



STEWARD AND COOK

3c & 2c

NAVY TRAINING COURSES

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STEWARD AND COOK 3c AND 2c

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PREFACE

This book is written as an aid in the preparation of men for promotion to the ratings of Steward third class and second class or Cook third class and second class.

The qualifications for these rates, in accordance with Part D, Chapter V, Section 2 of the Bureau of Naval Personnel Manual, are printed in the Appendix at the back of the book. Since the examination for promotion will be based on these qualifications, it is suggested that the student and his training officer refer to them frequently for guidance.

It is realized that this course alone cannot teach a man to be a good cook. Nothing can take the place of practical experience in the galley. It also should be understood that this book does not take the place of, nor cover the same scope as, the *Navy Cook Book*. While some of the information in the two publications is duplicated, this Training Course is designed more as a broad, fundamental guide and does not include recipes and detailed cooking instructions.

The first ten chapters of this book cover qualifications which are common to the Cook's rating and the Steward's rating. The eleventh chapter deals with requirements which are listed only for Stewards.

As one of the NAVY TRAINING COURSES, this book represents the joint endeavor of the Training Courses Section in the Bureau of Naval Personnel and of Naval establishments specially cognizant of the technical aspects of Cooks' and Stewards' duties.

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STEWARD AND COOK
3c AND 2c



CHAPTER I

FEEDING THE NAVY

THE MEN BEHIND MORALE

There's nothing like a good meal to make a man fit for his job. Good chow does more than anything else to keep a fellow happy and healthy. When you wrap yourself around a hearty meal, you get a lift—you have a satisfied feeling and you're ready to pitch into your work.

You've heard a lot about **MORALE**. When your spirit is high, when you're feeling swell, when you're doing a good job and want to do a better one—that's good morale. One sure way to build morale among Navy men is to give them tasty, well-balanced meals.

That's why Cooks and Stewards are among the most important people in the Navy. The officers you feed will be the first to admit that. The ship's officers are your "customers"—and since they're the men who run the ship, you are a key figure behind the success and happiness of the whole ship's company. You do a good turn for all hands—yourself included—when you

make the officers' mess something that they'll look forward to three times every day.

You'll do more than just cook the food or serve it. You'll be a supervisor too. KEEP YOUR EYES AND EARS OPEN. A supervisor sees that the men under him do things the right way. He pays attention to the example set by higher-rated men in the galley or wardroom. He watches and listens to the officers to find out what they like or don't like about the food and the service.

No matter how good the chow and service are, you'll hear some griping. It's an old custom to "beef" about food. But you'll soon be able to tell whether the officers have some real complaint that you could and should do something about. Notice whether the officers light into their food as if they enjoy it. Observe what's left in the dishes after the meal is over. If you'll do these things, you'll get some good clues on how to do your work better.

WHAT YOU NEED TO KNOW

Exactly what skills and "know-how" must you have? The qualifications printed at the end of this book list all the duties that Stewards and Cooks 3c and 2c might have to perform on ANY ship or station in the Navy. Maybe you're on a ship where a baker does all the baking, and a butcher does all the meat cutting, and a steward does all the serving, and a chief keeps the accounts. Even so, you need to learn something about all these jobs, for two reasons—

First, you may be transferred to a small ship where you'll be steward AND cook, butcher AND baker all rolled into one. Second, you'll understand your own special job better, and you'll make yourself a more valuable man, if you have a general idea of the requirements of ALL the jobs in the galley and wardroom.

Either you're a PETTY OFFICER or you're trying to become one. That means you have to step out and be a LEADER. You can't be satisfied with knowing merely

the one particular task to which you may be assigned right now.

Take a look at a summary of the duties of the ratings which are covered in this Training Course.

STEWARD THIRD CLASS

Your territory as Steward 3/c covers the officers' country and the galley. It's up to you to see that the Steward's Mates keep the officers' rooms and the ward-room shipshape. You must be able to run the ward-room—seat officers according to rank, keep track of all equipment, know all the rules of table service, and keep accurate records. For the records work, you'll need a little arithmetic.

In the galley, you must know how to operate the electric or oil range, and any other mechanical equipment. You should be able to cook anything you've planned on your menu. You'll be baking pies, cakes and pastries and preparing all other desserts.

STEWARD SECOND CLASS

When you go up to Steward 2/c you have to know all the same things better, and more besides. You'll be in charge of storing food so you should know the facts about storage and the regulations for getting provisions out of storage. You'll be buying food on the beach, studying price lists, estimating quantities and judging food. Cutting meat is a trick you'll have to master.

COOK THIRD CLASS

As Cook 3/c you have to know the galley inside out. That means keeping tabs on equipment, knowing how to run it, and keeping it clean. It means knowing safety and sanitation rules, observing them, and seeing that

the Galley Boys or any other men who are working for you observe them too.

And of course your main job is to cook, and you may do some baking as well.

COOK SECOND CLASS

As Cook 2/c, you must be able to perform the duties of Cook 3/c and to do a few other things too. If carcasses of meat come to you, you'll have to locate the cuts and do the cutting. You'll be in charge of storage, so you must keep refrigerators and food lockers clean, know the sanitary conditions for storing food, and the rules for getting provisions out of storage. You need to be familiar with the set-up of the officer's mess.



CHAPTER 2

GALLEY AND WARDROOM EQUIPMENT

HOME GROUND

By this time you can probably find your way around the galley or wardroom of your ship in the dark. As galley boy you've helped with the cooking. As pantry boy you've learned a little about both cooking and serving. So you know something about the gear you have to work with—the ranges, mixers, refrigerators, and other equipment. But to be a rated man—and especially to make second class—you have to know more than just “something” about the equipment. You need to know ALL about ALL of it—what each thing is for, how to use it, and how to take care of it.

As far as your test for advancement in rating goes, you only have to show that you can handle the gear of YOUR OWN ship or station. But you never know when you're going to be transferred to another ship or station which may have different equipment. If you're working on a small ship, you won't be using many fancy mechanical gismos. There's more stuff to handle

if you're aboard a bigger ship. Officers' mess galleys, being smaller than general mess galleys, usually don't have as much mechanical apparatus. But there may be times when you'll have to go into the general mess galley and use one of the machines that you don't have.

For these reasons, you can see why this book tells about all galley and pantry equipment. Better not dodge the parts which discuss equipment that doesn't happen to be in your own galley right now.

ELECTRIC RANGE

Figure 1 shows the electric range. Ranges come in sections which are set side by side. One section is

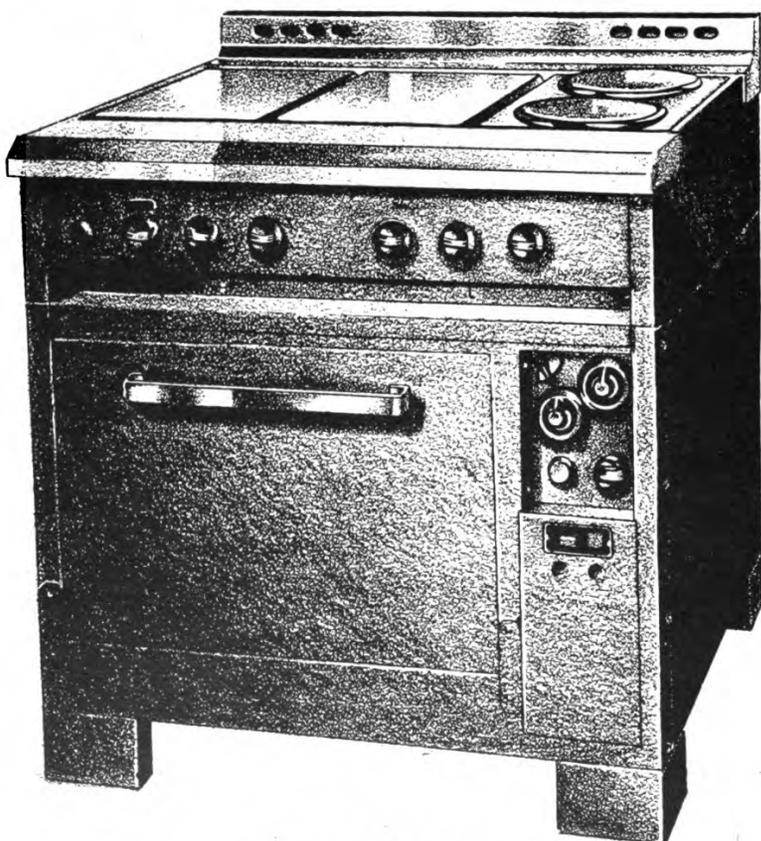


Figure 1.—Electric range.

shown in the picture. The plate tops are of cast iron or steel, so they're easy to clean. Cleaning is **IMPORTANT**. Don't let grease collect under the edges.

You can turn the switches to any of three heats—LOW, MEDIUM, and HIGH. Go easy on HIGH. You'll need it only to bring water to the boil, or to heat food to cooking temperature. Then turn to LOW. Pull the main switch when the range is not in use. Be sure to turn off each burner after using. Don't waste electricity. It takes fuel oil to run the engines which make the electricity. So if you leave any burners turned on when you don't need them, you're wasting the ship's limited supply of fuel oil.

Most electric ranges have ovens. A circuit breaker in the line prevents the oven coils from overheating. You control the heat by setting the thermostat on the right-hand side. Each coil in the oven has its own switch.

PREHEAT the oven before you do any baking or roasting. Set the switches to "HIGH" and set the thermostat to the temperature you want. This will heat the oven to 450° in 15 minutes.

Don't keep opening the oven door to see what's cooking. That cools off the front part of the oven and makes the whole cooking operation take longer.

You'll find the DAMPER CONTROL at the left of the oven door. If steam comes out around the oven door while you're doing roasting or baking, pull out the DAMPER CONTROL KNOB only enough to make the steam stop. At other times, save heat by keeping the damper closed.

BAKE OVEN

On some ships, separate ovens are located near the ranges and are high enough so that food can be put in and taken out without stooping. These ovens are used for baking or roasting vegetables, desserts, meat and bread.

This kind of oven has a thermostat and a three-heat switch mounted in a box at the right. The switch works

the same way as the one in an oven built into the range. High heat in this oven is 500° F.

OIL RANGE

All new Navy ships are equipped with electric ranges. But you may have to use an OIL RANGE so you'd better know how it works. Most oil ranges look like the one in figure 2. The oil is forced into the range by either air pressure or steam. When the fire is hot enough, cut down oil and air. This prevents too much heat and a smoky flue.

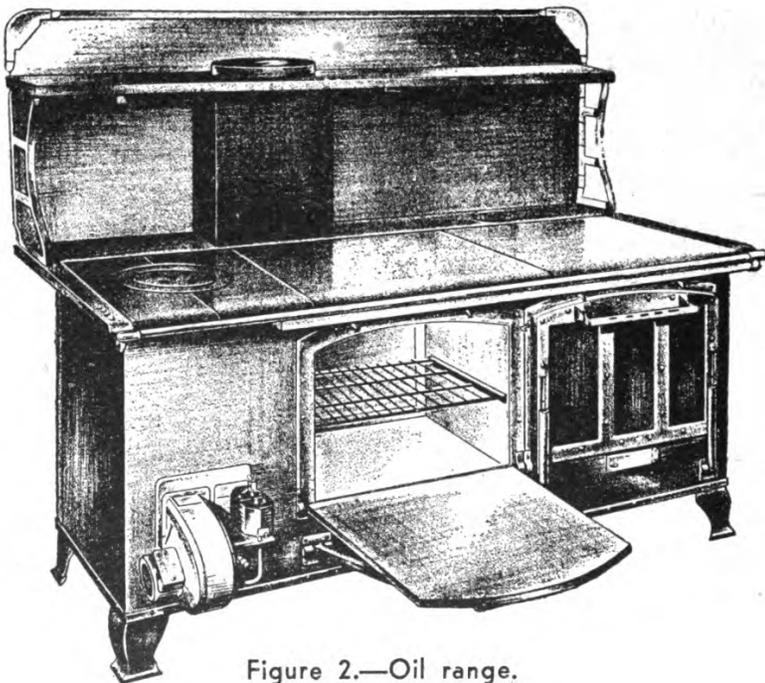


Figure 2.—Oil range.

Don't forget to DRAIN the oil tank EVERY night just before you secure the galley. Refill the oil tank the first thing in the morning.

Clean burners and flues THOROUGHLY at least once a week.

It's a rule that fires for cooking shall be out at "tattoo" unless the C.O. wants them left on for some special reason. It's better to put out your galley fire as soon as you've finished cooking. Leaving the range lighted wastes oil and heats up the galley. The galley's

hot enough anyway. Put out fires during target practice; the jar of gunfire might break oil lines and cause a serious fire.

Report any damaged equipment to the O.D. Be especially careful to prevent the accidents which may easily happen before repairs are made.

PANTRY RANGE

You'll probably make breakfast on a pantry range. It's a handy little number with a cooking top and a small oven. A grease rim around the top allows grease to fall into a drip pan below. Never let old grease collect anywhere. Keep the main drip pan clean. If there's a grease trough in the range top, scrape it free of grease. Don't let grease collect in the range holder.

GRIDDLE

Griddles are used for frying food. One thing you should be especially careful about is to CLEAN THE GREASE OFF the griddle. If you let grease collect it will come off in black spots on the food you're frying. That looks bad and tastes worse. The grease may also get into switches and foul them. So keep your griddle clean. You can do it this way—

First dampen a cloth with household ammonia. Then put the cloth on the cold griddle and let it stay there for 4 or 5 hours. The grease will be soft by that time so you can get it off easily with a cloth. WARNING: Don't let your ammonia-soaked cloth touch electric wiring—it will eat off the insulation.

FRIALATOR

The biggest ships have a frialator or deep-fat fryer like the one in figure 3. It's used to cook doughnuts, French fried potatoes, or other food that needs to be fried in deep fat. The best frying temperatures to use

for various purposes are listed on the front of the fryer.

Before using the frialator, be sure the drain valve at the bottom is closed. Then fill the container with frying fat, leaving room at the top to insert the wire baskets in which you put the food. Set the dial for the correct temperature and turn on the heat. CAUTION—never turn on the heat when the container is empty.



Figure 3.—Frialator.

When the food is cooked properly, hang the basket on the metal flanges at the back and let the fat drain from the food into the tank.

Fat in a frialator has a tough time. With constant heating it smokes and it develops an unpleasant taste. You can avoid this to some extent by keeping the cook-

ing temperature below 400° F. Strain the fat after use to get rid of pieces of burnt food. Keep both the inside and outside of the frialator clean. Clean the inside about twice a week with hot water and a brush (after removing the fat). Drain all the water out and let the

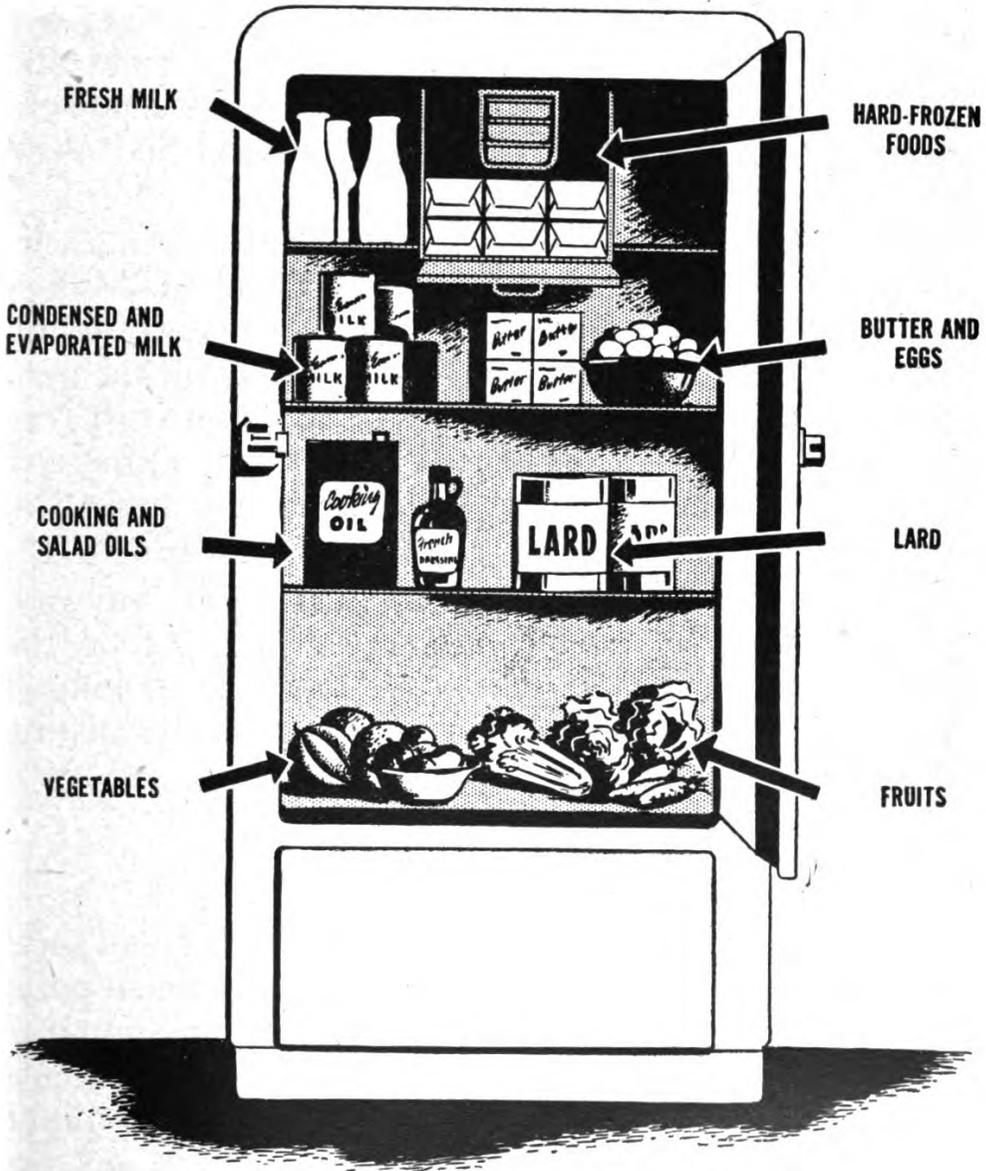


Figure 4.—Proper storing of food in a refrigerator.

frialator dry before using it again. If the fat is still good for cooking, you can put it back; otherwise, pour it into a large can and cool it. It can be used for making explosives.

REFRIGERATOR

The main thing to remember about taking care of the refrigerator is to **KEEP IT CLEAN**. If you fail to do that, there will soon be a bad odor inside—and then the food kept in the refrigerator will pick up a foul taste. There's another reason, too, for refrigerator cleanliness—it keeps down the growth of mold and bacteria which might ruin food or cause food poisoning. So you ought to take out all the food and clean the refrigerator once a week.

Don't jam the "box" too full of food. An overcrowded refrigerator is hard to clean and food odors spread easily in it. One way to prevent overcrowding is to limit the amount of food you draw from the general mess at any one time. When you draw stuff that will have to be kept in your refrigerator, don't get any more than you can stow properly. Figure 4 shows you a good method of storing food in a refrigerator.

DEFROSTING may be a bother—but **DO IT**, anyway. The refrigerator won't work well if the ice on the coils is more than $\frac{1}{4}$ inch thick. Don't go poking it off with an icpick! Always let it **MELT** off by turning down the current.

ELECTRIC MIXER

The electric mixer shown in figure 5 will do all sorts of jobs for you if you treat it right. It will mash potatoes, mix or grind meat, make batter or mayonnaise, and beat eggs. Figure 6 shows some attachments (called "paddles") which you can put on the mixer for the different jobs.

The mixing bowl may hold anywhere from 10 to 80 quarts. Both the bowl and the paddles must be **CLEAN** before you use the machine. Fill the bowl half full—**NO MORE**; if you get it too full, the machine may break down. Fasten the proper paddle to the mixer. Place the bowl on the extended arms on the lower part of

the machine. Turn the switch to the speed you wish, and then start the motor. Grasp the arms holding the bowl and move them up until the paddle is whirling

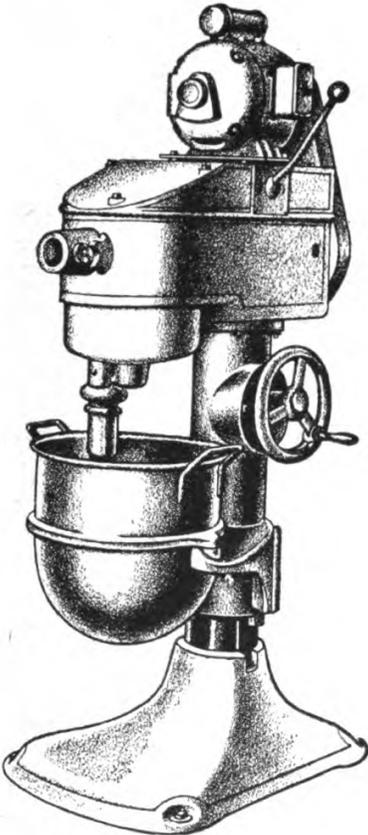


Figure 5.—Electric mixer.

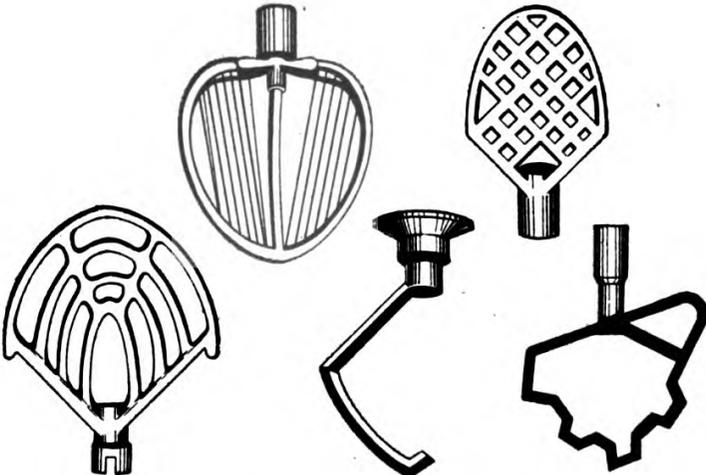


Figure 6.—Mixer attachments.

through the mix. DON'T put your hands in the bowl or they'll become part of the mix. And TURN OFF the machine before you put your hands anywhere near the paddles after the mixing is done.

See that the machine is oiled once a day if it is used

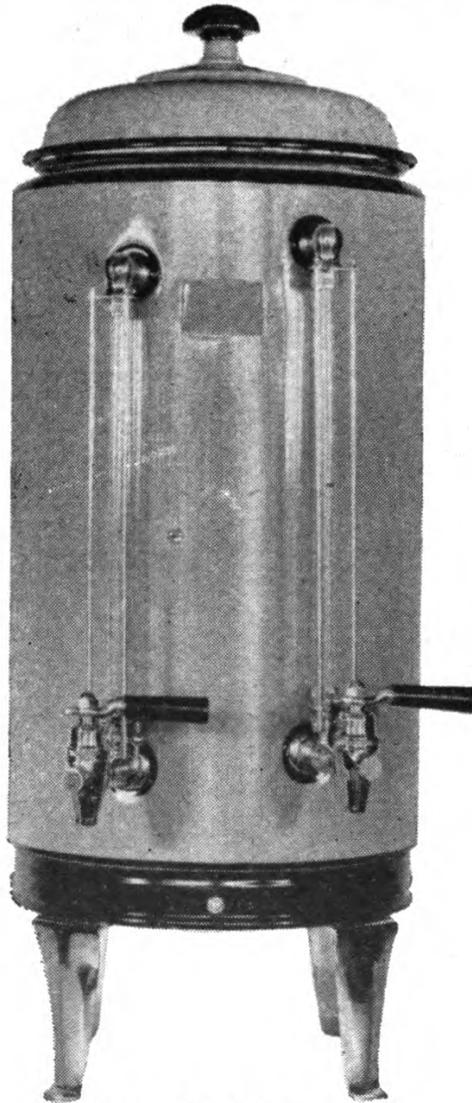


Figure 7.—Coffee urn.

often. Also, the gear casings should be refilled with grease now and then.

