's fair in '93. It will be a breech-loader with a bore of 16 inches, the length of the barrel being 49.67 feet. When completed it will weigh 280,000 pounds or 140 tons. The projectile will weigh 2,370 pounds, while one round will consume 1,060 pounds of powder. At a distance of 2,500 yards, about a mile and a half, the projectile will penetrate steel of the best quality to the thickness of 29.2 inches. These figures must appear all the more surprising when one considers that the largest cannon used in the civil war, which in its days was itself a giant, weighed one-sixth as much, fired a projectile of 500 pounds with 50 pounds of powder, and had a penetrating power of 6 inches at shooting range.

Bulky as these instruments are, their manufacture must nevertheless be accomplished with the utmost nicety. The slightest flaw in the bore of the cannon may make it absolutely worthless, while an error in the setting of the carriage would destroy its accuracy. The barrel is made of the finest quality of forged steel, which is put into a huge lathe and bored. Around this heated steel bands are placed. As these grow cold they shrink upon the inner metal and counteract its expanding force. By this process the pieces of metal are more firmly united than by any amount of welding or casting. The process of banding is continued, more bands being wrapped around the rear end of the gun, where the shock of the explosion is greatest. Finally the metal is planed off so as to give the barrel its conical shape; it has now been "assembled and finished." All of this work is done at Watervliet arsenal.

The manufacture of gun carriages at Watertown is attended with much more complicated, though not more delicate, problems. There is more opportunity in this direction for new inventions, and new varieties of carriages are constantly being introduced. Two kinds of carriages are now in use in our sea coast defenses—the barbette and the disappearing carriage. With both of these the great problem is to check the terrific recoil of the gun without dropping it abruptly. On the barbette carriage a piston attached to the barrel moves in a hollow cylinder filled with oil. The head of the piston has a small opening, through which a red runs that thickens to the rear. As the gun recoils the piston is shoved back; it presses against the oil in the cylinder, and as the escape grows smaller it is gradually brought to a standstill.

The disappearing carriage is so constructed that no part of the gun is above the parapet, and no view of the enemy, except at the moment of firing. At the discharge the barrel drops backward and downward, and is then held below by means of a pawl and ratchet. A counter weight attached raises it to the firing position.

A HEROIC EXAMPLE.

How a French Officer Braved the Infection of Cholera.

Exposure to the fire of an enemy is not the only form of bravery which an officer or a soldier may be called upon to show. Not long ago the French papers chronicled the death of Lieut.-Col. Azan, of the army, of infectious pneumonia contracted while visiting a military hospital where there were cases of this disease, and encouraging the men. In connection with this case, the exploit of Col. Gardarens, of the sixth regiment of the line, also in the French army, is recalled.

During one of the Algerian campaigns, when the position of the French troops was somewhat precarious, some cases of cholera appeared in the regiment. They were all in one mess. A feeling of panic spread among the men, which it was necessary to allay in some way, in order to prevent a disaster.

At that time the fact was not fully known that cholera is communicated wholly through the food and drink, and is in no other way "contagious." But Col. Gardarens had reason to believe that it was not infectious in the ordinary sense.

One evening a man had died of cholera in the quarters and lay dead on his bed. The men had fled from the vicinity in consternation. The colonel ordered them to follow him to the presence of the victim of cholera and they obeyed.

With his own hands he lifted the dead man from his bed and had the body removed. "Now I will show you," he said, "that cholera is not infectious. I shall pass the night on this man's bed."

He did so. Not only did he crawl into the dead soldier's bed, without any change of the clothing, but the wondering soldiers heard him snoring tranquilly through the hours of the night. In the morning he rose, dressed, gave the military salute and departed, having evidently rested well.

Whatever the soldiers may have thought, they were debarred by this example from showing any further signs of panic.—Youth's Companion.

History Retold.

The Emperor Nero had a good many faults, among them being that of vanity. He has gained the reputation of cruelty largely on account of the fact that he insisted upon appearing in public as an amateur actor. His ambition, however, was to play the fiddle before a large popular audience, but for a time no suitable opportunity arose. At last, in the tenth year of his reign, Rome was almost entirely destroyed by fire, and the whole population was out in the streets. "At last," he said, "my chance has come." And he sallied forth with his fiddle in one hand and an original composition in the other. Having seated himself on the top of a pile of smoldering ruins, he struck up a nocturne in 17 sharps and five flats. But the people did not seem to be pleased. "Don't look vexed," he called out. "I am not unfeeling, but I have always understood that when there has been a fire the best thing that can be done is to play on the ruins."—Judy.

