

## FIELD COOKING.

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THIS is a subject of special importance to the medical officer since much of the disease of armies in the field is predisposed to by faulty food and monotony of diet, and, moreover, waste of good material is certainly caused by the inability to make it appetising, and an important part of the care of the sick and wounded is the cooking of food suited to their needs.

In the "Manual of Military Cooking," pp. 59 to 71, and Schedule VI., pp. 80 to 82, the subject is dealt with under the headings:—

*Field Instruction.*—Cooking in mess tins, preserved meat tins, Alder-shot oven, erecting the oven, directions for working, kitchen, wood.

*Recipes for Field Cooking* (fourteen given).—The instructions are chiefly, as a matter of course, directed to cooking of food in bulk by company cooks, which is a necessity of the situation; for it is a saving of fighting energy and time for the men to have their food prepared for them by a small percentage of their number who are not in the firing line.

But, on the other hand, men are likely to be separated from the main body in groups or small detachments, and in this case the regimental cooks are inaccessible, and the men must either subsist upon previously cooked (hence cold) rations, raw rations, or the emergency ration; or else they must be prepared to cook their raw rations in their mess tins.

In the "Manual of Military Cooking," pp. 36 and 37, five dishes are mentioned as suitable for preparation in mess tins: Plain stew, Irish stew, curried stew, sea pies, meat puddings.

Very brief directions are given with regard to them, and the time taken to cook is three hours, whence it will be seen that cooking by individuals in mess-tins is not seriously contemplated, and the British soldier is consequently not well equipped in the matter of preparing his own food.

Cases have occurred on active service where freshly-killed meat and raw flour have been issued as rations, and each man has had to make what he could of his ration without the help of the cook and without a very clear notion of how to proceed. The natural impulse, generally followed, was to put the flour and meat into the mess-tin, fill it up with water, and boil it, the result being a substance like rubber and some dirty water.

It is said by the school which deprecates formulation of ideas, and holds that everything will come right after a little practice in campaign, that the soldier, in the light of experience gained by failure, will soon learn to cook for himself, and that he needs no instruction beforehand. But, in the meantime, he suffers from indigestion and starvation, and if

a little instruction and practice, even at the expense of the lustre of the mess-tin, were afforded in time of peace, the knowledge gained would be of practical utility to the man, whether as a soldier or in after-life as a civilian, and would make him more independent than he is at present, and hence the State would benefit.

In the French Army, and doubtless in some others, the art of individual cooking is given a place of some importance, and a most excellent book has been published in French called, "*Livre de Cuisine Militaire aux Manœuvres et en Campagne*," published as a military handbook by Henri Charles-Lavauzelle, St. Germain, Paris.

Very complete directions for field cooking, using the rations and apparatus available on service, and much necessary information bearing upon the subject, together with recipes for thirty-one dishes, are given in this manual, and most of these dishes would be as palatable to the British as to the French soldier. The Frenchman is proverbially good at cookery, and this manual will, I am sure, repay a careful study. I propose to make its contents the foundation of this article.

In a recent article in the JOURNAL OF THE ROYAL ARMY MEDICAL CORPS, vol. xvii, page 497, Lieutenant Kinsella, R.A.M.C., has given a short account of field cookery as practised in the Training Camp, Royal Army Medical Corps, at Tidworth, which included certain of the recipes from the "French Manual." The subject seems to me so well worthy of attention that I think a more extended consideration is desirable, and it might even be possible to issue a pamphlet to the troops containing recipes for use at their camps of exercise or company training, and make them cook their own food on, say, one day a week.

In the French Army co-operation by four men is usual, and certain utensils for collective use, which we do not possess, are supplied, e.g., a *marmite*, which is of a capacity of four mess-tins; a *gamelle à quatre hommes* is carried by one of the four, in addition to his own mess-tin or *gamelle individuel*. The *marmite* is a metal vessel for boiling and stewing, with a lid which can be used for frying. It holds 5 litres, as does also the large *gamelle*.

The *marmite* is a tall vessel with a lid which is of the capacity of a single *gamelle*. A socket projects from one side of the lid to receive a handle for frying purposes. The *marmite* and lid are kidney-shaped in horizontal section, rectangular in elevation. The lid has a loop handle which folds down over its convex posterior aspect. The height of it is 10½ in. without the lid. Its extreme width is 9 in.

The *gamelle à quatre hommes* is basin-shaped. Its exact use is not specified, but it would be very convenient for washing vegetables or mixing ingredients, and in a variety of ways.

A *coffee mill* is carried by a "half section" on manœuvres and active service.

In the British Army, mess-tins only are carried by the men; the camp

kettle which might replace the *marmite*, but which is of twice its capacity, is not suited in shape for carrying on the person. Its lid can be used for frying.