COFFEE URN

You'll find coffee urns like the one in figure 7 on large ships. The heating is done by steam. Be sure to

OPEN the exhaust valve before turning on the steam.

Scrub the urn thoroughly with HOT WATER and URN CLEANING POWDER after each using. NEVER use soap or lye—they might get into the coffee and cause poisoning.

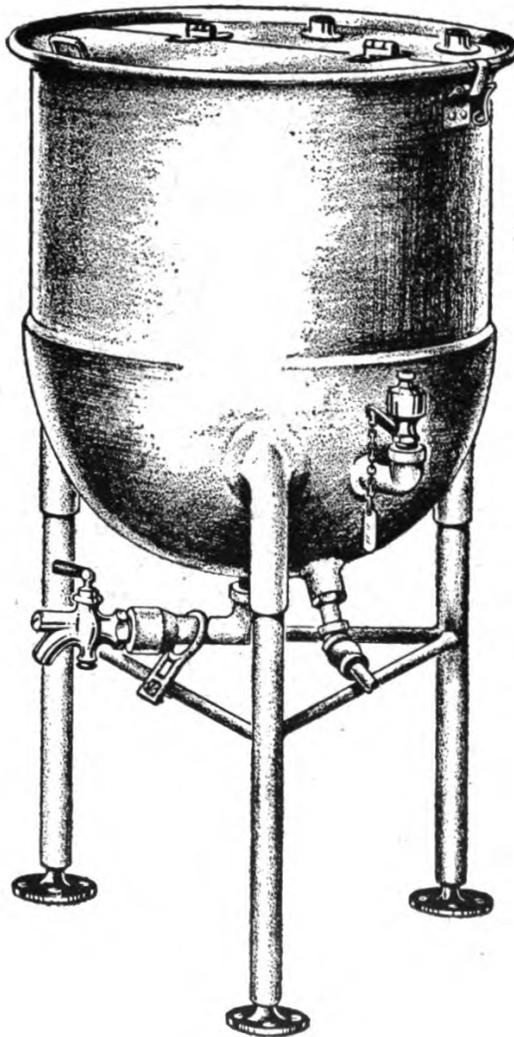


Figure 8.—Copper.

COPPER

Coppers like the one in figure 8 are used for boiling and steaming vegetables, soups and puddings. In spite of their name, they are usually made nowadays of aluminum or stainless steel instead of copper. They

are made somewhat like a thermos bottle, with an inside container and an outside jacket. The space between contains steam. Before turning on the steam OPEN the exhaust valve or you may blow yourself up. Leave it open until you finish cooking.

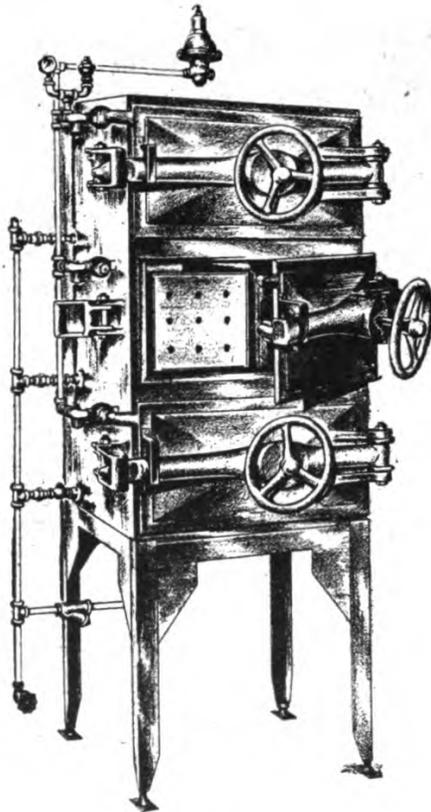


Figure 9.—Steamer.

Clean the copper with hot water and a stiff brush. If the inside is greasy use boiling water, but never use soda, soap or lye.

STEAMER

Some galleys have a steamer (figure 9) to be used for steaming potatoes and other vegetables. The food is put in a galvanized bucket, which is placed inside the cast iron jacket of the steamer. After closing the doors and opening the exhaust valve, open the steam valve.

Steamers need daily cleaning. The best way is to flush them out thoroughly with hot water.

POTATO PEELER

The potato peeler is the answer to the spud coxswain's prayer. It can peel more potatoes in five minutes than he can peel by hand in an hour. The spuds

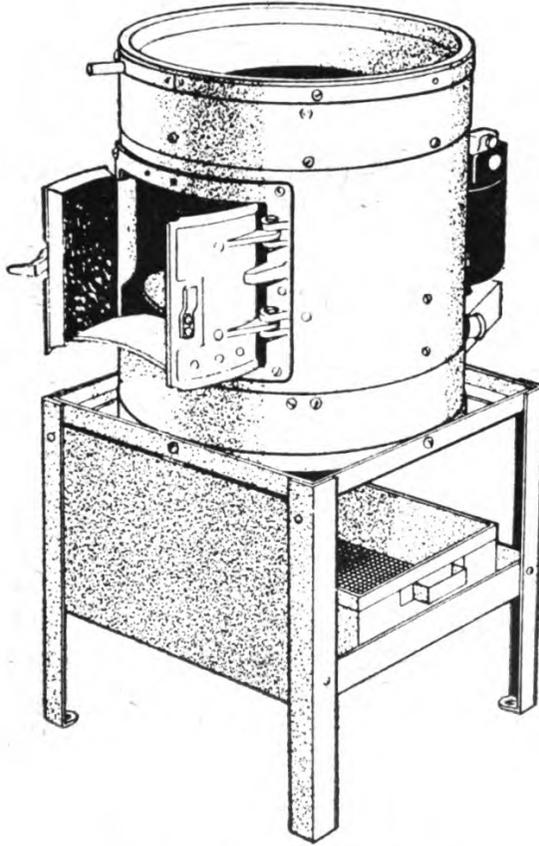


Figure 10.—Potato peeler.

are dumped into the top opening of the machine (see figure 10). An electric motor whirls a circular drum and throws the potatoes against the sides. The rough surface of the sides rubs the skins off the spuds in the same way that sandpaper smooths off a piece of wood. Water runs over the potatoes to carry away the peelings. The spuds are removed through the front opening.

Before you use the machine, sort the potatoes so that those in one load are about the same size. Turn the switch to start the motor, turn on the water, and then dump the potatoes in. Don't overload the machine. The spuds should be ready in 2 or 3 minutes. If the potatoes have deep "eyes" or large dents, it will be necessary to use a small knife on them after they have been removed from the peeler.

Clean the machine by scrubbing it with hot water. Don't use soap or anything else. The belt that revolves the drum should be kept dry so it won't slip.

DICER

The dicer cuts potatoes or other vegetables into cubes, slices, and French-fry shapes. To get the dif-

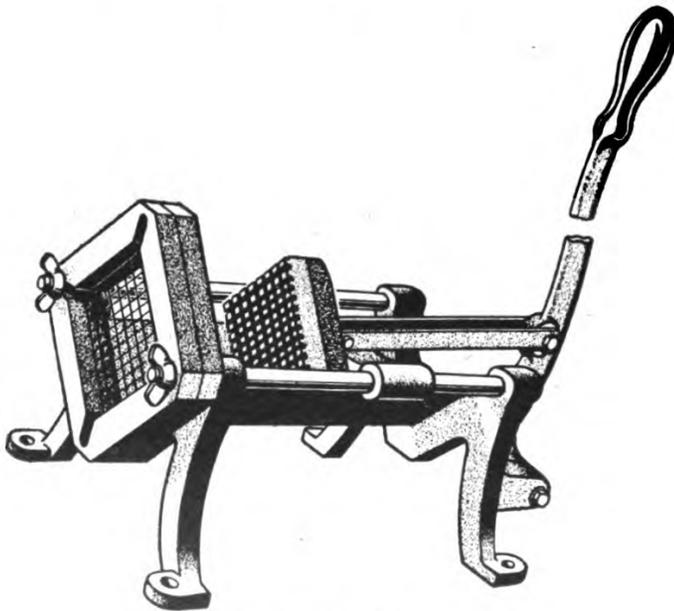


Figure 11.—Dicer.

ferent sizes and shapes you want, you use different DIES. Each die has criss-crossed knives. Notice the die at the left end of the dicer in figure 11.

With the hand lever which you see in the picture, you push the vegetables through the first die. This cuts them into parts $\frac{1}{2}$ inch thick. Then the vegetables

drop into a chamber where there's another die. The food is forced through this die and cut into the desired shape.

The main problem in operating is to see that the dies are set right. Keep the knives absolutely clean and dry. Clean the machine after every use and oil it daily.

FOOD SLICING OR BUFFALOING MACHINE

The food slicing machine (figure 12) chops up vegetables for soup and salad. Two knives are attached

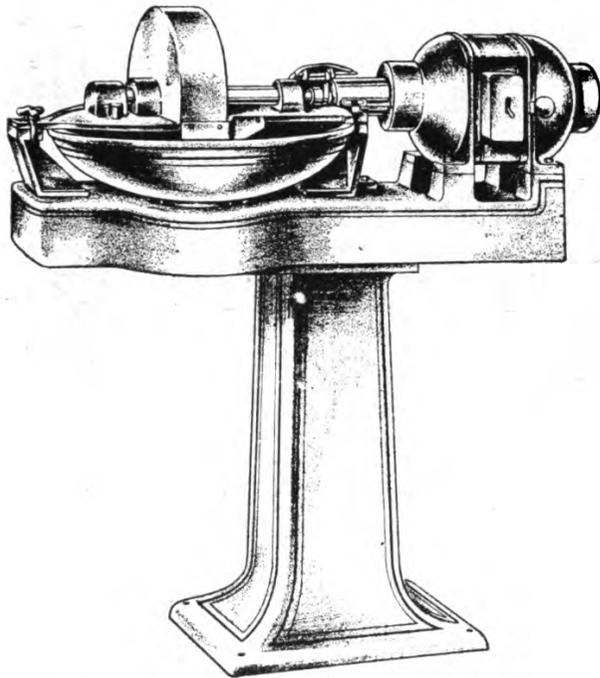


Figure 12.—Food slicing machine.

to a shaft which is turned by an electric motor. The motor also revolves the bowl in which you put the vegetables. As soon as the food is sliced to the size you want it, stop the machine and remove the bowl. Scour the bowl with hot water and a stiff brush.

MEAT BLOCK

Meat blocks (figure 13) need good care. If you keep yours DRY it will be a lot easier to clean. Don't wash

the cutting surface of the block. And don't wash meat tools on the block. Avoid leaving fresh meat on the block any longer than necessary, and never thaw frozen meat on it.

Clean the block with a scraper and a wire brush after each use. When you've finished cutting liver or cleaning chicken, it's especially important to scrape

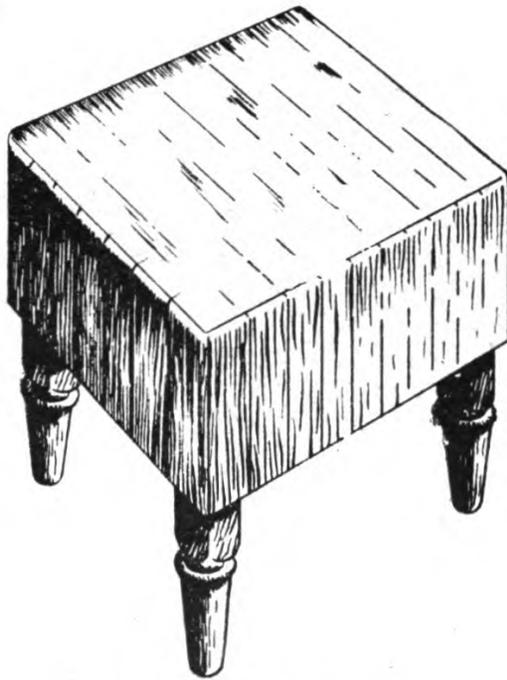


Figure 13.—Meat block.

down the block IMMEDIATELY. This will keep blood and moisture from soaking into the wood.

The surface of the block is rounded at the edges to prevent splitting. When you clean the block, scrape the edges so as to KEEP them rounded.

Turn the block around every week so the surface will wear evenly. Use the whole surface as much as possible—not just the middle or just the outer part.

ELECTRIC MEAT SAW

Electric meat saws (figure 14) are used mainly for cutting lamb chops, pork loins, pork chops, veal chops,

and ham. Before operating the machine, tighten the blade—using only one hand. Fix the blade just tight enough to keep it from slipping. Turn on the motor, and feed the meat through straight. Use only sharp blades. Dull blades heat up, twist, and break. The revolving wheels of the machine have grease chambers.

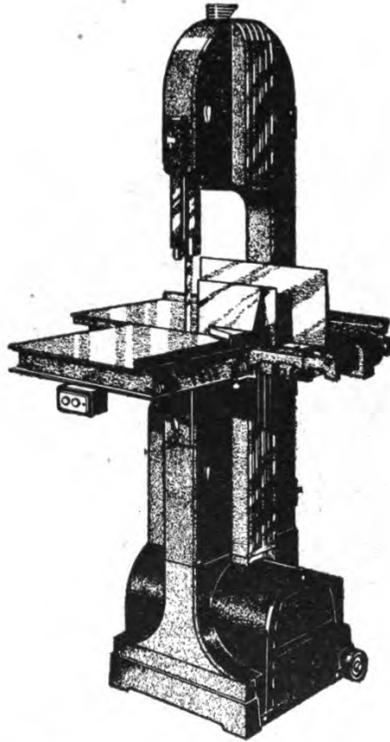


Figure 14.—Electric meat saw.

Pack them frequently. Keep the machine clean, and oil it once a week.

MEAT SLICER

The meat slicer (figure 15) is used to slice roasts, bacon, luncheon meat, sausage, and ham. Here's how to use the machine. Put the meat on the carriage and adjust the clamp to hold the meat firmly. (The clamp also protects your hand.) Next, set a dial on the machine for the desired thickness of the slices. Turn on the switch and make the disk knife revolve. Move the carriage back and forth with the hand lever.

Clean the machine with hot water and a stiff brush. Don't let any water get into the motor. Dry thoroughly with a cloth after cleaning. Oil the shaft and other parts that require oil.

When the disk knife needs sharpening, adjust the emery wheels that are attached to the machine. Turn on the switch so the blade will revolve against the

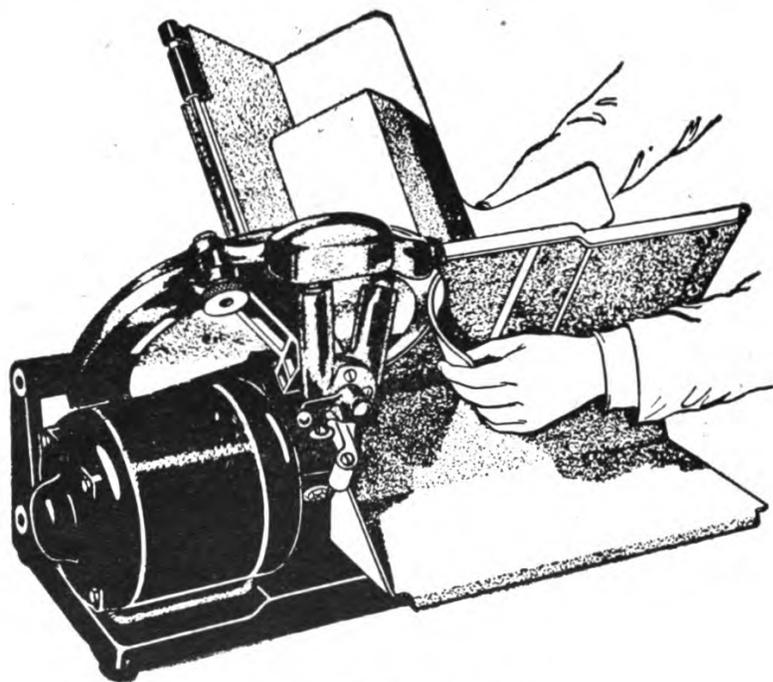


Figure 15.—Meat slicer.

wheels. Clean the knife after sharpening to remove the particles of emery.

CUBE STEAK MACHINE

The cube steak machine makes all sorts of tough meats tender. Put the steak (or other meat) on the perforated plate, and push the hand lever. The lever causes 32 disk-wheel knives to cut part way into the meat. The perforated plate then makes a one-quarter turn. Push the lever again to make cuts which cross the first cuts. The meat is then ready for frying or broiling.

Clean the machine after each using, and oil the parts often.

ELECTRIC MEAT GRINDING MACHINE

Meat grinding machines are used to prepare hamburger, minced beef, hash, and chili. In figure 16, the part marked *A* is called a worm. It fits into the cylinder *B*. The worm forces the meat through a cutting knife

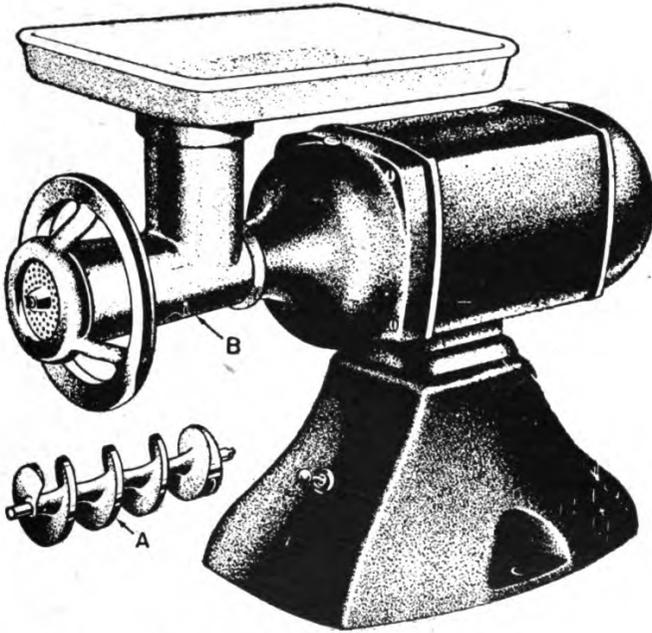


Figure 16.—Electric meat grinding machine.

which you attach to the end of the cylinder after the worm is inserted. After starting the motor, feed the meat into the hopper, using a wooden plunger. Never poke the meat in with your hands!

When you've finished using the machine, clean each part with soap and hot water. Use a stiff brush.

ALLOWANCE LISTS

Somebody has figured out exactly how much your ship needs in the way of galley equipment and mess equipment. This is written down on ALLOWANCE LISTS which are kept by the Supply Officer.

On some ships the Supply Officer gives the allowance lists to the Steward so the Steward can check against what he has. Regular inventories of equipment are required. You'll be told when to make these exact counts of all your gear.

Reasons for loss or breakage are checked carefully. You may take the rap—so protect yourself by being a good supervisor.

Keep your eyes peeled for damage to mechanical equipment. Report breakdowns of equipment immediately, either to the Chief Steward or to some responsible officer. Follow up your report and see that repairs are made. Don't let anybody use the equipment until the repairs ARE made. This is particularly true in the galley—otherwise, you'll be asking for accidents.

REPLACING EQUIPMENT

If galley or mess equipment is lost or broken due to negligence, you use Form 154 (SURVEY REQUEST, REPORT, and EXPENDITURE). Just make a statement on the back, telling what you know about the loss or breakage, and sign the statement. The mess treasurer will do the rest.

Chinaware, especially, gets broken easily but you can keep down breakage by seeing that it's carefully handled.

Be sure that wardroom and flag equipment are kept straight. Don't replace broken flag china with wardroom china, and don't use wardroom china to replace flag china.

You get new gear—such as silverware, chinaware, linen, or galley equipment—by filling out Form No. 307 and getting it approved by the Supply Officer. It will probably be your job to draw the equipment from the storeroom.



CHAPTER 3

SOMETHING ABOUT NUTRITION

WHAT MAKES A GOOD MEAL?

“Man, that was good eating!” You’ve said something like that after you have put away a meal that just seemed to “hit the spot.” And no doubt you’ve heard officers say the same thing about chow that you helped fix or serve. But nobody except the mess crew thinks much about **WHAT MADE IT A GOOD MEAL.**

When people say they like a meal, they are talking mainly about **TASTE.** That’s only natural. The way chow tastes is what counts most of all. But taste isn’t the only thing that makes a meal good. It has to be **NUTRITIOUS,** which means it has to have a lot of nourishment in it—the kind of chow that keeps men healthy and strong. And the meal should be **WELL-BALANCED**—a nice variety of food the men like and need.

The skill of Cooks and Stewards in preparing food is one big factor in determining whether it’s going to taste good. Another point is that the food must be of the best **QUALITY** in the first place. That means you

have to be smart in JUDGING THE QUALITY of food. And if you're going to give the officers chow that has high food value and is well-balanced, you need to know something about the basic ideas of NUTRITION.

You see, then, that NUTRITION and QUALITY are important in answering the question, "What makes a meal good?" Nutrition is discussed in this chapter, and quality in Chapter 4.

BALANCING THE DIET

People learned about diet the hard way. It took years of disease and thousands of deaths to prove that the right food can keep people in good health. The British Navy was one of the first to make this discovery.

For a long time sailors on long voyages had suffered and died from a disease called scurvy. Then the British tried taking along a supply of limes and giving their men a daily ration of lime juice. (That's how British sailors got the name "limey.") It worked. There was no more scurvy aboard British ships. Limes contain vitamin C and scientists have proved that vitamin C in citrus fruits, tomatoes, green peppers or pineapple is what prevents you from getting scurvy.

It didn't take long after that first experiment to find that other kinds of food prevent other diseases, that certain foods make rich blood or build strong bones or good teeth. The science of NUTRITION was under way.

Almost everybody knows some of the principles of nutrition. The Navy follows these principles when a ship is stocked with food. All the foods that are necessary to keep men in tip-top condition are put aboard. They're right there in the storeroom. But it's still up to YOU to know the right combinations and plan nourishing meals.

HUMAN FUEL

There's lots of talk about how easy it would be to take a few pills a day and be fed. No more eating and

lots of spare time. Or it would be nice to run cars for a year on an atomic pill. Same idea as the food pills—it would save time, money and effort.

But for a while—maybe the rest of our lives—we'll have to live on good old-fashioned food and run our cars on oil and gasoline. And until we can buy our meals in pill form with everything figured out for us, we still have to worry about getting ourselves fed the right way.

The human body is like a car engine but it's much more troublesome. It runs on "fuel" but it has to have five different kinds, all nicely balanced, and it has to be refueled three times a day. Every person requires a different amount of fuel, depending on his size and weight and the kind of work he does.

THE CALORIE

When food is digested in your body it releases heat and energy. This amount is measured in CALORIES. To keep physically fit, people need anywhere from 2,500 to 3,400 calories a day, depending on what they're doing. Some foods (milk, for example) have high calorie value and other foods (lettuce, for example) will "generate" few calories. You won't need to bother much about "counting calories." You'll be using the menus in the *Navy Cook Book* (or menus based on those suggestions) and they are all figured out to provide the right number of calories.

THE BIG FIVE

All food doesn't behave in the same way when it gets inside you. Some of it goes to repair tissue that's worn down by daily living. Some makes healthy blood. Some keeps your teeth and eyes and skin in good condition. And some just pushes along waste food so it can be gotten rid of.

Five food elements are necessary to keep you up to par—proteins, carbohydrates, fats, vitamins and minerals. Many foods contain all five of these elements. But different foods have different amounts of each one. You need a general idea of what each of the “Big Five” does for a man, and what foods provide each.

PROTEINS AND MINERALS

Proteins build up flesh, muscles and blood. They give energy and help the digestion along. You'll find them in the foods you like best—meat, milk, eggs, cheese, fish, poultry, beans, and peas.