Up to Date.

"Why, Frankie, what are you reading in that book about bringing up children?"

"I'm just looking to see whether I'm being properly brought up."—Fliegende Blaetter.

Why Hand Organs Vanish.

Philanthropist—Yours is the first hand organ I have seen for some weeks. Got too cold for them, I suppose.

Organist—Eet ces so, Signor. Zee peoples keepa windows shut and notta pay us to mova on.—N. Y. Weekly.

"Star Tobacco."

As you chew tobacco for pleasure, use Star. It is not only the best, but the most lasting, and therefore the cheapest.

The man who rides a hobby, thinks nobody else is making any headway.—Ram's Horn.

Fits stopped free and permanently cured. No fits after first day's use of Dr. Kline's Great Nerve Restorer. Free \$2 trial bottle & treatise. Dr. Kline, 933 Arch st., Phila., Pa.

Railroad men will not dance except at a "grand ball."—Atchison Globe.

With cold neuralgia increases. With St. Jacobs Oil it decreases and is cured.

The way to get a better position is to more than fill your present one.—Ram's Horn.

WHAT A STUPENDOUS LIE.

We hear a farmer say when he reads that John Breider, Mishicott, Wis., grew 173 bushels of Salzer's Silver King Barley per acre in 1896. Don't you believe it? Just write him! You see Salzer's seeds are bred up to big yields. And Oats 230 bushels, corn 260, Wheat 60 bushels, Potatoes 1,600 bushels, Grasses 6 tons per acre, etc., etc. \$10.00 FOR 10 CENTS.

JUST SEND THIS NOTICE AND 10 CENTS stamps to John A. Salzer Seed Co., La Crosse, Wis., and get 12 farm seed samples, worth \$10, to get a start. [K]

"I think the joke has been carried far enough," said the editor, as he marked "accepted" on it.—Brooklyn Life.

Easy to have rheumatism. Just as easy to get rid of it with St. Jacobs Oil.

It takes a higher degree of courage to be laughed at than it does to be shot at.—Ram's Horn.

Just try a 10c box of Cascarets candy cathartic, finest liver and bowel regulator made.

Nobody has sympathy for a fat man, though every real fat one needs it all the time.

A funeral at a house attracts people who never go there at any other time.—Atchison Globe.

Frost-bites are like burns and scalds. All are cured by St. Jacobs Oil.

She—"Does the baby take after its mother?" He—"Well, it hasn't begun to talk yet."—Yonkers Statesman.

Cascarets stimulate liver, kidneys and bowels. Never sicken, weaken or gripe, 10c.

The man who knows himself well, will know a good deal about other men.—Ram's Horn.

The degree of every man's manhood is determined by how much he says no to himself.—Ram's Horn.

It takes backbone to take any kind of a stand that will leave a man standing alone.

A jury of ravens would not be long in deciding that a linnet could not sing.

Best

Results prove the greatest merit. For a spring medicine there can be no substitute for Hood's Sarsaparilla, because its unequalled record of cures of all blood diseases proves

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Is the One True Blood Purifier. C. I. Hood & Co., Lowell, Mass.

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FOR 14 CENTS. We wish to gain 50,000 pleased customers in 1897 and hence offer 1 Pkg Bismark Cucumber 10c 1 Pkg Round Globe Beet 10c 1 " Earliest Carrot 10c 1 " Kaiser Wilhelm Lettuce 10c 1 " Earliest Melon 10c 1 " Giant Yellow Onion 10c 1 " 14 Day Radish 10c 1 " Brilliant Flower Seeds 10c Worth \$1.00, for 14 cents. Above 10 pkgs. worth \$1.00 we will mail you free together with our great plant and seed catalogue upon receipt of this notice and 14c. postage. How can we do it? Because we want new customers and know if you once try Salzer's seed, you'll never never get along without them! JOHN A. SALZER SEED CO., LA CROSSE, WIS. Catalogue alone 5c. postage, 2c.

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\$5 per 100 collecting \$6 per 1000 for disnames and addresses. \$6 per 1000 for disnames and addresses. Select territory at once and send 14c cents for sample. Blank, particulars and instructions to begin. The M. M. Pub. Co., Berrien Springs, Mich.

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