The French individual *gamelle* is a simple round pot wider at the top than at the bottom, with a lid attached to it by a chain. It does not seem suitable for handling over a fire. Our mess-tins, on the other hand, are provided with handles, and can be used for boiling, and their lids for frying.

Given the use of a camp kettle the instructions for the preparation of the dishes contained in this manual for the French squad, with their four *gamelles* and *marmite*, could be quite well carried out by a British squad of eight with their eight mess-tins and camp kettle.

The French soldier has the following meals on the field :—

(1) *The morning repast* of coffee and bread, and if possible soup, cooked overnight and warmed up in the morning, or kept hot through the night.

(2) *The midday meal*, taken at the *grande halte* or in camp.

(3) *The evening meal*, which is the most substantial.

The next day's midday meal will be drawn from this in part.

(4) Also, when the evening meal can only be served at a late hour, a *collation*, composed as far as circumstances permit, of cold food or food rapidly prepared. Since much of the preparation must be done at the end of the day's work, pains must be taken to keep the men alive to the necessity of doing it properly, as they will be tired and apt to scamp it.

General directions for the preparation of rations for cooking are given, and useful hints bearing on the subject, e.g. :—

Meat freshly killed should only be boiled or braised, and it must be cut up into small pieces after having been boned. Meat which has been lightly salted may be used for soup, ragoût or roast. Before using it, it must be brushed and scraped with a knife so as to get the salt out of the crevices. It must be carefully washed and rinsed. Soups and other dishes made out of salted meats must not have salt added to them. Meat which has been cooked overnight must not be carried in mess-tins, especially in hot weather. It should be made into sandwiches carried in the haversack. Bones should be broken up and made into soup overnight.

*Vegetables*.—The water for boiling vegetables *must* be soft. If it is hard it must be softened by the addition of soda. When the white cloud caused by this has settled the water can be poured off, leaving the sediment.

*Alimentary pastes*—e.g., macaroni, tapioca—must not be boiled for long.

*Lard and Saindoux*.—Saindoux is clarified lard. These fats are used for cooking. Saindoux has a lower melting point than unclarified lard. Fat is essential to cooking and some must be carried by each man; a tin box is useful for this. Men are also enjoined to carry two or three onions each (another almost universal ingredient).

*The Kitchens.*—Hearths made of bricks, stones, or small trenches are recommended.

*To light the fire in rain.*—The fire may be started inside a cooking pot and when the material is thoroughly alight continued in the proper place.

*Utensils* must be washed immediately after use. Sand is not to be used as it takes off the tinning. Paper, rags, grass, or straw pads are good.

A table is given showing the weights of food materials corresponding to spoonfuls, tumblerfuls, and mess-tinfuls for rapid measurement.

Thirty-one recipes follow. The Frenchman is very fond of soup, and fourteen recipes are given for soups.

The directions for the cooking of each dish are classified into:—

(1) *Preliminaries* such as *boning the meat*, which is one man's work.

*Getting ready the fire*, another man's duty.

*Washing and cutting up the vegetables*, a third man's task.

*Chopping up the bread* and *distributing* it among the mess-tins.

(2) *Method.*—An exact description of the cooking.

(3) *Observations.*—Any special directions.

Next follow seven ways of cooking fresh and preserved meat, remarks on mutton and horseflesh.

Then nine recipes for the cooking of vegetables and flour, including unleavened bread.

Finally, the preparation of coffee or tea and a method of keeping food hot which has been cooked overnight.

A few recipes from this book, viz.: *Soupe à la minute*, potatoes à la *paysanne*, *quenelles* of flour, *pilaff de bœuf*, were quoted in Mr. Kinsella's paper, and there are one or two others which will be found very useful and worth quoting at length.

SOUP OF PRESERVED MEAT.

Time—One hour and a-half.

*For four men.*

Preserved beef .. ..	Four half rations.
Saindoux or lard .. ..	Two spoonfuls.
Carrots in quarters .. ..	Three-quarters of a mess-tinful.
Onions chopped up .. ..	One-third of a mess-tinful.
Cabbage chopped up .. ..	Four-mess-tinfuls.
Salt .. ..	One heaped spoonful.
Water .. ..	Three mess-tinfuls.
Chopped bread .. ..	One mess-tinful.

*Preliminaries.*—Make the fire. Cut up the lard. Clean the carrots, wash and chop into quarters. Clean the cabbage, wash and cut into eight pieces. Take the meat out of its tin. Chop the bread into small pieces.

*Method.*—Put the lard into the *marmite*, melt over a quick fire. Add the carrots and onions. Brown lightly, keeping constantly moving over a brisk fire. Moisten with water and boil. Add two-thirds of the salt.