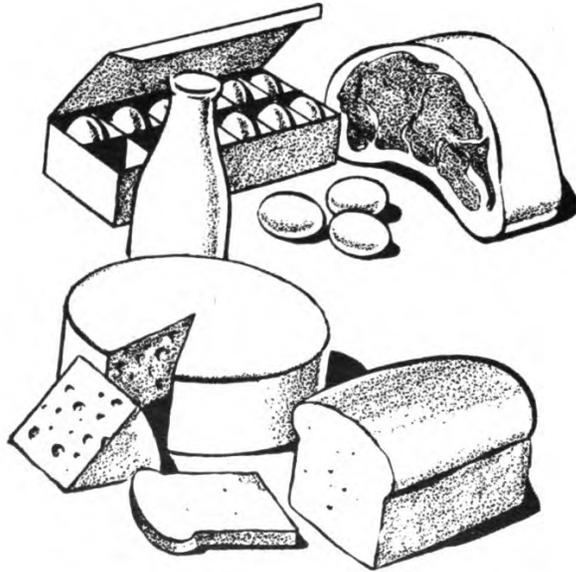


Figure 17.—Sources of proteins, the muscle builders.

The same foods, plus bread and green leafy vegetables (lettuce and cabbage), provide the minerals that keep your bones and teeth in good shape. These minerals are CALCIUM and PHOSPHORUS.

Another important mineral is IRON. Iron makes you red-blooded. When blood is red, it keeps oxygen circulating all through your body. In other words, it keeps you alive. You get iron from eggs, liver, vegetable greens, dried beans and peas, and oatmeal.

The salt used by the Navy contains IODINE, another mineral that is needed for good health. In hot weather

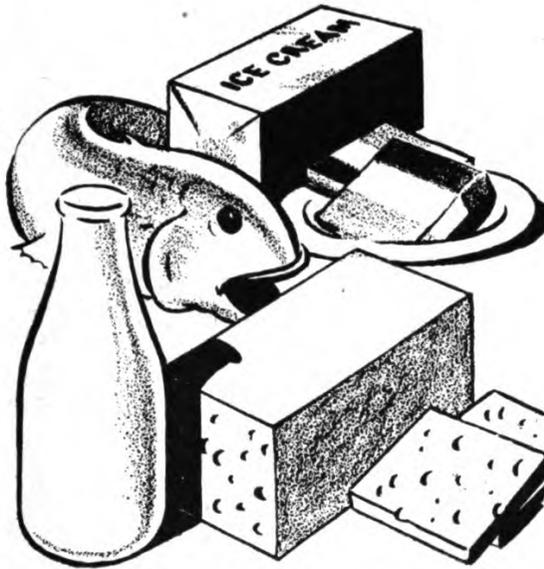


Figure 18.—Sources of calcium and phosphorus, the bone and teeth builders.



Figure 19.—Sources of iron, the red-blood maker.

you lose a lot of salt by sweating, and this has to be replaced either by salt tablets or by an extra amount of salt in the food.

CARBOHYDRATES AND FATS

Carbohydrates and fats are pep foods. Like the fuel in an engine, they are mostly burned up to give immediate energy. If you are overweight, it's because your body has been storing away the carbohydrates and fats it hasn't burned up.



Figure 20.—Sources of carbohydrates, the pepper-uppers.

STARCHES and SUGARS provide carbohydrates and fats. Bread, rice, potatoes, macaroni and cereals are some of the starchy foods. The sugars, of course, are sugar, molasses, honey, candy, jams. Fresh and dried fruits have sugar in them, too.

FATS are found in bacon and other fatty meats, milk, butter, eggs, lard, peanuts, soy beans and salad dressings. Fats keep you from feeling empty so quickly after a meal.

VITAMINS

Maybe you're getting tired of hearing about vitamins. They're always popping up nowadays—so much so that it makes you wonder how you ever got along without them. The answer is—you didn't. They were

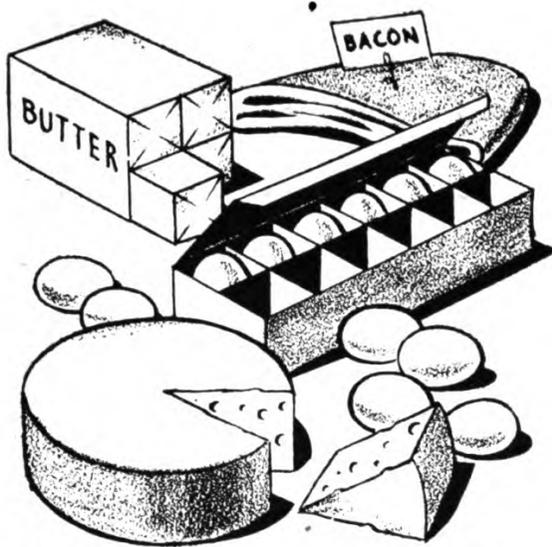


Figure 21.—Sources of fats, which, together with carbohydrates, are the energy-builders.

there all along but nobody knew it, any more than the British knew that the thing in lime juice that prevented scurvy was vitamin C. As a rule, you won't need to have EXTRA vitamins in special doses. If your



Figure 22.—These foods supply vitamin A.

diet contains plenty of milk, meat, eggs, fresh fruit, and green leafy vegetables, you'll get all the vitamins you need.

But the vitamins in food will get away from you if you're not careful. Certain ones dissolve in water and are boiled right out of vegetables. The best way to hang on to the vitamins is to cook with steam. However, if you're cooking vegetables in water, here's a couple of hints—use as little water as possible, and bring it to a boil before putting in the vegetables so that they won't have to stay in the water any longer than necessary. If you'll make the left-over water into soup or gravy, you can save a lot of vitamins which would otherwise be lost.

Grate or chop vegetables for salads **JUST BEFORE** they are to be served. If the salads stand exposed to the air for some time, many of the vitamins will be destroyed. The same thing is true for hot foods that are prepared too early.

Now suppose you get acquainted with the different kinds of vitamins—what they're good for and what foods supply them.

VITAMIN A

Vitamin A helps you to see well at night and keeps you in good general health. It is found in yellow foods—butter, egg yoke, carrots and other yellow vegetables, and fruits. You can also get it from kidneys, liver and giblets. Vitamin A won't dissolve in water, so you can be sure it will still be in foods after you've cooked them.

VITAMIN B FAMILY

Vitamin B is a family in itself. Its family names are difficult—thiamin, riboflavin, niacin are the ones you should know.

THIAMIN (vitamin B₁) gives you pep and a good appetite. The U. S. government has recommended that it be added to bread so as to supply the daily need—that's why much white bread now is advertised as

“enriched.” Whole wheat bread contains thiamin and so do whole wheat cereals, liver, heart, kidneys, yeast, pork, beans, peas, and eggs. Vitamin B₁ gets lost easily in cooking, so cook the foods in covered pots and save the cooking water for soup or gravy.

RIBOFLAVIN (vitamin B₂) keeps your skin and eyes in good condition and makes for all-round good health.

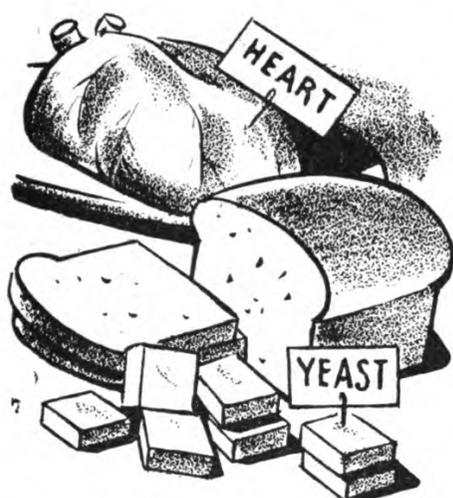


Figure 23.—Good sources of thiamin.

Like thiamin, it dissolves in water, so follow the same rules. Best sources for riboflavin are milk and eggs. It's also present in liver, lean meat, green vegetables, and bread.



Figure 24.—Riboflavin in these.

NIACIN prevents pellagra, a disease which is common in the South among people whose diet is limited

to salt pork, corn and molasses. Niacin goes along with the rest of the B family in liver, milk, eggs, whole grain bread, and fish.

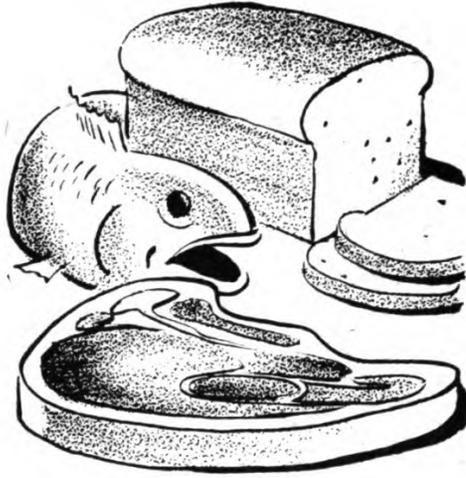


Figure 25.—Some of the sources of niacin.

VITAMIN C

You've already heard about one job of vitamin C—preventing scurvy. It also helps your teeth and gums and fights infection. Serve this vitamin in raw tomatoes, salads, fresh fruits, marmalade, steamed or boiled potatoes, radishes, peppers, green leafy vegetables (cabbage and lettuce), and sprouted soy beans or grain. If you can't get fresh fruit or vegetables, serve canned tomatoes—they keep most of their vitamin C value.

MILK'S GOT EVERYTHING

Milk is a nearly perfect food. It is a good source for almost all the vitamins and minerals as well as protein and fats. Serve it often—in as many different ways as you can think of. You can use it in custards, soups and creamed dishes, or with cereals and cut fruits. If you find that some of the officers don't like to drink plain milk, give it to them in one of those other forms. They can't have too much of it.

ROUGHAGE AND WATER

Certain foods provide roughage. Roughage pushes the other foods along and helps the intestines carry off

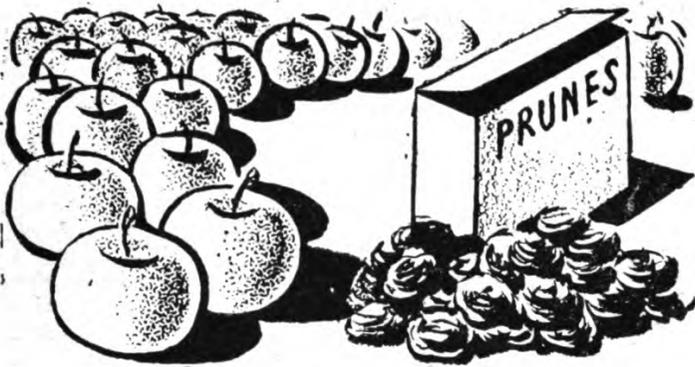


Figure 26.—Vitamin C foods.

waste. Frequent serving of fruits, leafy vegetables, and whole grain bread should supply enough roughage for the average person.

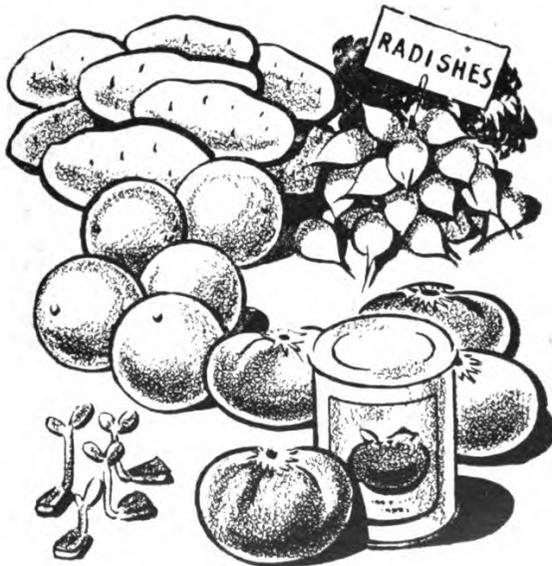


Figure 27.—Roughage.

Water also helps your body get rid of waste. Most of your body is composed of water, strange as it may seem, and the water that's lost must be replaced. Not many people drink as much water as they should—except maybe in hot weather.



CHAPTER 4

FOOD QUALITY

PREPARATION FOR MARKETING

When you know about food values, you've only won half the battle. It's equally important to know about food quality. You can take it for granted that the food you get from the general mess is of high quality. But how about when YOUR turn comes to do some marketing? Will you know good meat when you see it? Can you tell if a melon is ripe by feeling it? Could you pick out good tomatoes from poor ones?

You have to have this knowledge at your fingertips to be a good marketer. If you don't know the facts about quality and general price ranges, somebody may try to put something over on you. You may be buying in markets all over the world. Choose a market with a good reputation and give it the once-over before you buy anything. See how clean it is, and notice the methods of keeping food.

GOOD MEAT

You don't have to worry about the quality of any meat that is delivered to the Navy in the United States.

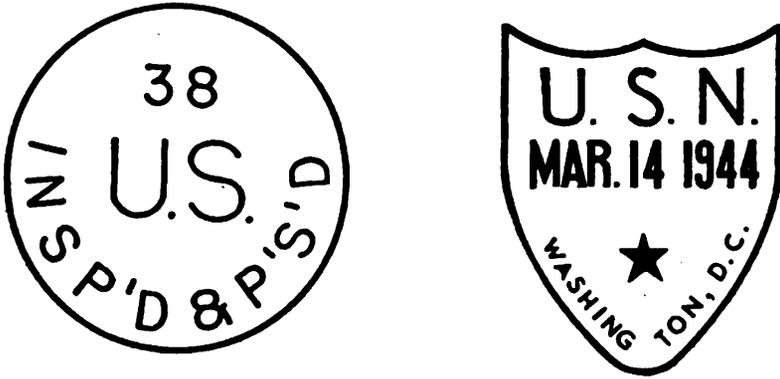


Figure 28.—Meat inspection stamps.

It's inspected at least three times, and sometimes four. There will be two inspection stamps on the meat—one showing it has been passed by the U. S. Department of Agriculture, and one showing the approval of Navy inspectors. These two stamps are shown in figure 28.

The Department of Agriculture usually double-checks by making another inspection when the meat is delivered to the naval activity. Then a medical officer inspects the meat for quality and a supply officer checks it for quantity. After that it's put into cold storage for the general mess. And that's where you get the meat for the officers' mess.

There may be times, however, when you'll have to go out and buy meat instead of just drawing some from the general mess. In that case, you will have to be the "inspector." And even if you don't have to do any marketing, an expert Steward or Cook should know how to judge good meat.

JUDGING BEEF

The best beef is streaked with layers of fat so that it looks marbled, as in figure 29. It should feel firm and "springy," not wet or flabby, and should have practically no odor. If it has a disagreeable odor, you can be sure it's bad.

The feather bones of a quarter of beef (see figure 30) will tell you something about the quality of the meat. If the beef is young and tender, the bones will

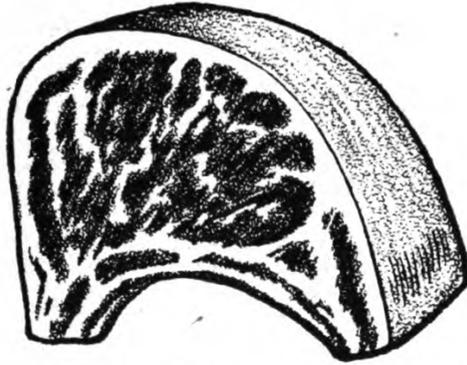


Figure 29.—Streaks of fat in meat are called marbling.

be soft and red and there will be white “buttons” on the tips of the feather bones. The lean meat will be bright red and fine-grained.

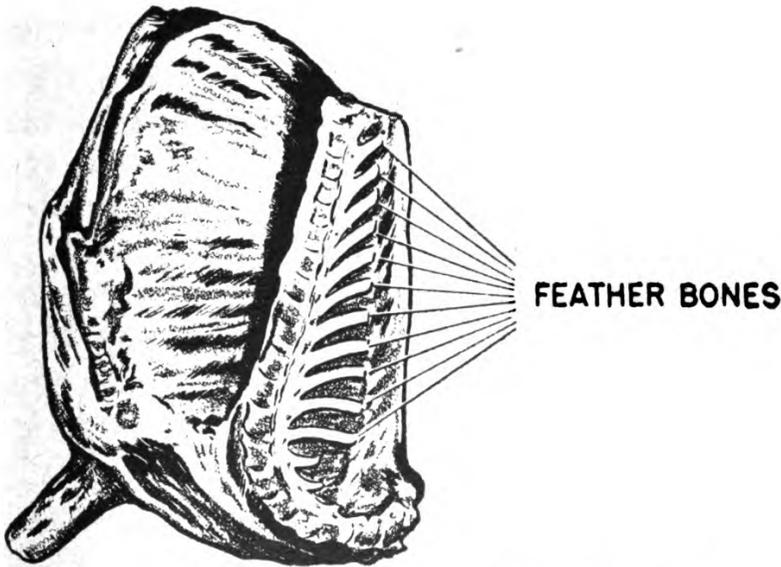


Figure 30.—Quarter of beef showing feather bones.

PORK

The flesh of pork should be grayish-pink and fine-grained, not flabby. There should be an even layer of firm white fat. Loins should weigh between 8 and

16 pounds. Other common cuts of fresh pork are shoulders, hams, and spareribs. Cured cuts include bacon and hams.

VEAL

Good veal is firm and light brownish-pink in color with a thin layer of clear, white, firm fat. The kidneys should be covered with hard, white fat. Veal carcasses should weigh between 75 and 250 pounds. Veal may also be purchased in sides (halves) or in cuts.

LAMB

The best lamb has firm flesh, well marbled with fat. The lean meat is light pink. The bones are soft. A lamb carcass ought to weigh about 30 to 60 pounds.

POULTRY

The poultry you buy—chickens, turkeys, ducks and other fowls—will probably be “dressed.” Dressed birds have been plucked but not drawn. You will have to remove the entrails, clean the gizzard, and remove the gall bladder from the liver.

If you want birds for immediate use, you may get them “dressed and drawn.” This means that their feathers and entrails (except for giblets) have been removed and feet and heads cut off.

You'll know a bird is young and tender if it has lots of pin feathers, soft feet and a smooth skin. An old bird has long hairs instead of pin feathers, and its breast bone has become hard. In general, the best birds are fat and well-bled, without any bruises, scratches or deformities.

There are six classifications for chickens—broilers, fryers, roasters, stags, capons and fowl—and dozens of ways of cooking them. Try to learn as many as you can.

SEA FOOD

It's easy to spot fresh fish. They have a good, ocean smell, bright eyes and firm, moist flesh. Bad fish are slimy and limp with a foul smell.

CRABS, LOBSTERS, and SHELLFISH should all be **ALIVE** when you get them. Crabs and lobsters will be kicking. Shellfish (oysters and clams) must be **TIGHTLY** closed. If they aren't, it means they're dead.

FRESH FRUITS

If fresh fruit isn't sound and ripe, don't serve it. You can't disguise bad fruit—you can't fancy it up or mix it up so that it becomes good. When you buy fruit be **EXTRA** careful. Just looking at it may not be enough; sometimes you'll have to judge by the weight and feel of it, too.

APPLES—Look out for signs of decay in apples—brown, squashy spots or overall softness. The best ones are medium size, firm, bright in color.

BANANAS—Bananas should be over 5 inches long. If you buy them slightly green, let them ripen until the skins are flecked with brown. When you buy them ripe, be sure they are free from the black areas that mean decay.

BERRIES — All berries (blackberries, blueberries, gooseberries, loganberries, raspberries, strawberries) should be firm, clean, and free from soft patches, mold, or injuries. Inspect them carefully for decay. Strawberries should be solid red with the leafy cap attached.

CHERRIES—The best cherries are plump and bright, with stems attached. Look at the boxes they come in—dampness and stains are signs of decay.

GRAPEFRUIT—Good grapefruit is firm and springy to the touch—not soft, wilted, or flabby. The fruit should be well-shaped and heavy for its size. This heaviness indicates a thin skin and lots of juice.

GRAPES—Grapes should be firmly attached to the

stems. Be sure the grapes are not soft, overripe, discolored, or moldy.

LEMONS—The skin of good lemons is smooth, thin, and bright yellow in color. Decay begins as a mold or a soft discolored patch at the stem end.

MELONS—Quality in **CANTALOUPE**s is determined by sweetness, fine texture, flavor, and ripeness. One way to tell whether a cantaloupe is ripe enough is to look at the netting on the skin and the condition of the scar at the stem end. The netting should be coarse, corky, well-developed, and of a grayish color. The scar at the stem end should be slightly sunken and calloused (with a hard covering). This shows that the melon separated easily from the vine; it didn't have to be cut away. Overripe cantaloupes are soft, watery, and tasteless. Decay is indicated by soft sunken spots on the surface or by mold and moisture at the stem end of the melon.

HONEYDEW melons keep a long time. They may be taken aboard before they are ripe but must be allowed to ripen before they are used.

Ripeness is the most important thing to check when inspecting **WATERMELON**. Thump the melons with your knuckles. If there is a dull hollow sound, the watermelons are ripe. If there is a ringing sound, they are not yet ready for eating.

ORANGES—The best oranges are firm and heavy. The skins are bright colored and of fine texture. Decay shows up as a squashy area that molds quickly.

PEACHES—Peaches spoil quickly and so they should be used within two or three days after buying. Watch out for decay. It appears in the form of brown spots which spread rapidly.

PEARS—Pears should be firm and well formed, not hard, wilted or shriveled. Use them right away if they are at all soft.

PLUMS and **PRUNES**—Good plums and prunes are plump, clean, of fresh appearance, and soft enough to yield to slight pressure.

VEGETABLES

Vegetables form the biggest part of your diet. They're so full of food values that many people live on vegetables alone.

POTATOES—The vegetable you eat most often and cook in the greatest variety of ways is the potato. The best potatoes are sound, smooth, shallow-eyed, and reasonably clean. Avoid spuds that are wilted, leathery, or discolored. Decay appears either as a wet or a dry rot. Wet rot spreads rapidly.

SWEET POTATOES—Good sweet potatoes are smooth, well-shaped, firm, and of bright appearance. Check them for decay. It will show up as a soft wet rot or as a dry, shriveled, sunken area—usually at the end of the sweet potato. Look carefully at sweet potatoes that appear to be damp. The dampness may be due to bad handling, freezing or decay.

ASPARAGUS—Asparagus ought to be fresh, tender, and firm. The tips are compact (not spread out). Asparagus ages rapidly after it has been cut; the tips spread out and become woody. Green asparagus is better than the white kind.

BEANS—There are many kinds of green or yellow pod **SNAP** beans. Some are flat, some round. The best snap beans are clean, fresh, firm, crisp, tender, and free from spots. Break several pods in two; they should snap when they break. Avoid beans that are stringy or decayed. A mold or a soft watery place is a sign of decay.

Good **LIMA BEAN** pods are well-filled, clean, bright, fresh, and of a dark green color. Dried, shriveled, spotted, yellowed or flabby pods may be old or diseased. Shelled lima beans ought to be plump and tender. Shelled beans spoil easily. Be extra careful in inspecting them.

BEETS—The best beets are smooth, free from blemish, and reasonably clean. They are at least 1½ inches thick.

CABBAGE—Prime heads of cabbage are fairly solid and heavy. Cabbage heads that show worm injuries, decay, yellowing of leaves, or signs of bursting are not acceptable.

CARROTS—Good quality carrots are firm, clean, fresh in appearance, smooth, well-shaped, and of good color. They should be between 1½ and 3 inches thick and at least 3 inches long. You won't want wilted, soft, shriveled or decayed carrots. Decay shows up as a soft or water-soaked area which may be partly covered with mold.

CAULIFLOWER—Good cauliflower heads are white or creamy-white, clean, heavy, firm, and compact. The outer leaves are fresh and green. The best heads are at least 4 inches thick. Avoid spotted, speckled, or bruised heads.

CELERY—The most desirable celery is of medium length and thickness. The stalks are brittle enough to snap easily. Pithy or stringy celery is not very good.

CORN—The husks of sweet corn should be fresh and green. The cobs are filled with bright, plump, milky kernels that are firm but not so hard that you can't press them with your fingers. Look out for worms.

CUCUMBERS—Cucumbers should be firm, fresh, bright, well-shaped, and of a good green color. They should be at least 6 inches long and 1⅞ inches thick.

EGGPLANTS—The best eggplants are heavy, firm, free from blemish, and of an even dark color. Dark brown spots mean decay. Watch out for it; it spreads fast.

GREENS—The most common greens are BROCCOLI, COLLARDS, ENDIVE, ESCAROLE, KALE, and SPINACH. They should be fresh, young, green, tender, and reasonably free from dirt. Flabby or wilted plants or leaves indicate age or some form of damage.

LETTUCE—You'll be using iceberg lettuce more than any other kind. It should be fresh, crisp, tender, and firm. No decay should be present. The outer leaves serve as protection and should not be eaten.

ONIONS—Bright, clean, hard, well-shaped, mature onions are the ones you want. You don't want onions with seed stems. A thick, tough, woody stem or neck tells you that these seed stems are present. Sometimes onions decay—the decay attacks either the outer or inner scales of the bulb. Green onions should have fresh green tops and medium size necks. These necks should be white for at least 2 to 3 inches from the root. The part of the green onion that is eaten should be crisp and tender.

PARSLEY—Parsley ought to be bright green, fresh, and free from dirt and yellowed leaves.

PARSNIPS—The best parsnips are smooth, firm and well-shaped. They should be between 1½ and 3 inches thick.

PEAS—The pods of good peas are bright green. They look fresh and feel velvety. The pods must be well filled. Yellowish or dry pods are old or damaged.

PEPPERS—Sweet peppers should be ripe, firm, and well-shaped. Bleached, discolored areas on the peppers are danger signs—such peppers won't last long.

RADISHES—Good radishes are well-formed, smooth, and firm. They are tender, crisp, and mild in flavor.

SQUASH—Summer squash should be fresh, fairly heavy for its size, and free from blemish. The rind (outer skin) should be so tender that it can be punctured easily. The rind on winter squash should be much harder.

TOMATOES—Good quality tomatoes are ripe but not overripe, fairly well formed, plump, smooth, of good color, and free from cracks, worm injuries, or other blemishes. Puffy or watery tomatoes have a poor flavor. Tomatoes should be at least 2¼ inches thick.

TURNIPS—The best turnips are smooth and firm. There are few leaf scars around the turnip tops and few hair-like roots on the bottom part of the turnips. Good **WHITE** turnips should be between 2 and 3½ inches thick, and **YELLOW** turnips between 3½ and 7 inches thick.

CANNED GOODS

Most canned goods are of good quality, but sometime you may run across a can that is swollen, dented or rusty. Chances are that the food inside such a can is spoiled. Normally the ends of a can should be flat or slightly concave (drawn in). If the ends or sides bulge out, it may mean that the contents have rotted and produced gas which causes swelling. A can of this kind is called a SWELLER:

There are other reasons for swelling, such as overstuffing or hot weather. The contents may still be good but you can't tell until you examine them. NEVER buy swollen or damaged cans. If a can in stock becomes swollen, examine the contents CAREFULLY before cooking. Throw the food out if it is softer and mushier than it would be ordinarily, if it contains gas bubbles, or if it has a peculiar or unnatural odor. DON'T taste the food if you have any reason to think it is bad. A single taste may cause food poisoning.

BUYING REMINDERS

Before you do any marketing on the beach, plan the menu and make a list of the foods you need that are NOT available in the general mess. You will have at hand a list, issued by the general mess, of available provisions and prices. FIGURE carefully the amounts needed. Remember that buying ashore is expensive. Large amounts of money may be turned over to you for buying—spend it well.

Don't plan to buy more perishable foods than you need for immediate use.

If you're smart you've made either a mental record or a record on paper of what food the officers have liked. If they haven't liked something once, don't waste food and money by buying and serving it again.

Of course, you won't be buying foods ashore if you can get them from the general mess. But even if

you never have to go marketing for basic foodstuffs (things like meat and potatoes), you may want to pick up some fancy foods such as whipped cream, marshmallows, shellfish, pickles, or other specialties. Whatever you buy, insist on **QUALITY** and **GOOD VALUE**.



CHAPTER 5

STOWING AND BREAKING OUT

WHAT GOES WHERE

If you've watched the stowing of food in general mess storerooms, you know what a tricky job it is. Many things must be considered before provisions can be put in their place. You, personally, may not have not have much of a problem because the officers' mess has to stow only a small amount of food as compared with the big quantities that the general mess takes care of. Most of your storing will be in a small locker and a refrigerator. But you'll still follow the same general rules that apply to the large storerooms.

The rules are just a matter of common sense. How can you make things easy for yourself? How can you keep down spoilage?

In the first place, you'll want to arrange things so they will be convenient. You don't want to dig your way to the bottom of the pile every time you need something. Put the **FOOD YOU NEED MOST OFTEN** where you can get at it easily.

A second rule is to arrange the food so that you'll **USE THE OLDER STORES FIRST**. That means that when you get new provisions, you should place them under or in back of the food already on hand. The provisions which you've had the longest should be on top or in front. By working it that way, you'll reduce the danger of letting some of the older foodstuffs spoil. If you keep piling in new stores without moving the older stuff, some of the provisions might get so old that they won't be fit to eat.

Another way to prevent spoilage—and this rule is even more important—is to **KEEP STORAGE SPACES ABSOLUTELY CLEAN**. You'll need to stay on your toes **ALL THE TIME** to guard against the enemies that ruin your food if you give them half a chance. Spoilage spreads like a disease and it only takes a little dirt or a few bugs to get it started. Clean all corners, cracks, and tops of beams. See that there are supports under the shelves which are high enough so that you can sweep the deck clear of flour or dust. Remember—dirt can collect in a day; it's in the air. So make cleaning a daily habit.

HOW TO OUTSMART INSECTS

Every insect that gets on a ship is out to make trouble. He lies in wait in dirt and dark places. Outsmart him—it's not hard if **YOU** always make the first move.

Say your storeroom is spotlessly clean and ready to be provisioned. You can't assume that the provisions will be clean too. Look over sacks and boxes carefully **BEFORE** you stow them. If you see any webs or silky tubes, holes in the containers, or brown specks in flour or sugar, you'll know there have been insects around.

Insects can't find anything to eat in clean places. If you've cleaned up every speck of dirt, they'll starve to death. They don't like low temperature, either. They

grow best when the temperature is between 50° F. and 110° F., so if possible keep your storeroom **RELOW** 50° F. It's a good idea to put as many of your provisions in cold storage as is practical.

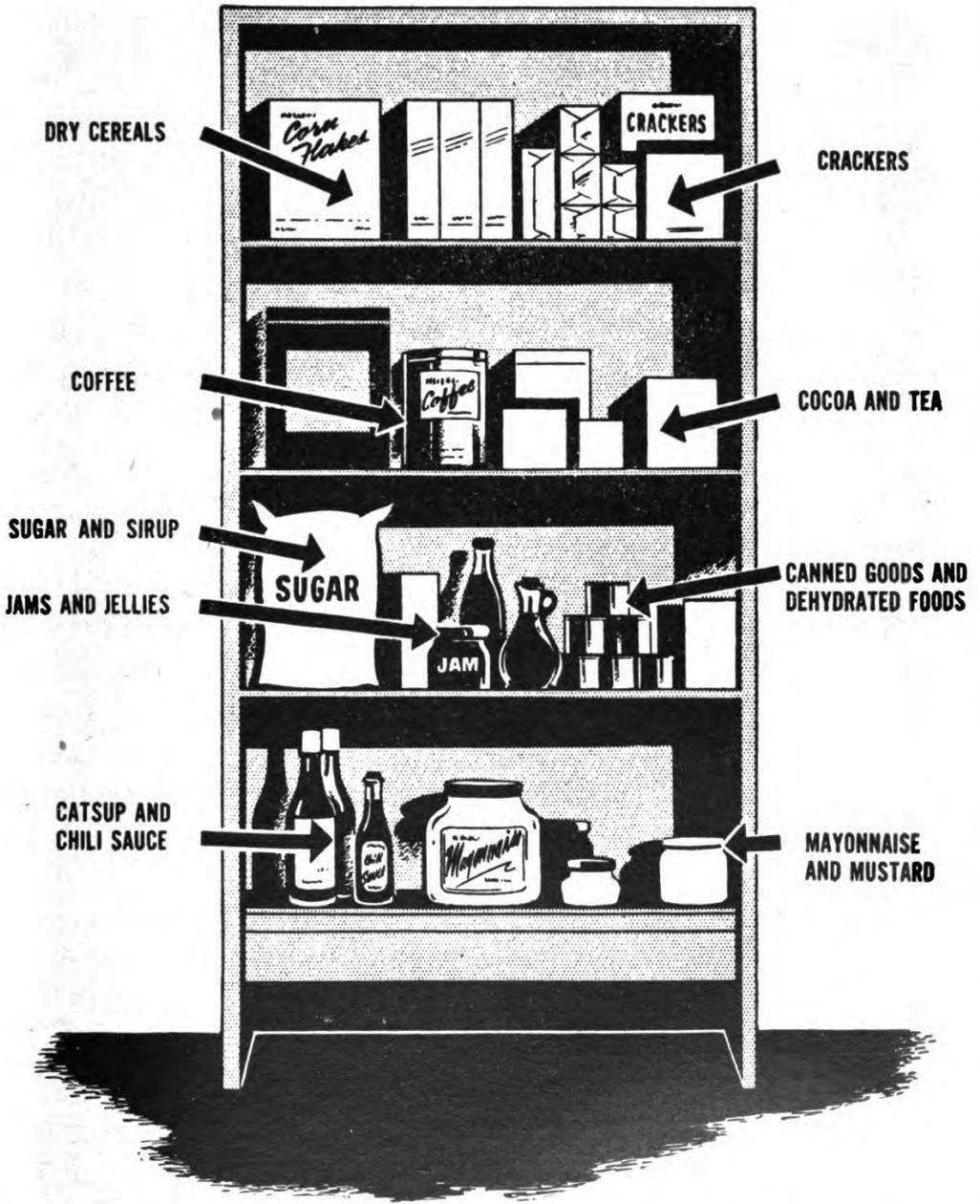


Figure 31.—A good arrangement of food on shelves in a storage locker.

Don't let crumbs collect on your shelves and see that the food containers don't get damaged. Insects don't need to be told that there's spilled food around.

Suppose insects come in spite of all your efforts. Report them to the Pharmacist's Mate. If you're having roach-trouble, he'll put roach pills around. Either you or the Pharmacist's Mate can use DDT, in a spray gun or an Aerosol bomb. It kills practically all kinds of insects.

STORING DRY PROVISIONS

BAKING POWDER, CORNSTARCH, CRACKERS, MACARONI, SPAGHETTI, and SODA should be kept both dry and fairly cool. This way they should last five months or more. Breakfast foods must be kept particularly dry. If possible, transfer them to tin cans after opening the cartons.

EGGS, MILK, BUTTER, AND YEAST

Keep eggs at a temperature of about 32° F. If it gets much warmer they spoil and if it gets much cooler they freeze. Put them in a dry, well-ventilated place apart from fruits and vegetables. Stack the egg cases on dunnage. Place strips of wood between the cases and leave at least eight inches between the overhead and the top of the highest case. This allows air to circulate around each case.

Always keep milk and cream CLEAN, COVERED and COOL. They will stay fresh for a week at a temperature just above freezing. Milk and cream must be covered to keep out dirt, bacteria and food odors.

Butter stays good for eight months or more at 0° F. or below. But since you'll be keeping it in your refrigerator at a temperature above freezing, the butter must be used within a month. Draw out only as much from the storeroom as you'll need for a few days. If it comes in a carton and you use only part of it, put back what is left and close the carton tightly. Butter turns rancid when it's exposed to the air too much, and like milk, it picks up stray odors.

Yeast should be stored at a temperature between 20° and 30° F.—in other words, just below freezing. It's best to leave it at this temperature until you want to use it, then let it warm up overnight at about 50° F. When you use thawed-out yeast, you'll need to put in one-fourth or one-third more than if you're using

TIME LIMITS FOR KEEPING FRESH FRUITS AND VEGETABLES

FRESH VEGETABLES

Item	Keeping time	Item	Keeping time
Asparagus.....	3 days.	Cucumbers.....	1 week.
Beans, green.....	3 days.	Kale.....	3 days.
Beets.....	4 weeks.	Lettuce.....	2 days.
Cabbage.....	2 weeks.	Onions:	
Carrots.....	4 weeks.	Green.....	3 days.
Cauliflower.....	1 week.	Dried.....	4 weeks.
Celery.....	1 week.	Parsnips.....	3 days.
Peppers.....	1 week.	Sweet potatoes..	4 weeks.
Potatoes.....	4 to 5 weeks.	Spinach.....	3 days.
Radishes.....	3 days.	Tomatoes.....	2 to 5 days.
Corn, green.....	3 days.	Turnips.....	4 weeks.

FRESH FRUITS

Apples.....	1 to 4 weeks.	Oranges.....	2 weeks.
Bananas.....	2 to 7 days.	Peaches.....	3 days.
Blackberries.....	3 days.	Pears.....	5 to 7 days.
Cantaloup.....	3 days.	Pineapples.....	5 to 7 days.
Grapefruit.....	2 weeks.	Strawberries....	2 days.
Lemons.....	2 weeks.	Watermelons...	1 week.
Limes.....	2 weeks.		

Figure 32.

yeast which has not been frozen, because some of its strength is destroyed by freezing. Keep yeast in the wrappers until ready for use, then remove and dissolve it in the water you're going to put in the dough.

FRESH FRUITS AND VEGETABLES

You'll get most of your fruits and vegetables by making daily trips to the general mess storeroom. Keep down the amount of food in your refrigerators so cleaning will be easier. Look back at Figure 4 for a good way of storing food in a refrigerator.

Be sure to look fruit over carefully before you put it in the refrigerator. Throw out any that is damaged. Keep fruit cool but don't freeze it. If you can, put it in a separate compartment to prevent its odor from getting into other food.

Root vegetables (such as potatoes, carrots, and turnips) last for several months if they are kept at a temperature just above freezing. Green or leafy vegetables such as peas, beans or spinach, may last for a month. At higher temperatures they dry out or wilt in a few days.

The table in figure 32 shows you the keeping times under ordinary locker conditions for fruits and vegetables.

You can see by the table that it's better to leave most fruits and vegetables in cold storage until the day you plan to use them.

MEAT

Most of the meat that goes aboard ship is frozen. If it has already been cut, you can thaw it out as part of the cooking process. Otherwise, thaw it gradually at a temperature just above freezing. This may take several days but the meat is better in the end. Never thaw meat or fish in water, because the water will absorb much of the taste and food value.

Frozen meat and poultry keep fairly well at temperatures as high as 20° F., but temperatures of 0° or below are much better. Unfrozen meat must be used promptly. If you buy fresh meat ashore, get only enough for your immediate needs.

MISCELLANEOUS

Keep coffee, cocoa, sugar and tea in a DRY, cool place. Use ground coffee as quickly as possible—it loses its flavor fast.

Jams and jellies should be covered tightly when they aren't in use. Don't let the outsides of jars get sticky—insects like sweets.

Insects like spices, too. Close the tops of containers to keep flavors in and insects out.



CHAPTER 6

ACCOUNTING FOR THE AMOUNTS

HOW'S YOUR MATH?

How's your math? If it's shaky, you'd better take a look at the Navy Basic Training Course, *Mathematics*, and brush up on how to add, subtract, multiply and divide, and how to handle decimals and fractions. You're going to need some arithmetic either for keeping accounts, for buying, or for figuring out the proper amounts in recipes.

Guesswork won't do. When you waste food by careless figuring, you're wasting the officers' money. They pay for their own food. The mess treasurer estimates the cost at the beginning of each month. At the end of the month, a bill comes from the supply office for the food bought from the general storeroom. This is food that you have drawn out according to your planned menu. If the bill from the supply office is larger than the estimate made by the mess treasurer, the officers will have to pay more the next month.

When you buy on the beach, you'll be getting special food that will make the cost of the mess higher for the officers. You have to be a smart buyer to keep expenses down. The mess treasurer will turn over money to you to be used for buying food. You must sign for the amount advanced and know from the menu you've planned how it's to be spent. Before you receive any money, you must estimate how much food you want to buy. And after the buying is done, you must show the mess treasurer the receipts and turn back to him any money you haven't spent. The treasurer will want to know what happens to every penny he gives you. He has to account to the members of the mess and the auditing committee (which goes over HIS books), just as you must account to him.

KEEPING RECORDS

In buying from the general mess, your copies of Form 307, which you receive from the jack of the dust, will be all the record you need to keep. However, you should have a ledger for keeping a record of the purchases you make ashore. If any question comes up, you'll be able to account for all expenses to the mess treasurer. And of course you'll have the receipts as further record.

Your ledger is a proof of your efficiency. Make it as NEAT as you possibly can. The best way to be efficient is to know what you're doing. Keep it SIMPLE—don't bother with a fancy accounting system unless you've had plenty of experience.

Two sets of figures are important. First is the amount of money given you by the mess treasurer. This is called Cash Advanced. Then, an itemized account of expenses. Just copy your receipts (always use the original, NOT the carbon copy). Make a record EVERY time you make a purchase and EVERY time the mess treasurer gives you money. Add the total amounts in each of the two columns for the month.

The money left over from cash advanced must be returned to the mess treasurer.

HOW NOT TO WASTE

The cook and steward should be partners in all planning. The steward shouldn't buy food without talking with the cook about the amount needed. If you go over the menu together, you can both figure the exact amounts. With a little teamwork you can keep from wasting food. Buy only what you need. Don't stock up on food unless you are SURE you will use it. Sticking close to the planned menus is the best way to avoid waste.

Before you buy, you have to know how much food it takes to feed a given number of men. Most cook books figure it about the same way. For instance, it takes 50 pounds of fresh pork if you're going to serve roast pork to 100 men. (That is— $\frac{1}{2}$ pound per man.) But you probably won't have exactly 100 men in your mess; you'll have either more or less. Suppose there are 35 men. If 50 pounds will feed 100 men, it will take $\frac{35}{100}$ of 50 pounds to feed 35 men. You can put it down like this—

$$\frac{35}{100} \times 50$$

Then you can use the cancelling method (50 goes into 100 two times)—

$$\frac{35}{100} \times 50 = \frac{35}{2} = 17\frac{1}{2} \text{ pounds}$$

Now suppose you have 150 men—

$$\frac{150}{100} \times 50 = 75 \text{ pounds}$$

If you have 23 men—

$$\frac{23}{100} \times 50 = 11\frac{1}{2} \text{ pounds}$$

Now try one that's a little different. Say there are 23 men in your mess and you want to know how much

veal it takes to feed them. The cook book will tell you that it takes 65 pounds of veal to feed 100 men. So you need

$$\frac{23}{100} \times 65$$

In this case, the cancelling method isn't so handy. It's easier just to multiply and divide, like this—

$$\frac{23}{100} \times 65 = \frac{14.95}{100} = 14.95 \text{ pounds}$$

Remember that you can divide by 100 by placing a decimal point two places to the left in the figure to be divided. Since 14.95 is almost 15, you could plan to buy 15 pounds of veal.

When you're doing figuring like this, you'll often end up with a decimal, like 14.95 pounds or 6.3 pounds or 75.8 pounds or some other amount. Now food isn't usually weighed in tenths of a pound or hundredths of a pound, but rather in quarters or halves of a pound. So you need to know what the decimals equal in terms of fractions. Here's a simple way to consider it (a way which is close enough for the purpose of estimating food quantities)—

$$\begin{array}{l} .1 \text{ to } .3 = \frac{1}{4} \\ .3 \text{ to } .7 = \frac{1}{2} \\ .7 \text{ to } .9 = \frac{3}{4} \\ .9 \text{ to } 1.1 = 1 \end{array}$$

Thus if you work out a problem and find you'll need 6.3 pounds of beets, you will order $6\frac{1}{4}$ pounds. Or if your answer should be 75.8 pounds of pork, you'll get $75\frac{3}{4}$ pounds.

Look on page— of the appendix for a table of quantities of different foods required to feed 100 men. The table is extended to show the quantities of food required for 20 men. Don't depend on rough estimates—you'll only waste food. The number of pounds required to feed a given number of men varies greatly with the kind of food. You'll see by the table that you have to buy twice as much turkey per man as veal or pork, and only about half as much liver.

The same goes for vegetables—to feed 20 men it takes 10 pounds of mashed potatoes and only 5 pounds of beets. Waste comes from carelessness. If you study the table and do your arithmetic right, you'll be able to avoid waste.

UNITS OF MEASURE

The units of measure you use most in cooking are gallons, quarts, pints, cups, tablespoons, teaspoons, pounds, and ounces. Sometimes you'll find the numbers easier to handle if you change the given unit to the next smaller unit—for example, from pints to cups, or from tablespoons to teaspoons. Here's how you do it. To change—

	MULTIPLY BY
Gallons to quarts	4
Quarts to pints	2
Pints to cups	2
Cups to tablespoons	16
Tablespoons to teaspoons	3
Pounds to ounces	16

If you're doing it the other way round—say you're changing quarts to gallons or ounces to pounds—you **DIVIDE** by exactly the same amounts, instead of multiplying.

A SAMPLE RECIPE

Suppose you have to scramble eggs for 34 men and you want to use the recipe in the *Navy Cook Book*. You figure just as you did for buying food. The 100-portion recipe in the *Navy Cook Book* calls for 240 eggs. So—

$$\frac{240}{100} \times 34 = \frac{8160}{100} = 81.6$$

You can't take a part of an egg. So use 81 eggs. It's a waste of time to count them out one by one. So divide 81 by 12 to find the number of dozen you want.

$$81 \div 12 = 6 \text{ dozen plus } 9 \text{ eggs}$$

Now—the recipe says six tablespoons of SALT.

$$\frac{6}{100} \times 34 = \frac{204}{100} = 2.04$$

You'll need two tablespoons of salt.

PEPPER—Only $\frac{3}{4}$ of a tablespoon of pepper is required for 100 portions. The fraction $\frac{3}{4}$ expressed in decimals in .75.

$$\frac{.75}{100} \times 34 = \frac{25.5}{100} = .255$$

The figure .255 is between .2 and .3. Look back to page 60 for the decimal table. You'll see that any amount between .1 and .3 is about $\frac{1}{4}$. So you'll need $\frac{1}{4}$ tablespoon of pepper.

MILK—The recipe says $2\frac{1}{2}$ gallons of milk for 100 portions of scrambled eggs. Change this amount to quarts.

$$2\frac{1}{2} \times 4 = 10 \text{ quarts}$$

Then—

$$\frac{10}{100} \times 34 = \frac{340}{100} = 3.4$$

So you'll need $3\frac{1}{2}$ quarts of milk.

BUTTER OR OTHER FAT, MELTED—One hundred portions require 2 pounds and 8 ounces of butter or other fats. Change the pounds to ounces—

$$2 \times 16 = 32$$

Add 8 ounces—

$$32 + 8 = 40 \text{ ounces}$$

Now figure for 34 men—

$$\frac{40}{100} \times 34 = \frac{1360}{100} = 13.60$$

So $13\frac{1}{2}$ ounces of butter are needed.

Work out some recipes on your own. Take a recipe that's made out for 6 people and change it to 18. This would merely require multiplying all the amounts by 3. Make it harder by figuring for 22 people. Take other recipes for 100 men and work them out for the number of men in your mess. Set yourself some hard problems so that you can't be stumped by ANY recipe.



CHAPTER 7

COOKING 'ROUND THE CLOCK

SOME TIPS ABOUT ALL MEALS

Lots of people think breakfast is the best meal of the day. Others don't go much for a big breakfast but they want a husky dinner at noon. Still other fellows enjoy supper most of all because it tops off the day after all the work is done. And then there's the man who won't take sides about which meal he likes best—he likes 'em ALL.