Keep boiling moderately for thirty-five minutes. Add the preserved meat and warm for ten minutes.

*To serve.*—Put the meat and two-thirds of the vegetables into the lid of the *marmite*, and pour the soup upon the chopped-up bread in the mess-tins.

*Observations.*—In case, as is possible, the soup after the removal of the meat should be insufficient, other water should be kept boiling and added to it after the removal of the meat.

The following is an ingenious way of preparing wheat previously unground, which amounts to porridge.

POTAGE VAUBAN.

Time—30 minutes.

*Materials for four men.*

Wheat	..	..	..	..	Half a quarter litre = about a quarter of a pint.
Saindoux	..	..	..	..	Two spoonfuls.
Salt	..	..	..	..	One spoonful.
Water	..	..	..	..	Three mess-tinfuls.

*Preliminaries.*—Prepare the fire. Grill the wheat lightly (not to char it), and keep it moving. Break it up, unless there is some means of grinding it, such as a coffee-mill.

*Method.*—Soak the wheat in cold water. Incorporate the water with it gradually to avoid lumps. Put the mixture on a small fire to boil, stirring constantly with a piece of wood. Cook for fifteen minutes. Add the salt and the saindoux and divide among the mess-tins.

UNLEAVENED BREAD.

Time—30 minutes.

*Materials for four men.*

Flour	..	..	..	..	Twenty heaped spoonfuls.
Salt	..	..	..	..	Two-thirds spoonful.
Water	..	..	..	..	One quarter litre (about half a pint).
Saindoux (if possible)	..	..	..	..	Half spoonful.

*Preliminaries.*—Dissolve the salt in the water. Mix in the flour, incorporating it little by little with the salt water to obtain a firm dough. Divide the mass into two, and roll out each portion, using a tool handle or empty bottle. Shape each portion into a loaf of the size of the bottom of the large *gamelle* (the lid of a camp kettle would do). Pass the point of a knife round between the dough and the tin to prevent it sticking.

*Method.*—Grease lightly the bottom of the *gamelle* (to keep it from sticking to the dough). Put it upon the fire, and allow it to cook over a moderate fire for ten minutes. Turn the loaf over and take it off when cooked (five minutes). Repeat this with the other loaf. These chupatties may be eaten as bread.

*Rapid Cooking of Meat.*—Time eight minutes. The ordinary methods

of preparing meat necessitate somewhat long cooking. If time presses the meat can be *sauté* as follows:—

Cut the meat into very small pieces. Beat it with the back of the chopper. Add salt and pepper and fry it quickly in smoking *saindoux*.

#### NOTES ON A CASE OF MUSCARINE POISONING, COMPLICATED BY MALARIA.

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SAPPER C. W., Royal Engineers, was admitted into the Military Hospital, Gravesend, at mid-day on October 25, 1911, in an extremely prostrate condition; he was drowsy and could only be aroused with difficulty, both pupils were dilated and fixed, pulse 130, feeble and flickering; the respirations were laboured, his temperature was 102° F., the extremities were cold, the face cyanosed and tongue furred, dry and brown. He was immediately put to bed and hot-water bottles were applied to his extremities, brandy in warm water was given internally, also a hypodermic injection of atropine. Two hours after admission he was feeling quite comfortable, the extremities were warm, his pulse was less frequent and of better volume, but he complained of intense thirst. The following history was elicited from him:—

On October 18, he gathered about 2 lb. of mushrooms from the rifle range near Shornmead, cooked and ate them all. He felt no ill-effects next day, but on the 20th and 21st he suffered from dizziness and headache. Notwithstanding this, he ate some more mushrooms, and on the 22nd he was feeling worse and took some pills. On the 23rd he felt somewhat better, but next day he felt very ill, complaining of headache and colic, and took a *seidlitz* powder which moved him freely, but the giddiness, headache and colic persisted and he was sent to hospital on 25th.

*Previous History.*—He served in Malta from September 28, 1908, to September 28, 1910, and was then sent to England and posted to Chatham, where he was stationed until July 12, 1911, when he was transferred to Fort Shornmead ( $4\frac{1}{2}$  miles distant from Gravesend) for duty as permanent marker at the rifle range. He was quite fit all the time he was in Malta and also during his home service, the present illness being his first admission.

*Progress of Case.*—On the evening of October 25 he was feeling quite comfortable, pulse 110, pupils still widely dilated. He vomited some curdled milk on the morning of the 26th, but no marked change occurred in his condition on this date. On the 27th there was a return of his symptoms, and during the night he had a rigor followed by a feeling of distension of the abdomen. At the evening visit there was