It's plain to see that the only way for you to keep everybody happy is to make EVERY meal a good one. Three times a day, the Cooks and Stewards are expected to come up with chow that will come as close as possible to satisfying all the officers.

This chapter tells about some of the favorite dishes which may be served for breakfast, dinner, and supper. But it discusses them only in a general way. You are not given any recipes or menus here. You'll get them from your cook book. The purpose of this chapter is mainly to give you some helpful hints on preparing good chow morning, noon and night.

COFFEE

Coffee is a good subject to begin with. In fact, coffee is a good thing to begin the day with. And, as you well know, many Navy men like it at all three meals, with a few cups in between. Coffee is a quick builder-upper—if it's GOOD.

The ground coffee you use must be FRESH. Keep it in airtight containers. Never use the same grounds more than once. Coffee should be served as soon as possible after brewing. That is especially important if you use a percolator, a pot, or a glass coffee-maker. If you use an urn, the coffee will remain tasty for as long as six hours because none of the flavor can evaporate. Never reheat coffee that's left over. Throw it out and make a fresh batch.

Keep your coffee-making equipment absolutely CLEAN. If you have an urn, wash it with clear, hot water after each use. Twice every 24 hours, wash it with hot water and URN POWDER. Never use soap or soap powder. Rinse thoroughly with clear, cool water, washing soda, and a brush. Use one tablespoon of washing soda for each quart of water. Be sure to rinse thoroughly. Clean the glass gages at least twice a week with a brush, hot water, and washing soda.

If you use a glass coffee-maker, wash the bowls in clear, hot water after each use. Rinse the filter cloth in COLD water and renew it often. Scald all new filter cloths before using them. Never allow them to dry out; keep them submerged in clear, cold water.

Be sure that the glass bowls are thoroughly dry on the outside before you place them over the heat. Never allow an empty bowl to remain over the heat. When using the coffee maker on an oil range, place it over a low flame.

After removing the glass coffee maker from the heating unit, always put it on a rubber, asbestos, or cork mat. The glass may break if you place the hot container on a cold surface.

You don't need any special instructions about cleaning a coffee pot or percolator. Just wash them thoroughly with clear, hot water each time they're used.

You can turn to the *Navy Cook Book* or to experienced men working with you in the galley to learn the details of how to make good coffee—how much ground coffee to put in, how long to brew it, and how to use the different kinds of coffee-makers.

TEA AND OTHER DRINKS

Hot tea is refreshing even in warm weather. Make it just before you are ready to serve it. Bring fresh water to the boiling point and then pour the water over the tea leaves. NEVER boil after adding the water to the tea leaves. Use the leaves only ONCE.

When you make ICED TEA, sweeten the tea while it is still hot so the sugar will dissolve easily. Cool with cracked ice. Make tea to be iced a little stronger than hot tea, as the ice weakens the tea.

There are all sorts of fruitades that are good in hot weather—you can make them with lemons, oranges, limes, pineapples, and grapes. Vary your hot weather drinks. Always use plenty of ice.

Chocolate milk and cocoa are other drinks which you can serve to vary your menus.

FRUITS

Fruits are popular almost any time of day. You can serve them in salads or desserts, or as appetizers. At breakfast they are good alone or combined with cereal. Or you can serve fruit juice as the first course. The fruit must be fresh and ripe, and fruit juice should be cold.

If you're serving CUT FRUIT here's how to avoid discoloration. Place the cut pieces in salt water for a few minutes before using (allow one teaspoon of salt to each quart of cold water). Avocados, bananas,

and peaches should be sprinkled with (or dipped in) fresh or canned grapefruit juice, lemon or orange juice, or canned pineapple juice.

BREAKFAST DISHES

Besides fruit and coffee, the breakfast menu will include cereal and a main course.

Many men prefer hot cereals in cold weather and dry cereals in warm weather. Keep a variety of dry cereals on hand, so that the officers can choose what they want. Never let dry cereal get damp. A good way to make it crisp is to put it in a baking pan and place in a slow oven (325° F.) for about five minutes.

Probably the No. 1 main dish is eggs. Find out how each officer likes his eggs cooked and serve them that way. Whatever you do, serve 'em hot! There's nothing worse than cold, greasy eggs. If you're fixing scrambled eggs—or if, for any other purpose, you want to stir or beat several eggs together—first break them into a small bowl one at a time. Then you can throw out any bad egg that turns up without spoiling the others.

If you can combine bacon, or ham, or sausage with the eggs, so much the better. Of course there are many other combinations—like sausage and hot cakes, eggs and hash, ham and fried potatoes. Some men like fried mush or baked beans for breakfast. In every case, see that the food is piping hot when it goes on the table. When you're serving bacon, make it CRISP. Limp, soggy bacon is as bad as cold, greasy eggs.

Bread for breakfast can be in the form of toast, biscuits, muffins, sweet rolls, or coffee cake.

DINNER AND SUPPER

Noon chow is usually the main meal aboard ship. In the tropics—or for variety in any climate—supper may be the main meal. At shore stations, the noon

meal is often fairly light (called lunch instead of dinner) and the big meal is served in the evening (called dinner instead of supper).

It doesn't make any difference what names are given to the meals, or whether the main meal is at noon or at night. Soup or salad might be served either at dinner or at supper. You'll have vegetables at both. There'll probably be a meat course at both meals, although meat is sometimes omitted at supper.

SOUP

Got any left over vegetables or bones? DON'T throw them away—make soup out of them.

STOCK is the basis of most soups. You make it by mixing bones and small pieces of meat with vegetables and simmering the mixture in vegetable juice or water for several hours. NEVER BOIL soup stock. The secret of good stock lies in its being cooked SLOWLY. When you've strained the liquid off from the solids, you're ready to use it for soup.

Practically any kind of bones will do for stock. Beef bones are the most commonly used. You can make stock for broth with the lean meat and bones of lamb and mutton. Flavor bean or pea soup with stock from smoked ham shanks.

Make fresh soup stock EVERY DAY. It spoils easily. Cool it and place it in the refrigerator. Be sure the containers are clean. When you are ready to use the stock, skim off the layer of fat that has formed on top. Otherwise, your soup will be greasy.

You can use all kinds of vegetables in soup. If you cut them into small cubes or strips they're called "Julienne." If you're using vegetables Julienne style, cook them separately in as SMALL an amount of water as possible until they're tender. Then add the vegetables AND the liquid they've been cooking in to the stock. The cooking liquid contains flavor and vitamins, so always use it. Then add spices for seasoning.

KINDS OF SOUP

Soups may be thick or thin or jellied. The thin soups are called CLEAR soups and BROTHS. The thick soups are CREAMED or PUREED (pronounced "pure-aid").

You can make a CLEAR soup (bouillon or consommé) by straining the stock and letting it cool. Leave it in the refrigerator until the fat hardens on top. When you're ready to serve the soup, remove the layer of fat and heat the stock.

A JELLIED soup can be prepared by adding gelatin to a clear soup and chilling for several hours.

To make BROTH, strain the stock and add some vegetables. Don't thicken it in any way—it's meant to be a light soup.

It's a good idea to serve a thick soup in cold weather or with a light meal. You can thicken stock by adding flour, barley, corn meal, rice, or noodles. Another way to thicken soup is to add hot milk. This makes it a CREAM soup. Don't let it boil.

A PUREE is soup made by rubbing peas, beans, or lentils through a sieve and adding hot milk. It's the one kind of soup that isn't made with stock. Croutons are good with purees. Just cut small square pieces of bread and fry them in butter or shortening until they are crisp.

VEGETABLES

No matter how high the quality of your vegetables is, they will lose all their nourishment if you don't cook them the RIGHT way.

The vegetables you use will be either canned, quick-frozen, or fresh. CANNED vegetables make life simple for the cook. All you have to do is bring them to boiling temperature just before serving. Don't overcook. Keep the liquids from canned vegetables to use in soups, sauces and gravies.

QUICK-FROZEN vegetables are all cleaned and

trimmed and can be cooked just like fresh vegetables. Follow the directions on the container for the right method.

PREPARING FRESH VEGETABLES

Wash all fresh vegetables **THOROUGHLY**. Use a vegetable brush to clean celery, carrots, beets, and potatoes. Soak asparagus, broccoli, brussels sprouts, and French artichokes in salted, cold water (1 tablespoon of salt per quart) about 30 to 60 minutes. This will get rid of worms and insects.

Remove the dirt and sand from spinach, kale, beet tops and similar greens by washing them several times in cold water. Lift the greens from the water so that any dirt that's left will run off.

Keep your vegetables in the refrigerator or in a cool place until you're ready to cook them. If they get wilted, you can freshen them by placing them in ice cold water or between layers of crushed ice. When freshened, cover them with a clean damp cloth and put them in a cool place until you're ready to use them.

Don't let vegetables lie around after you prepare them for cooking. Don't soak them too long. Either way you lose valuable vitamins.

Whenever you can, cook vegetables with the skin on—especially potatoes. If you have to peel potatoes, make the peelings as **THIN** as possible, so as not to lose the food values that lie close to the skin.

Before you cook potatoes or other vegetables that differ in size, cut them into equal pieces. Then all the pieces will be cooked the same amount in the same time.

Here are some general rules for cooking vegetables. Cook only a small amount at a time. Use as **LITTLE WATER** as possible. Have the water **SALTED** and **BOILING** before you add the vegetables. **DO NOT ADD SODA**. Soda will make green vegetables turn darker in color, and some cooks used to think it made them prettier. But soda destroys vitamins and makes the vegetables

mushy. Cook vegetables only until they are tender—no more. If vegetables are overcooked they won't taste good and they'll lose those food values you're always hearing about.

Serve vegetables right away—don't let them stand. That means knowing how long to cook them and what time to start. Look on page 190 of the appendix for a timetable for cooking vegetables.

Add melted butter or sauces just before serving. Taste before you serve and add salt and other seasoning if needed.

SALAD

Salad isn't just something extra—it's part of the meal. It's full of vitamins and minerals and it provides roughage—the stuff that pushes waste matter along in your intestines. And besides all that, a tasty salad makes a meal more enjoyable. A good salad is an attractive, colorful COMBINATION of greens and other vegetables or fruits—not just a hunk of lettuce on a plate. If salad doesn't look pleasing, people won't touch it or they'll leave parts of it uneaten. Know your greens and what goes with them. Look at the list on page 192 of the appendix for some of the hundreds of combinations you can try.

Salad has to look fresh and be fresh. It should be one of the last parts of the meal to be prepared. Before you make the salad, SORT, TRIM, WASH and CRISP the greens. Wash them carefully to remove sand and dirt. Drain well. If you're using lettuce or cabbage as one of the main ingredients, cut it into strips or pieces or shred it.

Place the prepared greens in pans. Cover them with wax paper if you have some, and then with a clean, damp cloth. Put the greens in the refrigerator to chill and crisp before using.

If your salad is the kind in which several ingredients are mixed together, do the mixing carefully JUST BEFORE SERVING. Toss the ingredients lightly together,

small amounts at a time. Use a large fork to get everything well mixed.

SALAD DRESSING

A poor dressing can spoil a good salad. And a savory dressing gives that extra touch which makes the difference between an "ordinary" salad and a fine one. The basic kinds of dressing are mayonnaise, Thousand Island, Russian, cream and French. If you know these five, you can vary them to suit the salad.

Go easy on vinegar. Learn the effects of different kinds of vinegar—cider, tarragon, malt cider, Italian, or wine vinegar. In the same way find out what various seasonings and herbs do to dressing. Don't be afraid to experiment. Be sure to mix your ingredients thoroughly.

Add your dressing to fruit and raw vegetable salads just a few minutes before serving. But if the salad contains meat, fish, or COOKED vegetables, add the dressing one hour before serving. Then place the salad in the refrigerator to chill.

MEAT, POULTRY, FISH

The most important part of a dinner is meat. To some people, meat means only beef, pork, lamb and the like. When other people say "meat" they also include poultry and fish. Vegetables, salads, soups, drinks are all a part of the meal, but the dinner (and sometimes the supper) is built around the meat. Because meat, poultry or fish make up the main dish, you need a lot of know-how about preparing them. It's much trickier than fixing the other parts of the meal. That's why two whole chapters of this book are used to discuss cutting and cooking meat.

So in this chapter of general tips about meals, you'll skip the meat course. Just remember that you'll be coming back to it in Chapters 8 and 9.

However, before you leave the subject of "cooking around the clock," there are a few more points to consider.

SANDWICHES

Sandwiches don't belong especially to any meal but they're plenty important aboard ship. You'll serve them in rough weather, to officers on watch or coming off watch, and on modified G.Q. You may have to get them ready in a hurry, too, but that doesn't mean slapping a couple of slices of bread together with a little filler and letting it go at that.

The big thing to remember is—keep your sandwiches moist but not soggy. Use day-old bread if possible. Have all the materials you need right around you. Soften your butter by placing it in a warm place and then whipping it till it becomes creamy and easy to spread. Spread it from the corners and edges toward the center. Put plenty of filler in sandwiches. If you're using something dry like peanut butter, mix it with jam or mayonnaise and put in a leaf of lettuce.

Fillings made with meat, egg, or fish spoil quickly in a warm temperature. If you have to keep the sandwiches an hour or more, put them in the refrigerator immediately after making. Cover them with wax paper—not with a damp cloth.

LEFT-OVERS

Don't waste anything—that's good motto for a Steward or Cook. If your meals are well-planned, you won't have much left-over food. However, you may have some bones, meat, vegetables left over. **DON'T THROW THEM AWAY.** You can make some of your best dishes out of them.

You can make excellent soup stock from bones, skin, and gristle. Never throw meat away because there's just a little left or because it's tough. You can always grind it or cut it into small pieces, and make

a tasty dish of it. Left-over meat can be used for hash, stew, meat pie, croquettes or souffles. Even the scraps left on bones can be used in minced dishes.

Left-over vegetables have lots of uses—in soups, salads, and stew.

Save your stale bread. You can use it in puddings or dry the crusts for crumbing. Small pieces of stale bread can be toasted for croutons to put in soup. Or you can freshen up a whole stale loaf by steaming it in a closed oven for 15 minutes.

WARNING—left-overs that are handled wrong may breed bacteria which could cause food poisoning. Left-overs should be refrigerated as soon as possible, and used within 36 hours. Hot left-over food should be placed in the refrigerator as soon as it is cool enough to handle. Cold food should be placed in the refrigerator immediately. All left-over food should remain in the refrigerator until time to prepare it for a meal.

PRETTY IT UP

When the very sight of food makes your mouth water, then it's a pretty safe bet that the food has been well prepared and served. In fact, many people believe that a meal actually **TASTES** better if it **LOOKS** attractive.

COLOR is important. Don't serve macaroni, cauliflower and custard all in the same meal. Green and red vegetables look good when they are contrasted with potatoes or rice.

Vary the **TEXTURE** of the food and the manner of cooking. Don't serve creamed soup and creamed potatoes in the same meal, or two kinds of baked or fried vegetables at the same time. Vary your **FLAVORS**, too. Use pickles, sauces and condiments of all kinds.

Garnishing is a good way to make food look attractive. Besides peppering up the color scheme, it improves the taste of many dishes. There are endless ways of garnishing. Here are a few of them.

Brighten your cabbage salads with strips of pimiento and green pepper. Sprinkle paprika on mashed potatoes or potato salad. Slice hard-boiled eggs to garnish spinach. Sprinkle chopped parsley over soups, stews, gravies, and plain vegetables like boiled potatoes. Never serve food that looks dry. Melted butter, gravies and sauces all help.

Always provide the **EXTRA** something that will make food look and taste better. Serve slices of lemon with fish, cheese with apple pie, and apple sauce or sliced oranges with roast duck. Use your imagination. **VARY** your garnishes so they will always be effective.

HOT AND COLD

When food is meant to be hot, **SERVE IT HOT**. Vegetables should be steaming; meat should look as if it just stopped sizzling.

If food is supposed to be cold, **SERVE IT COLD**. This is every bit as important as keeping hot food hot. Keep cold food in the refrigerator until the last minute. Then in some cases you can use cracked ice to keep the food cold until it is eaten.

Keep the cold foods away from the hot foods or everything will be lukewarm. Nobody wants to eat lukewarm soup or melted ice cream.

Chill your fresh fruits—they taste best that way. Wash them thoroughly—especially grapes—so they'll look both cold and fresh. Cut the large bunches of grapes into small bunches.

CHECK UP ON YOURSELF

Suppose you've made out a menu for a week. Ask yourself a few questions.

Are these meals balanced—do they provide all the necessary food values and vitamins?

Is there a good color combination?

Are there good combinations of texture and flavor?

Are you staying inside your budget?

Are the foods you've planned available?

Are the meals varied? (That means NOT repeating the same menus from week to week. Don't let the officers expect certain things on certain days.)

Are the meals suited to the weather?

If you can answer yes to all these questions, you're doing a first-rate job.

FOOD POISONING

Food poisoning can kill a man. Or it can make him so sick that he almost wishes he would die. And even a mild case can put a man out of action for several hours. The symptoms are vomiting, diarrhea, and cramps. It's no fun, even if the illness does not become serious. You can easily PREVENT food poisoning among the men you feed if you know what causes it and how to control the causes.

The commonest kind of poisoning is caused by bacteria or germs. Harmful bacteria grow well in certain kinds of food—especially ham, chicken, turkey, custard-filled products, beef, hash, and tongue. These germs also lodge in any infected part of your body. They thrive between temperatures of 65° F. and 115° F. They need only a few hours to grow. If more than four hours pass between the time of preparing the food and the time of serving, that's long enough for germs to poison the food.

What to do about it? Remember the things that are friendly to harmful bacteria—INFECTION, the right TEMPERATURE, the right FOOD, enough TIME to grow in. Any men who have boils, infected cuts, or colds must be kept AWAY from food. Control sneezing and coughing in the galley or wardroom as much as possible. A sneeze or cough could spray enough bacteria on food to make the man who eats it plenty sick.

CHILL food that is not to be served immediately to a temperature below 65° F. Then bacteria can't grow.

To be sure the food is chilled all the way through, place it in shallow pans (not more than 3 inches deep).

Bread puddings, custards, eclairs, and foods with cream fillings should be covered, cooled quickly, and placed in the refrigerator or some other cool place until ready to serve. If you can't handle them in this way, don't serve them.

Keep bacteria from growing by observing the **4-HOUR RULE**. That means serving food **WITHIN 4 HOURS** of the end of the cooking period.

Grind food for hash and other dishes **JUST BEFORE** cooking. The ground food gives the bacteria more food surface on which they can develop. The grinding process also warms the food up to the temperature at which bacteria grow well.

Don't forget that **RECONSTITUTED** dehydrated foods and **THAWED** frozen foods spoil just as fast as fresh foods. The **4-HOUR RULE** still holds.

You read about poisoning from canned foods in Chapter 4. Rare nowadays. But if you have any reason to suspect that canned food is bad, **DON'T** serve it.

OTHER KINDS OF POISONING

Sometimes people are poisoned by **CHEMICALS**. This is caused by eating food that has been cooked in pots and pans made of certain poisonous metals.

The Navy provides cooking utensils that are safe to cook in. If you ever have to use any others, be sure that they are **NOT** grey enameled, cadmium plated, or galvanized iron.

Always **WASH** fruits such as apples, pears, and peaches before serving them. They may have been sprayed by the fruit grower with a spray containing some poison.

Insect poison sometimes comes in containers that can be mistaken for baking powder. So don't leave any can or box of poison on your food shelves or any other place where you might pick it up by mistake.

Leaky refrigerators give off a poisonous gas. Check your equipment daily for any such leaks.

Tin cans and aluminum containers are NOT poisonous. It is perfectly all right to keep food in a tin can after the can has been opened. In fact, the can is more sterile than a dish that has been washed in the usual manner.

Occasionally there are cases of poisoning caused by eating certain plants or seafood. Some kinds of mussels and shellfish are poisonous while other kinds are



Figure 33.—Some of the "danger signs" of food poisoning are swollen cans, certain kinds of mushrooms, mice, and flies.

not. The same is true of fresh mushrooms. It's better not to serve mussels or shellfish at all, and let an expert decide about mushrooms for you.

Rhubarb stalks make an excellent food. But don't use RHUBARB LEAVES—they contain a substance that is poisonous to some people.

As you go from port to port, you'll see in markets many plants and animals that are unfamiliar to you. Don't buy them unless you KNOW they are safe to eat.

TWO OTHER DANGERS

Dysentery is a common disease in tropical countries. It may be spread by impure water or contaminated food. The best safeguard against dysentery is absolute cleanliness.

Trichinosis is caused by a tiny worm called the trichina. The trichina sometimes comes aboard in pork. Inspectors can't be blamed for passing pork containing this worm, as it is too small to be seen. But YOU have no excuse for allowing anybody to get trichinosis. If you cook the pork THOROUGHLY the worm dies and causes no trouble. Rare pork is dangerous—never serve it.

CLEANLINESS

The best defense you can make against food poisoning aboard ship is cleanliness. If everything is spotlessly clean, germs won't be able to spread.

See that the Steward's Mates, Stewards, or Cooks under your supervision wash their hands and clean their fingernails frequently. Their clothing must be clean. Try to sell them the importance of cleanliness both for their own sake and everybody else's. Keep all equipment and utensils spotless and wash them in BOILING water.

Keep up a steady fight against insects and rodents. Trap mice and swat or poison flies. Flies carry millions of germs on their feet and they pick them up from the food or dirt that you've left lying about. So protect food from flies by covering it, and get rid of garbage and wastes PROMPTLY.



CHAPTER 8

CUTTING MEAT

MAKE THE MOST OF IT

Your meat-cutting may be nothing more complicated than carving a leg of lamb or a T-bone steak. At sea you probably will get frozen beef from the general mess with the bones removed and the meat cut into pieces. When you use other kinds of meat, the ship's butcher may do the sawing for you or cut the meat if it happens to be in larger pieces than you want.

But you may sometimes get a **WHOLE** carcass of lamb, a **SIDE** of veal, or a **QUARTER** of beef. This is likely to happen if you're on a big ship and the ship is in port, or if you're stationed ashore. So you have to know what cuts are where and how to get at them.

The navy way of meat cutting has been worked out to make the best use of all parts of the carcass—even the bones.

Beef is the most popular of all meats. Learn how to handle it first. Before you do any beef cutting though, study the beef chart on page 80 until you

BEEF CHART

LOCATION, STRUCTURE AND NAMES OF BONES

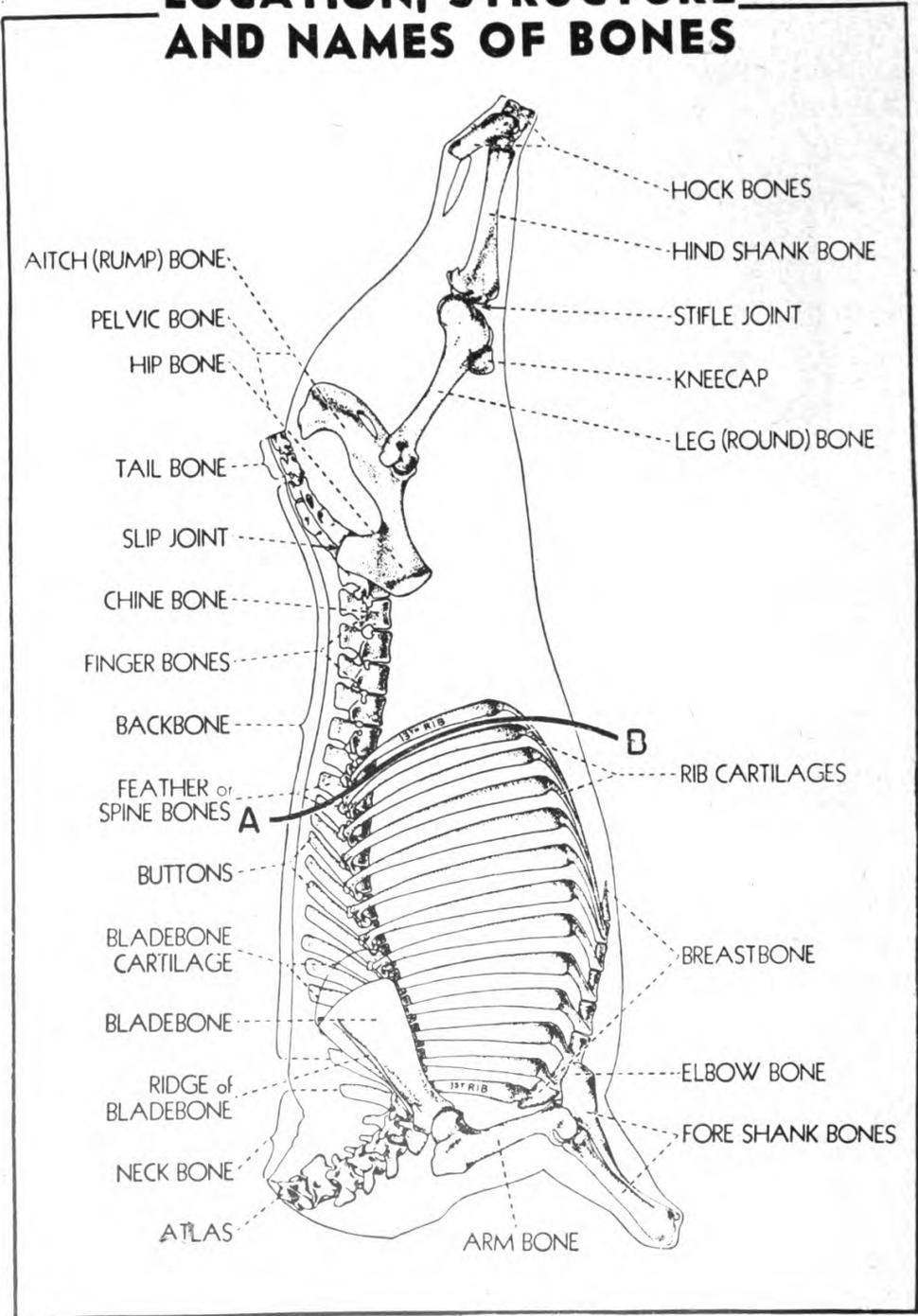


Figure 34.

have an idea where the bones are located. The line *A-B* shows where the division into quarters is made.

MAKING BEEF HINDQUARTER CUTS

Figure 35 shows a hindquarter divided into various sections which you should be able to recognize and cut. Dotted lines indicate pieces that are cut from the opposite side of the quarter.

Numbers 4 through 9 are used for roasts and steaks. This takes in about 46 percent of the hind-

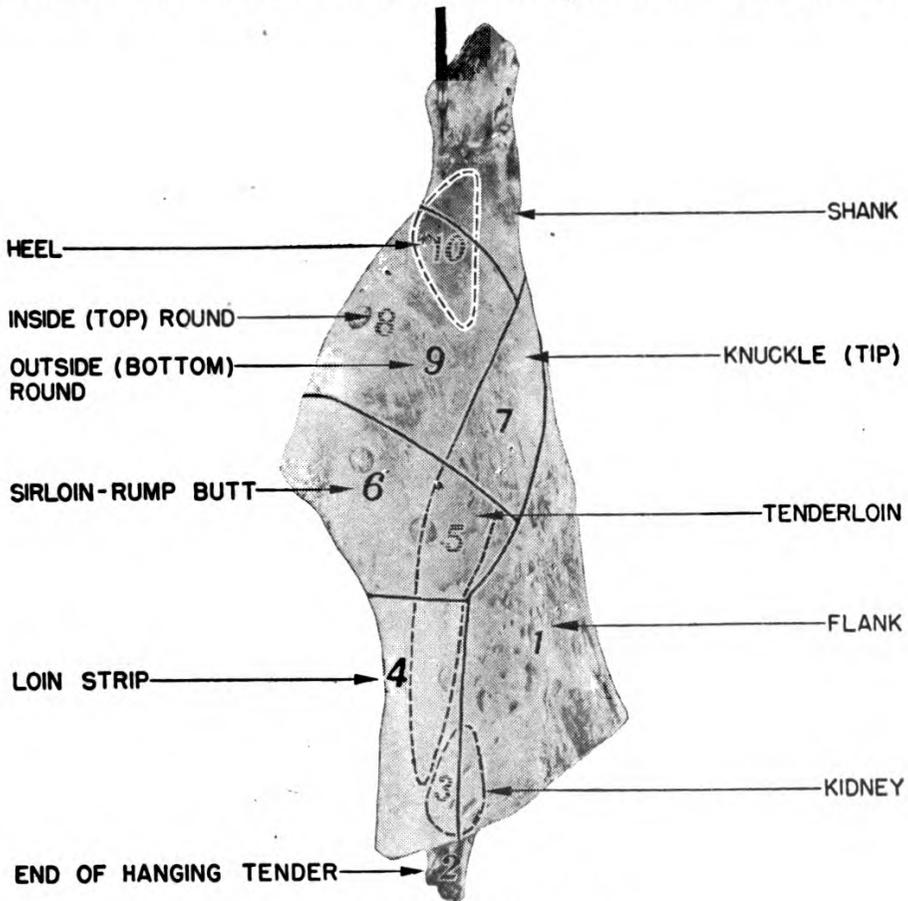


Figure 35.—Beef hindquarter.

quarter. Numbers 1, 2, 3, 10 and 11 (22 percent of the quarter) are used for braising, stewing or grinding. About 14 percent is made up of fat, used for covering lean meat and for cooking. Bones, 16 percent of the quarter, are used for making soup stock. Only 2 percent loss is allowed for cutting and trimming. Now for the cutting—

REMOVING THE FLANK

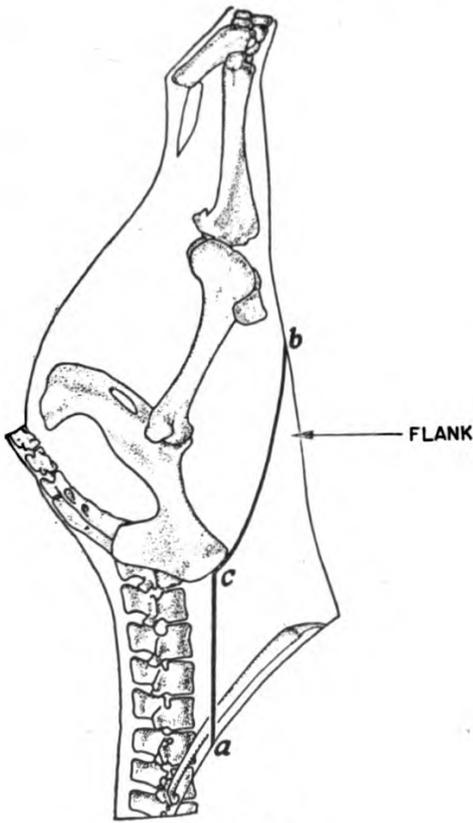


Figure 36.

Figure 36 shows where cuts should be made to separate the flank from the hindquarter. The cuts are made from *a* to *c* and from *b* to *c*.

How is this done? First of all, hang the quarter up as shown in figure 37. As indicated, saw through the 13th rib about 1 inch below the loin "eye" muscle. Next comes the knife.

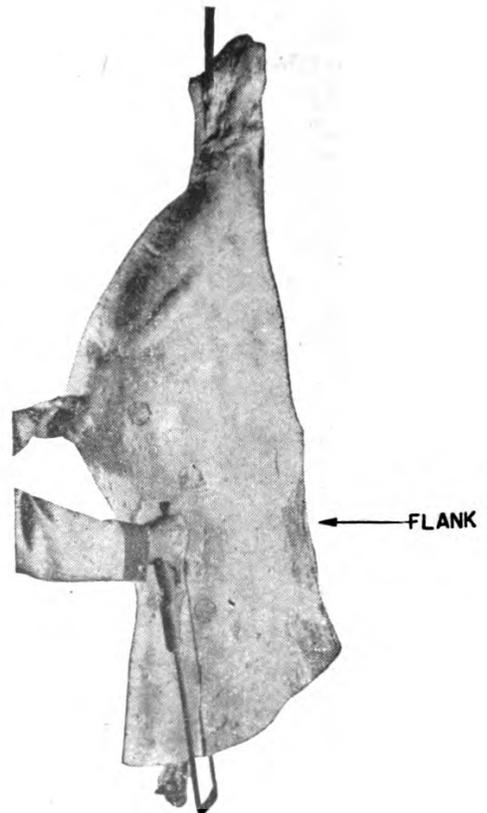


Figure 37.

Figure 38 shows how you cut straight up, parallel with the back, until the knife hits the hip bone.

Before making other cuts, remove the thin layer of meat from outside of flank (figure 39).

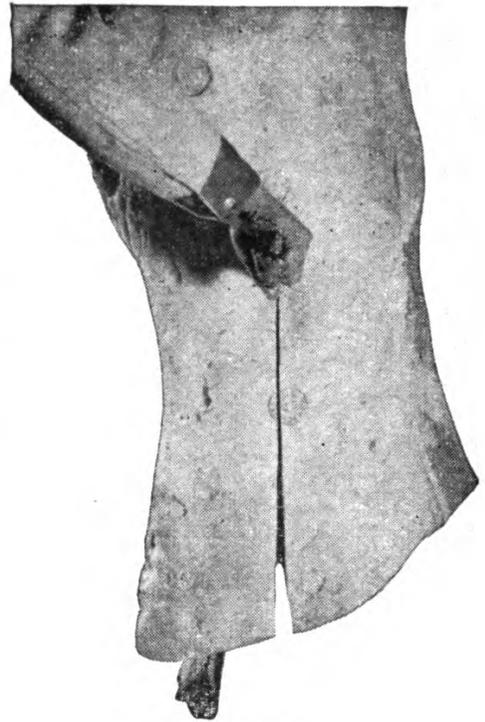


Figure 38.

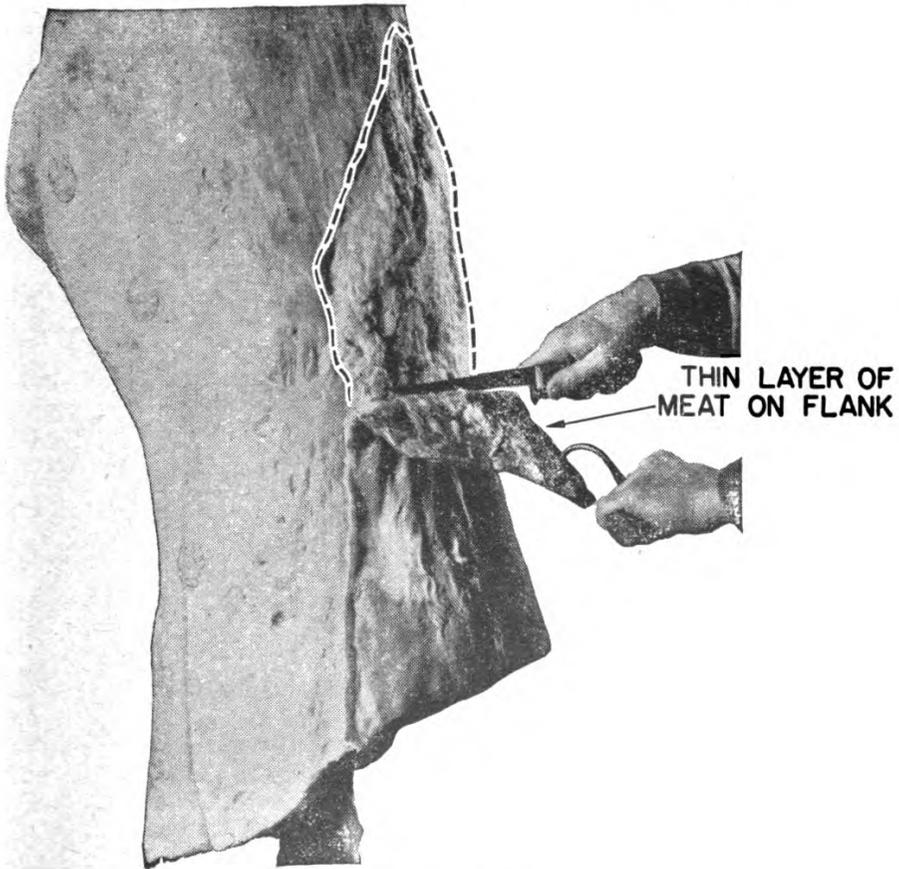


Figure 39.

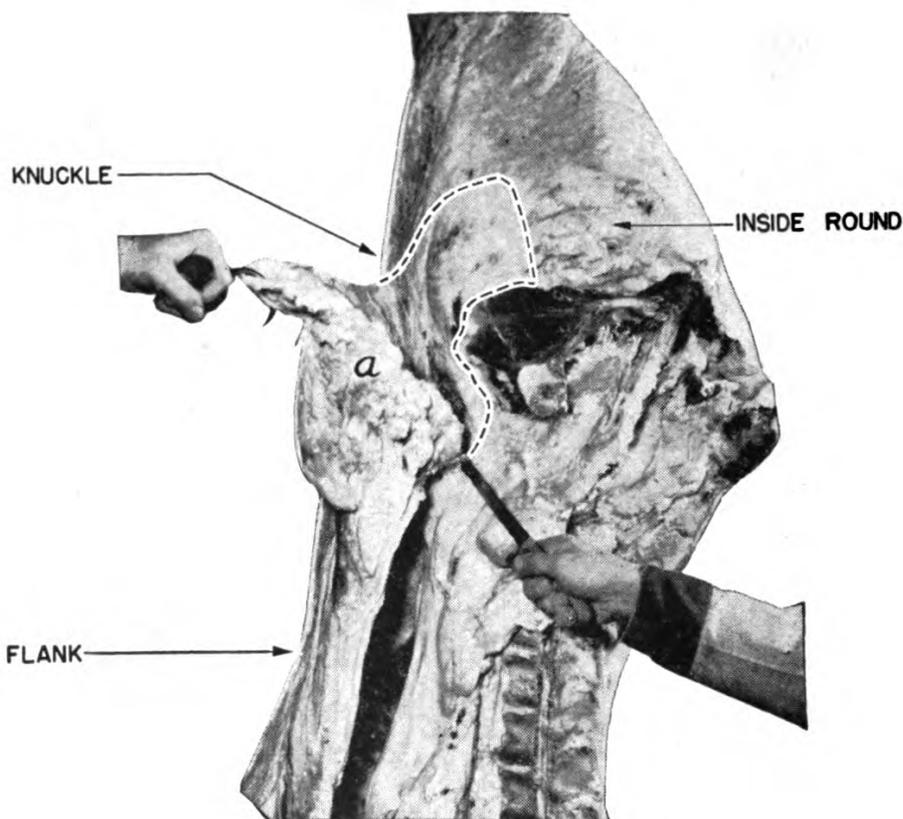


Figure 40.

Now, work on the other side of the quarter. Loosen the cod fat *a* shown in figure 40 by cutting through the seam over the inside round and knuckle. Broken line shows area to be cut. Flank is at left.

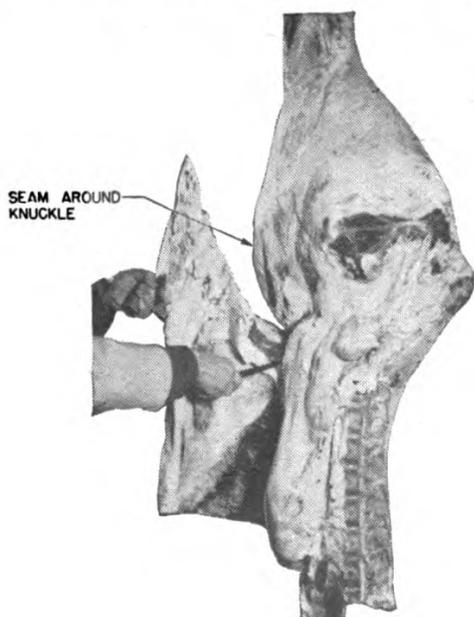


Figure 41.

Then cut through the seam around the knuckle to partially separate the flank from the hindquarter. See figure 41.

Finish separating the flank from the hindquarter as shown in figure 42.

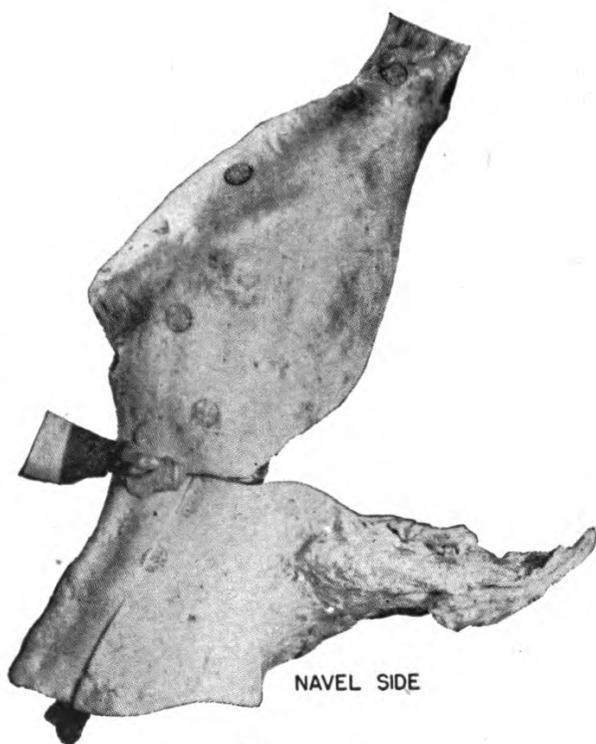


Figure 42.

CUTTING THE FLANK

Lay the flank down as you see it in figure 43. Cut the thin strip X from the navel side as shown.

Pull the membrane from the inside of the flank as pictured.

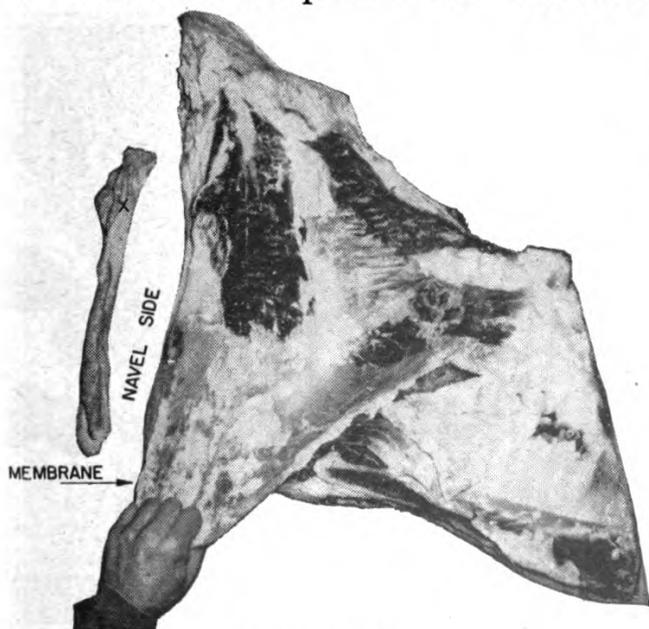


Figure 43.

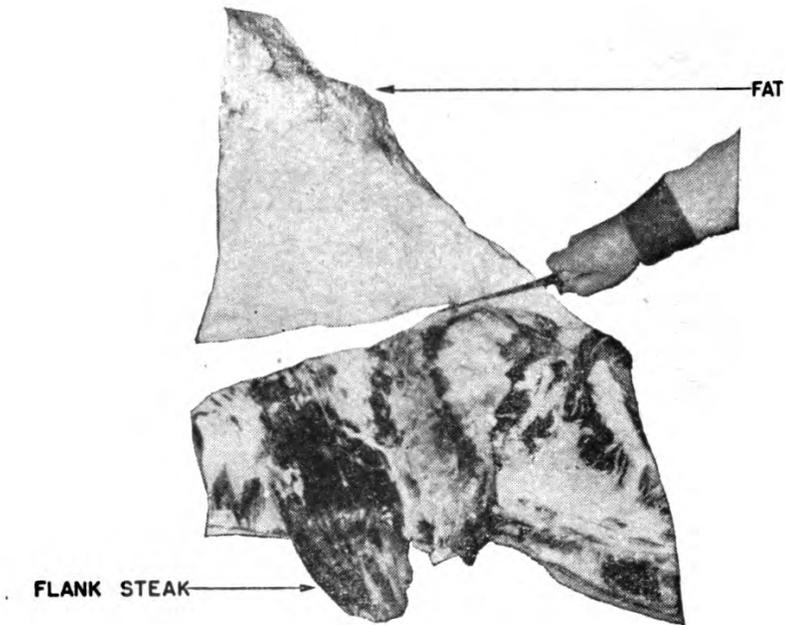


Figure 44.

Remove the piece of bone left in the flank when you sawed through the 13th rib. Lastly, separate the meat from the fat. Pull the flank steak—with meat attached—away from the fat as far as it will pull easily. Then make the cut seen in figure 44. Now the boneless flank is ready to be cut into pieces for stewing or grinding.

REMOVING THE HANGING TENDER

Your next job is to cut the hanging tender from the quarter. Now that the flank is removed, the hanging tender is revealed as in figure 45. Just before making this cut, remove the large blood vessel from along the edge of the chine bone as shown.

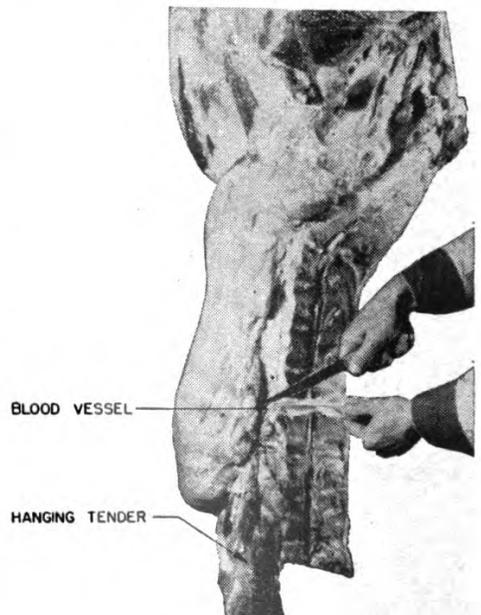


Figure 45.

Remove the membrane and surplus fat from the outside of the hanging tender. Split the tender and take out the strip of gristle.

This boneless hanging tender is then used for stewing or grinding.

REMOVING FAT FROM INSIDE OF HINDQUARTER

Before making any other cuts, remove the fat from the inside. Figure 46 shows the first step. Cut

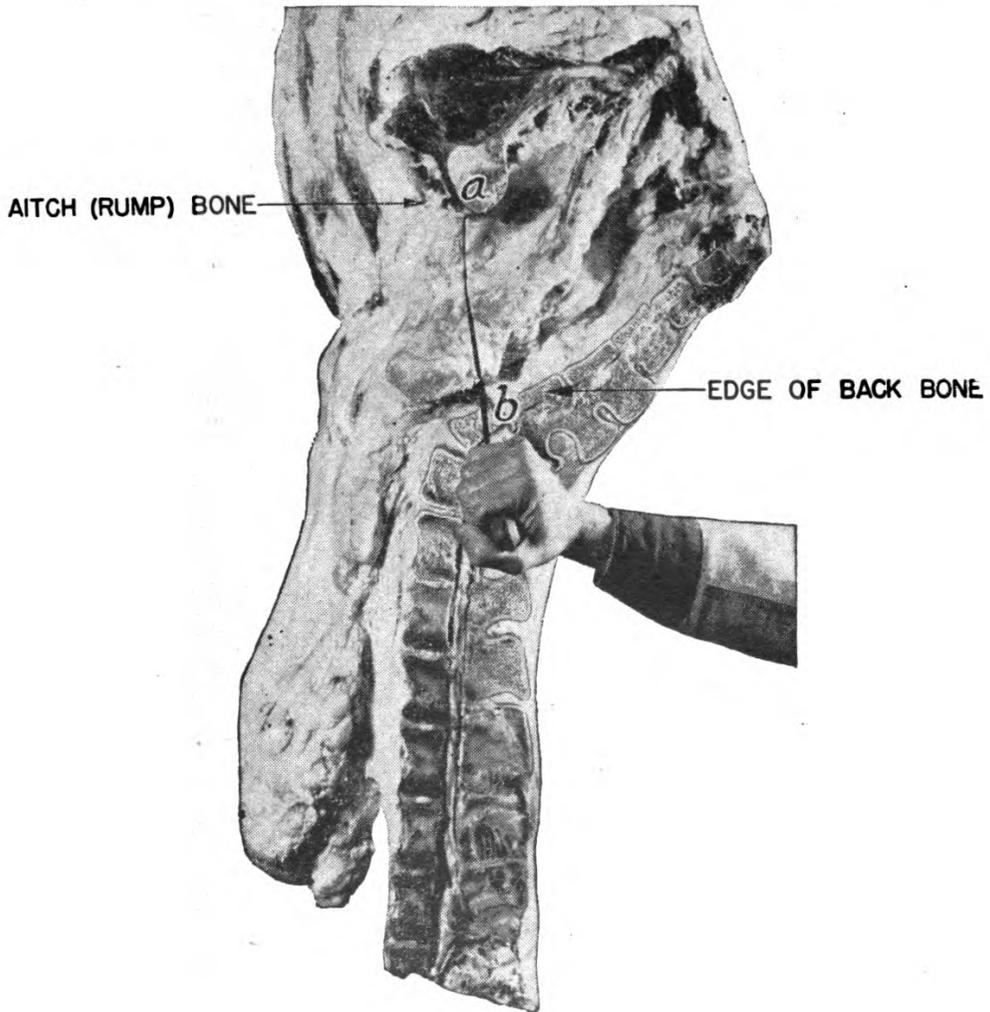


Figure 46.

through the fat from end of aitch (rump) bone *a* to the edge of the backbone *b*.

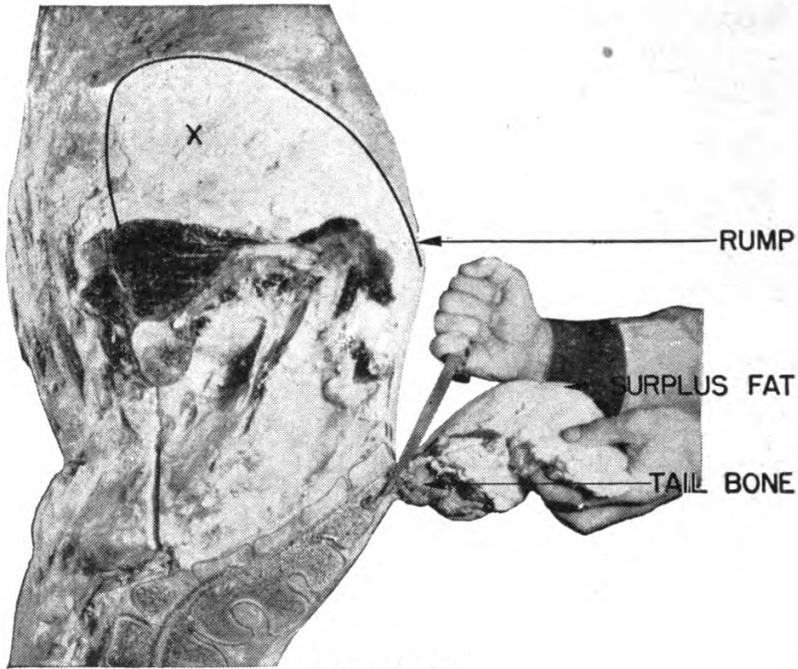


Figure 47.

Remove layer of fat (*X* of figure 47) leaving about $\frac{1}{2}$ inch on the meat. Cut the surplus fat from rump as shown. While doing this, unjoint and remove the tailbone (usually two tail vertebrae). Scoop the fat from inside the rump cavity (figure 48).

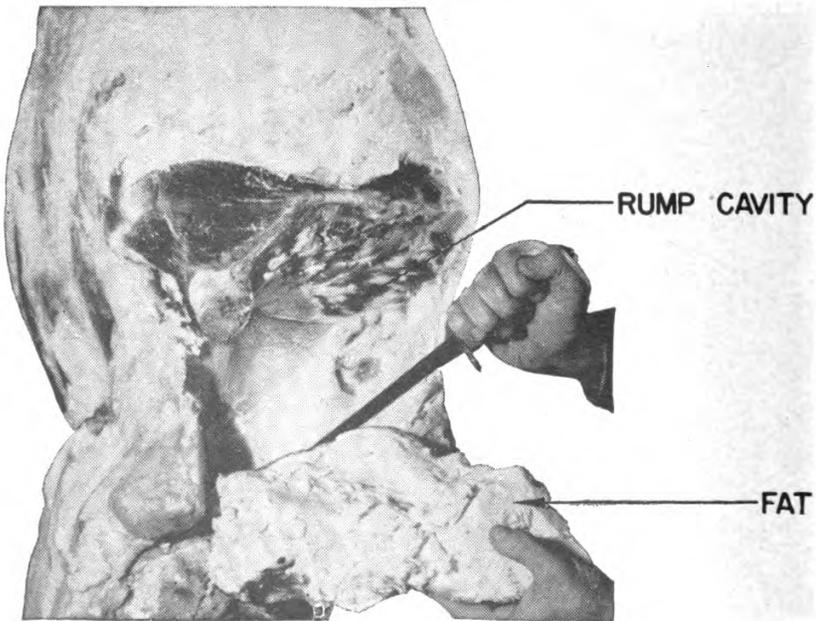


Figure 48.

Follow the seam to remove loin fat and the kidney knob as shown in figure 49.

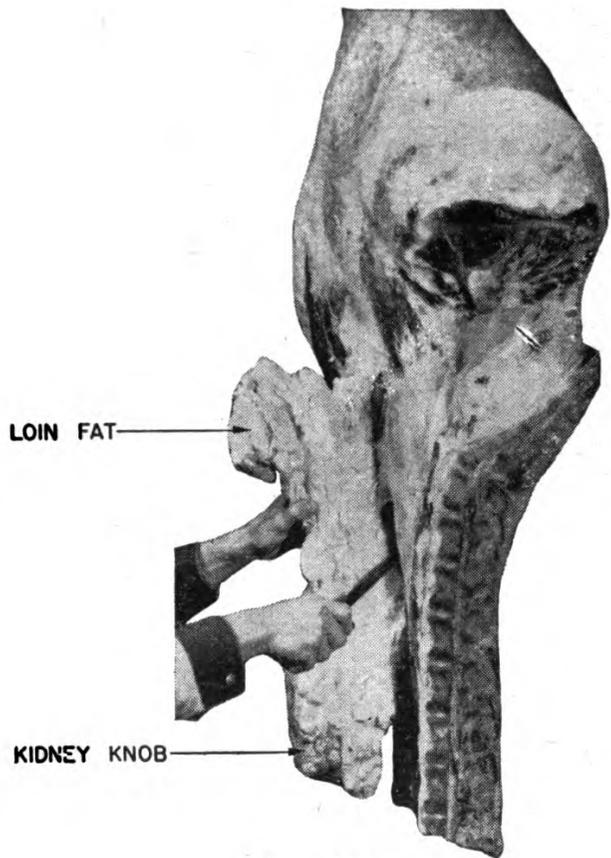


Figure 49.

Split open the kidney knob and take out the kidney (figure 50). Use the kidney with other meats in stews and ground meat dishes.

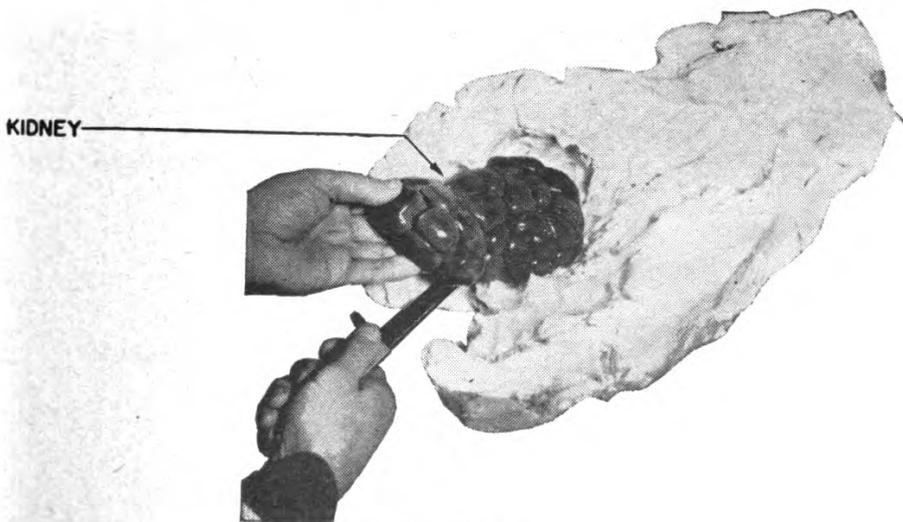


Figure 50.

REMOVING SHORT LOIN

Figure 51 shows how to remove the short loin. The butt end of the tenderloin (1) must be loosened

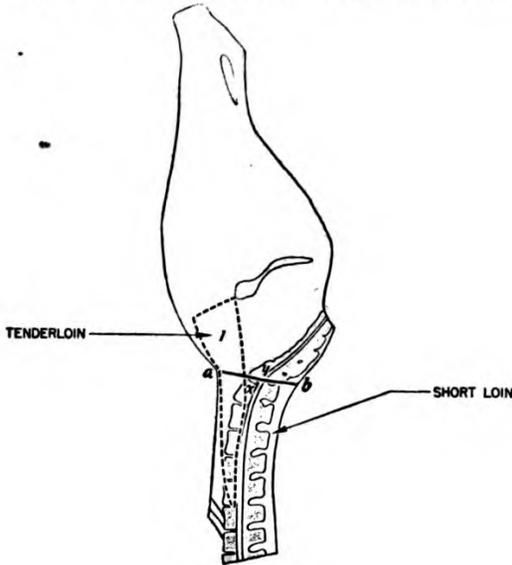


Figure 51.

and the short loin removed by making a cut between vertebrae *x* and *y* and then by cutting through the meat immediately in front of the hip bone from *a* to *b*. You don't need a saw for this.

First, scoop the layer of lean meat from the aitch (rump) bone shown in \times of figure 52. Use a boning knife.

Then cut on a line with the exposed aitch bone to separate the head of the tenderloin *a* from knuckle *b*.

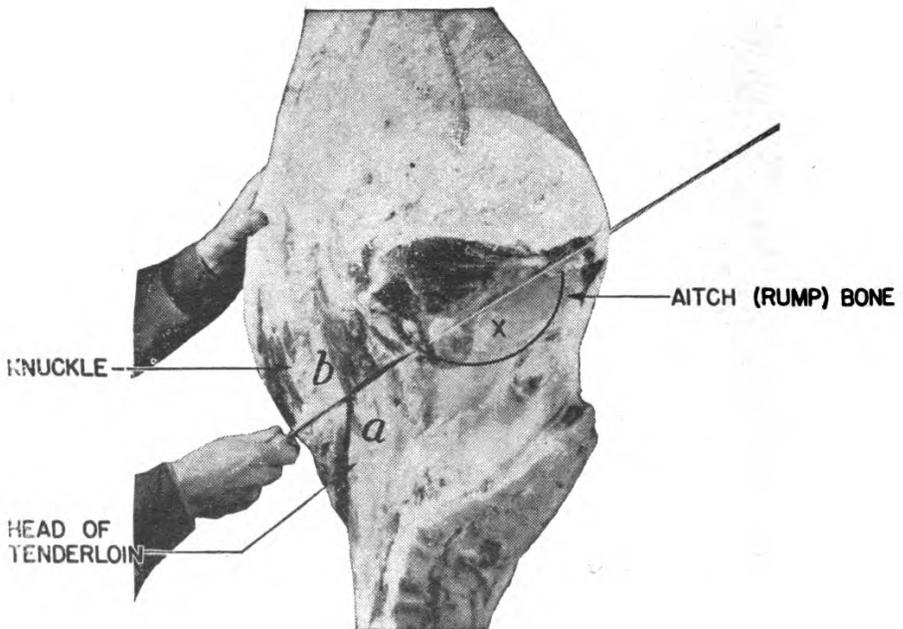


Figure 52.

Look at figure 53. Follow the seam over the hip bone to loosen the butt end of the tenderloin.

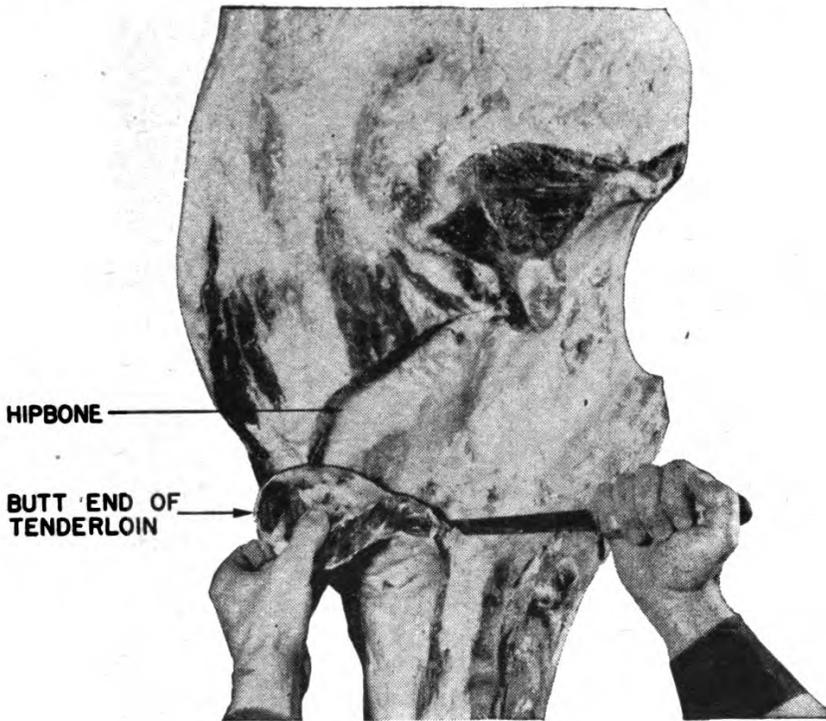


Figure 53.

Continue cutting under the tenderloin (figure 54) until the end of the hip bone is reached.

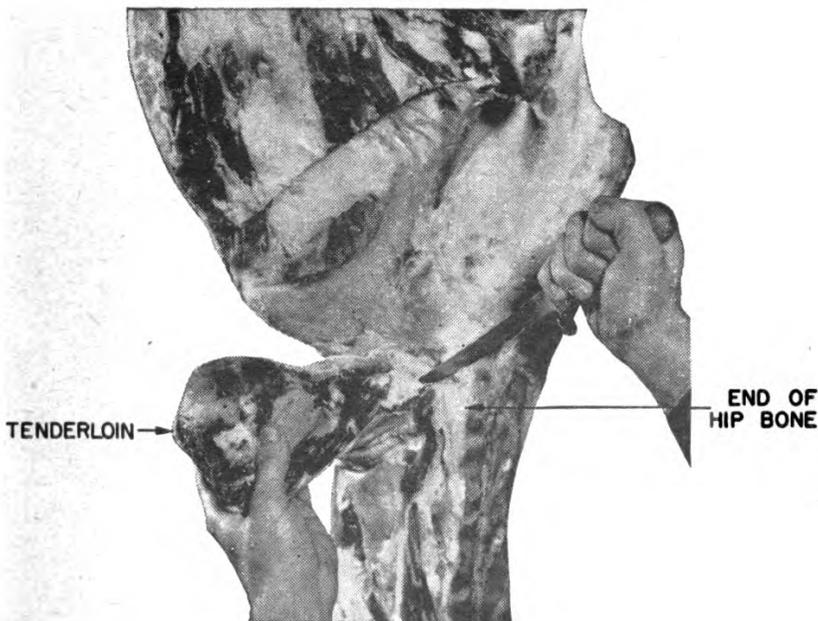


Figure 54.

Next, cut through the meat between the hip bone *a* and the last finger bone *b* (figure 55). Twist the

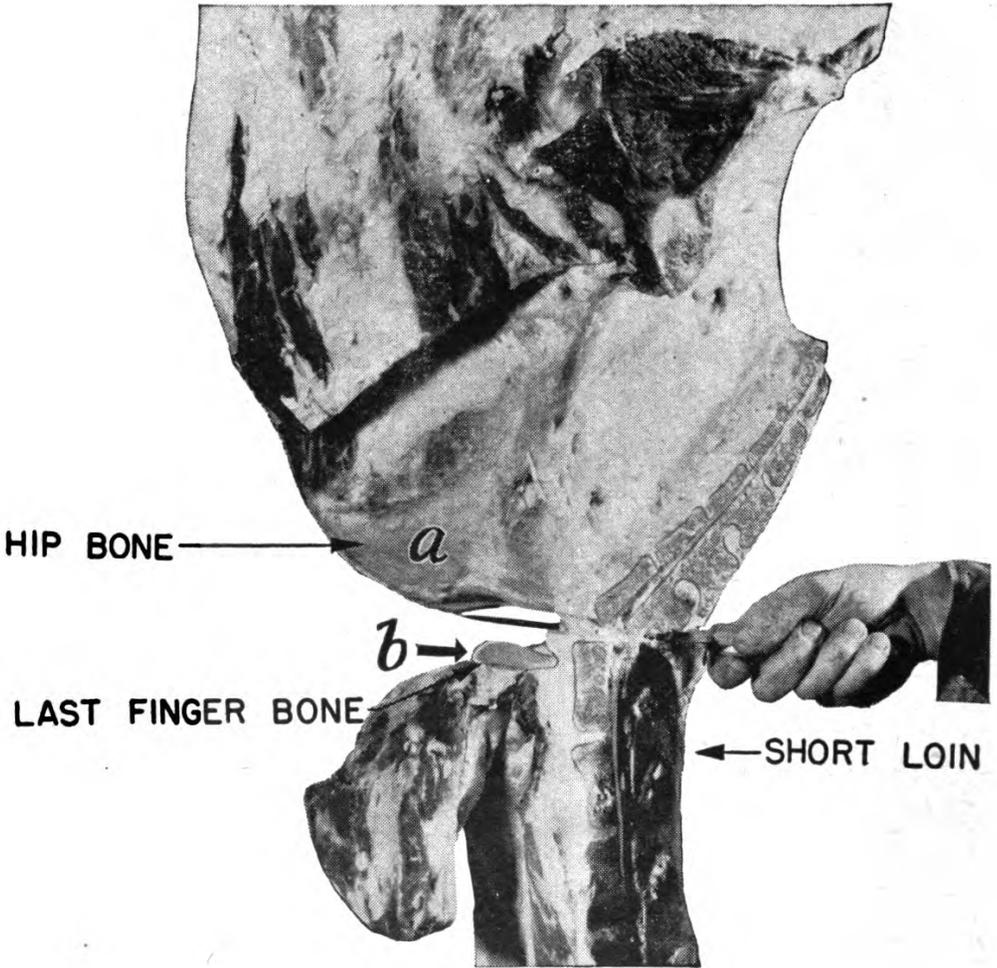


Figure 55.

short loin with your hands to free it from the rest of the quarter.

REMOVING AND TRIMMING THE TENDERLOIN



Figure 56.

Cut under the tenderloin to separate it from the short loin (figure 56). Remove the tough membrane from the outside of the tenderloin (figure 57).

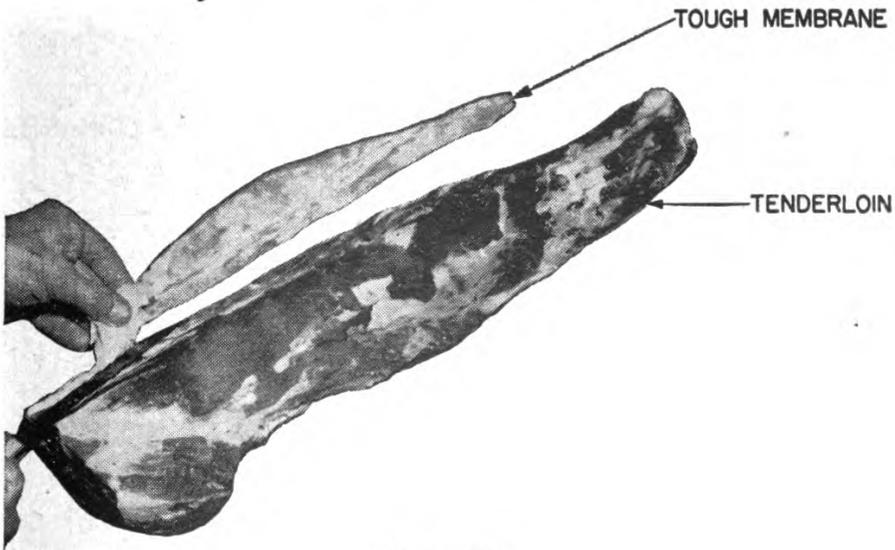


Figure 57.

The tenderloin is used for roasts or steaks.

THE LOIN STRIP

With the tenderloin removed, separate the loin strip from the backbone (figure 58).

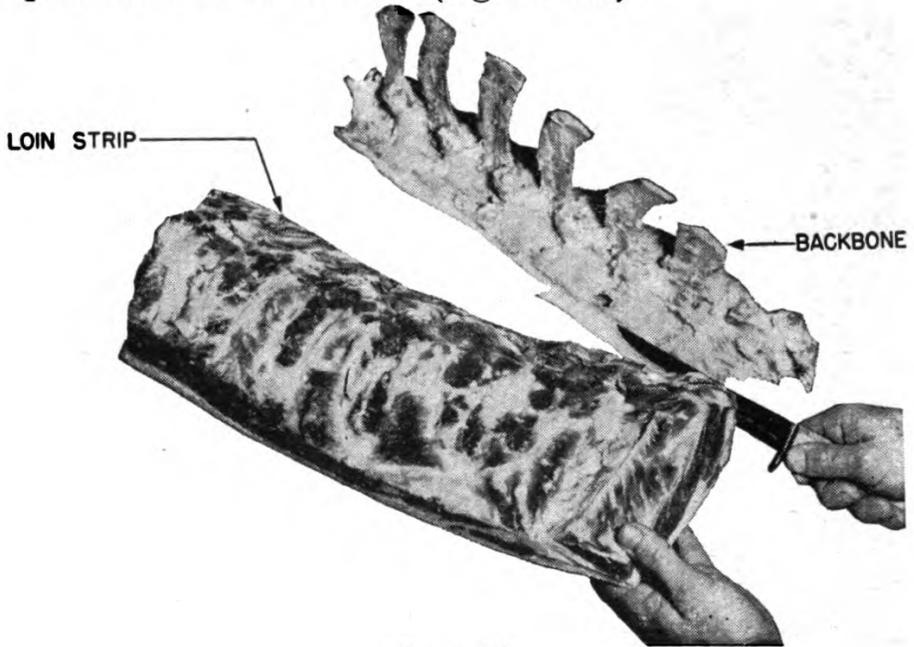


Figure 58.

Figure 59 shows the topside of the loin strip.

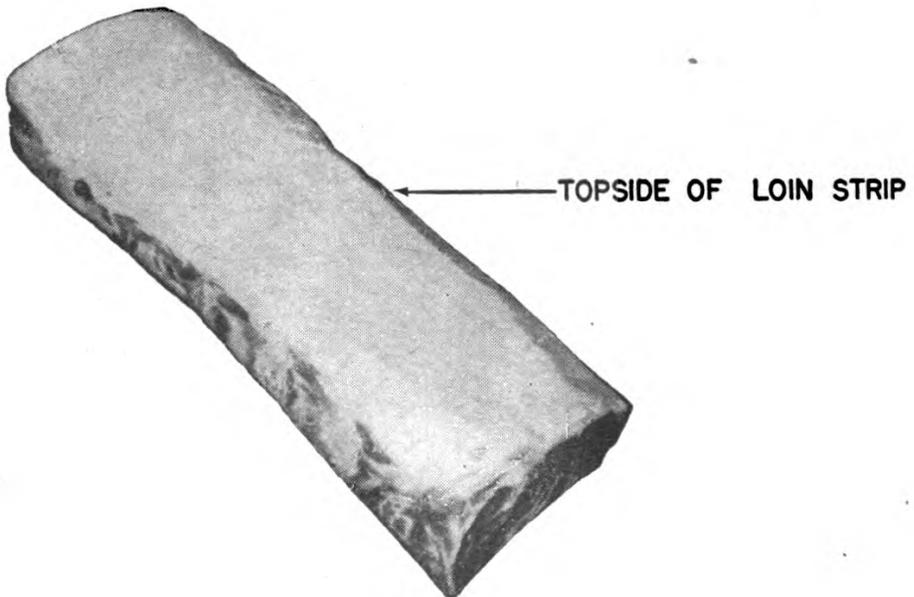
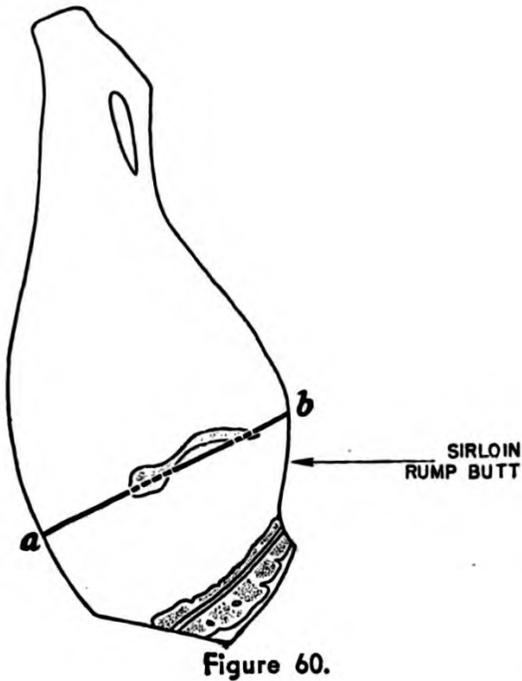


Figure 59.

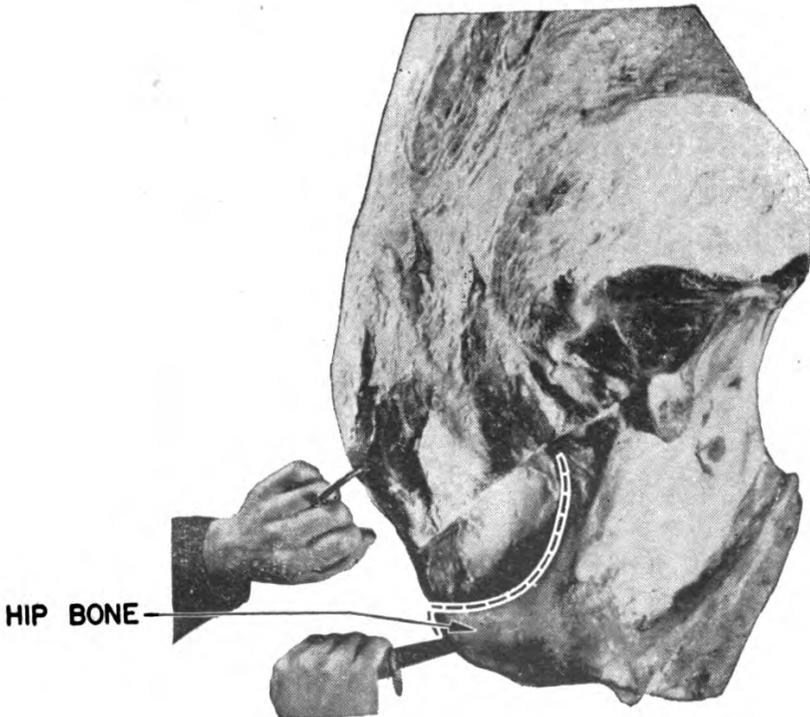
This piece of meat is excellent for roasts or steaks.

REMOVING SIRLOIN-RUMP BUTT

The line *a* to *b* in figure 60 indicates where the cut is to be made in order to remove the sirloin-rump butt.



Before this cut can be made, the rump and hip bone must be removed. Notice carefully how this is done. Loosen the meat from around the end of the hip bone as shown in figure 61.



Cut the meat free from the aitch (rump) bone (figure 62).

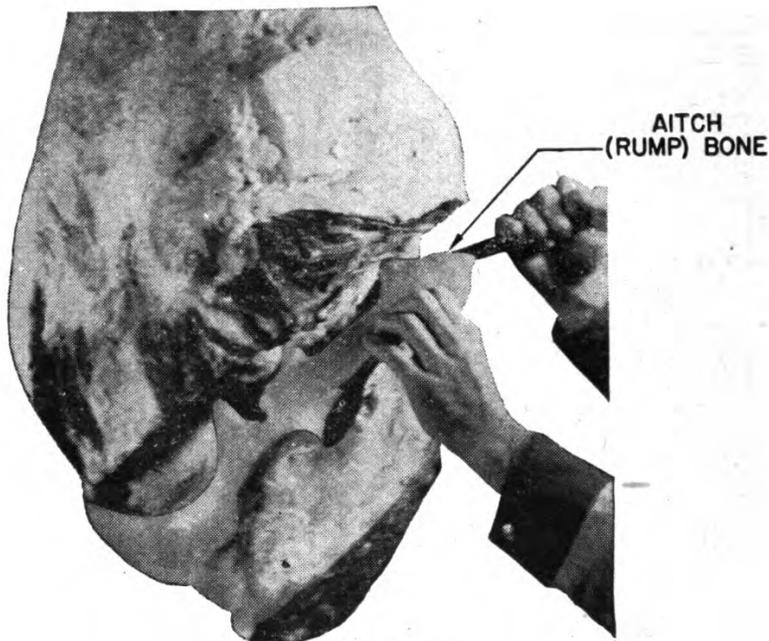


Figure 62.

Remove the bone by pulling it with one hand and cutting the meat free with the other (figure 63).



Figure 63.

Cut through both sides of the meat to the leg bone. Then cut around the ball end of the leg bone to separate the sirloin-rump butt from the round (figure 64).

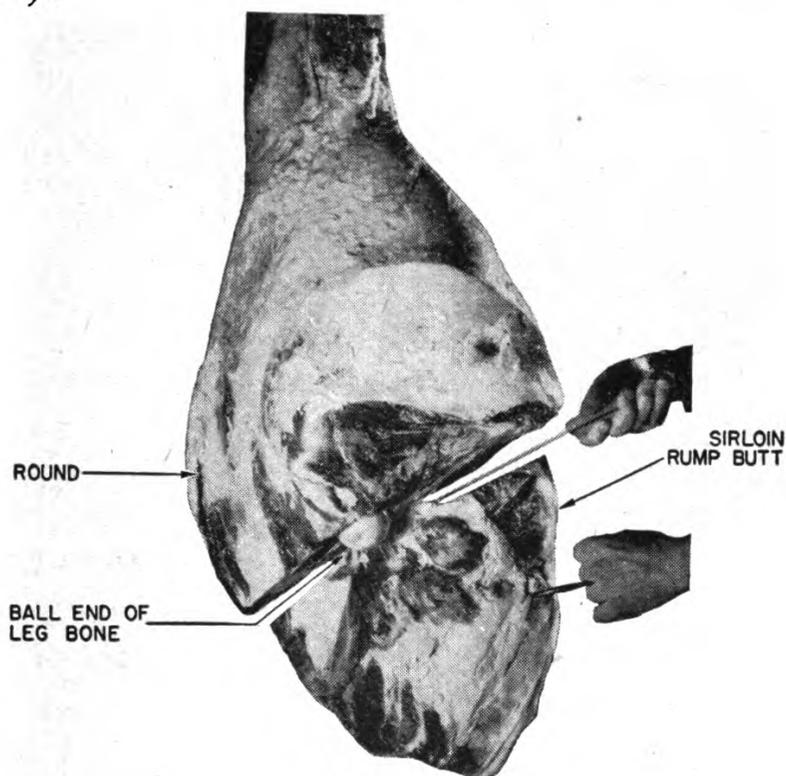


Figure 64.

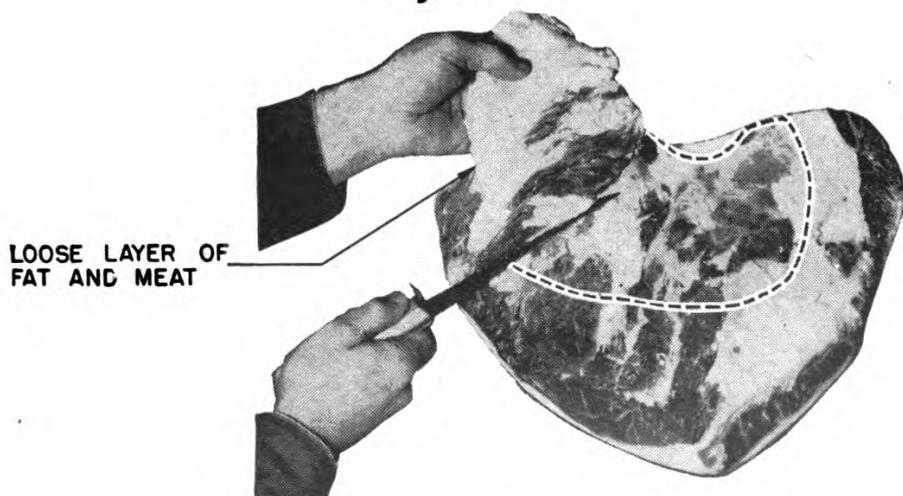


Figure 65.

Trim the sirloin-rump butt you have removed by cutting away the loose layer of meat and fat outlined by the dotted line in figure 65.

Split the sirloin-rump butt into two pieces by making the cut illustrated in figure 66. Cut the thin meat *a* from the sirloin section.

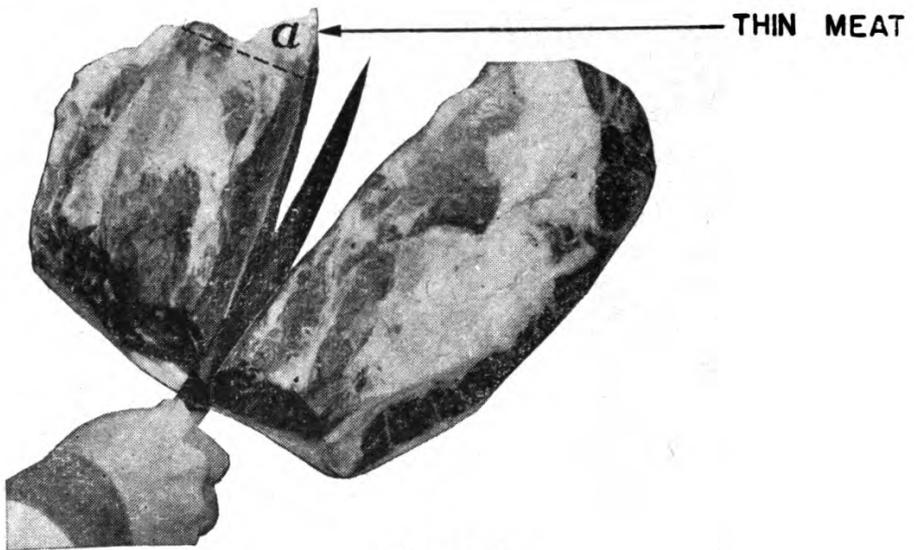


Figure 66.

The sirloin-rump butt is used for roasts or steaks.

MAKING CUTS FROM BEEF ROUND

Examine figure 67 to see what is to be done. The knuckle *1* is to be removed by cutting through the meat to the leg bone from *a* to *b* on BOTH SIDES of the round.

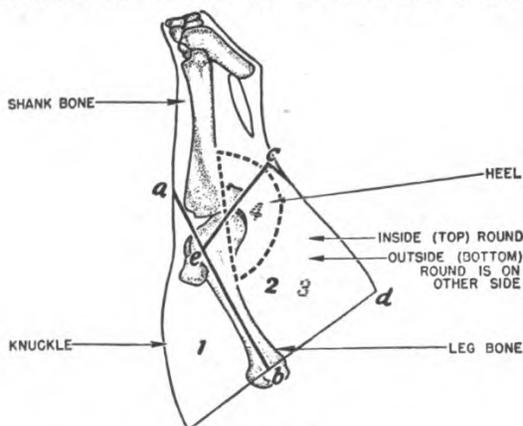


Figure 67.

The inside (top) round *2* will be removed by starting along the line *e* — *c* and following along the seam from *c* to *d* and *e* to *b*. The outside (bottom) round *3* will be taken off by cutting through the seam and around the heel *4*. The heel *4* is removed by cutting around the shank and leg bones.

The face of the beef round shown in figure 68 also shows the location and names of the cuts to be

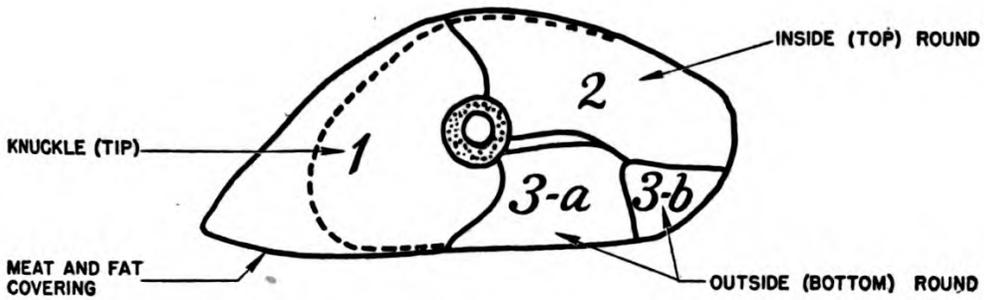


Figure 68.

removed. They are: knuckle (tip) 1, meat and fat covering, 1-a; inside (top) round 2; outside (bottom) round, 3-a and 3-b.

REMOVING THE KNUCKLE (TIP)

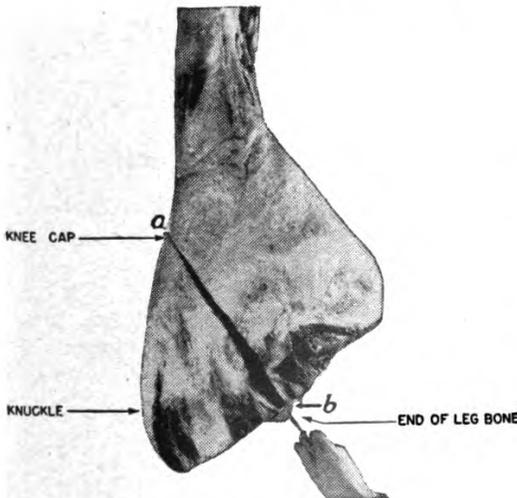


Figure 69.

On the inner face of the round, cut through the meat to the leg (round) bone from kneecap to end of bone as illustrated in figure 69.

Follow the seam to remove the meat and fat from outside of knuckle. (Figure 70).

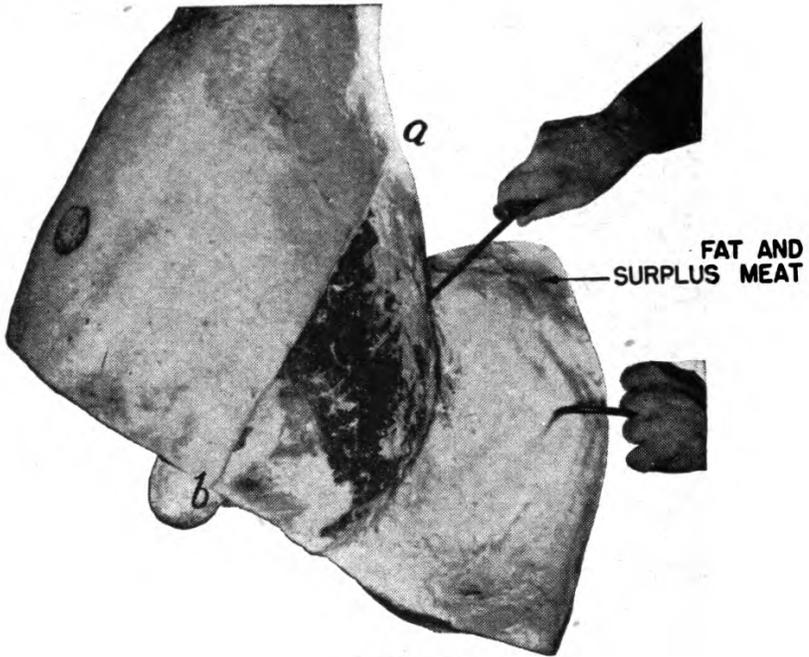


Figure 70.

Cut through the seam to leg (round) bone between *a* and *b* then unjoint the kneecap and cut through the membrane which covers the leg bone (figure 71).

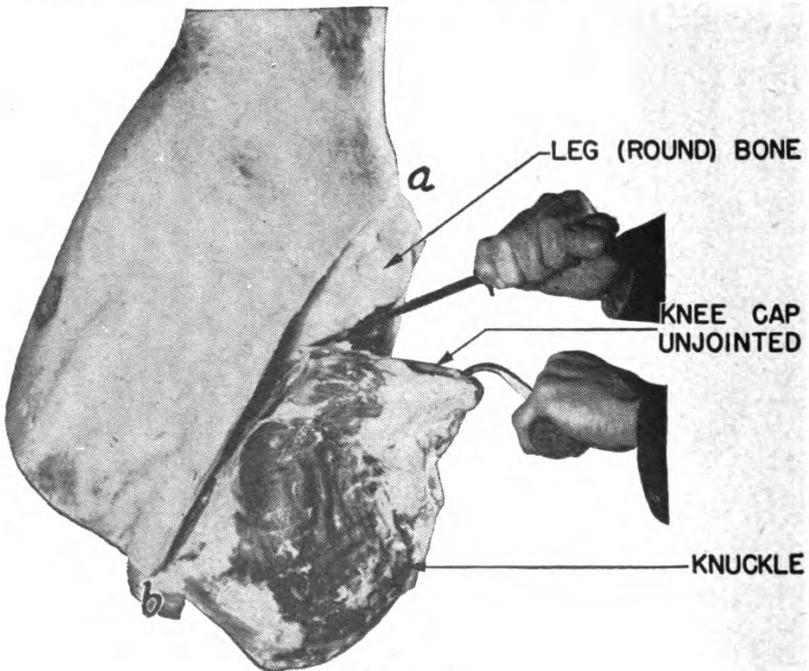


Figure 71.

Pull the knuckle (tip) from the leg (round) bone (figure 72).

Figure 73 shows how to trim the knuckle (tip). Cut the knee cap 1 from the knuckle 3; then follow the natural seam to remove the thin muscle 2.

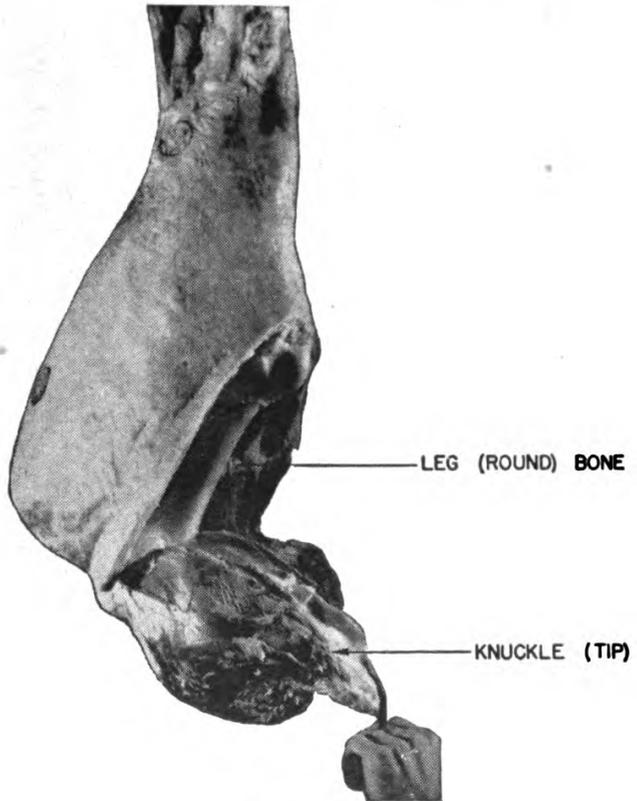


Figure 72.

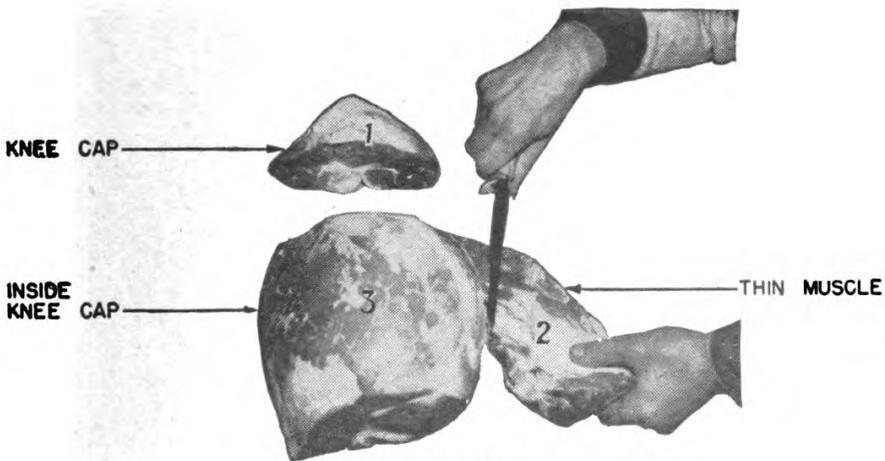


Figure 73.

The knuckle (tip) 3 is used for roasts and steaks.

REMOVING THE INSIDE (TOP) ROUND

After trimming the thin layer of dry meat and membrane from the inside (top) round, cut in a straight line with the tip of the knife from near the lower end of the gam cord *a* shown in figure 74 to the edge of "eye" muscle *b*.

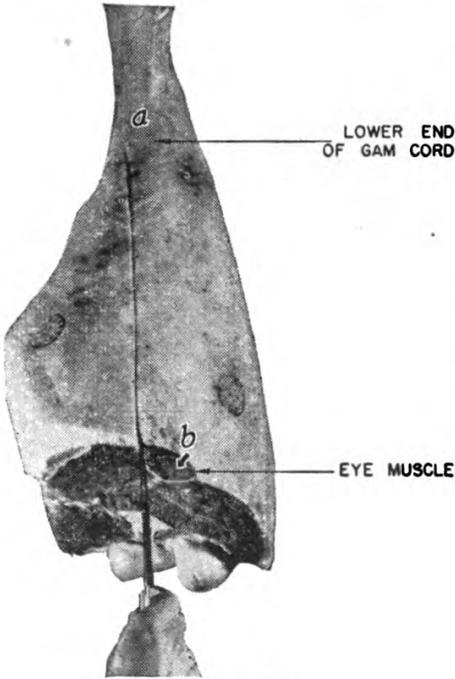


Figure 74.

Then cut from the lower end of the gam cord *a* along the line *a-b* to the upper end of the leg (round) bone *b* as shown in figure 75. Use the tip of the knife for this.

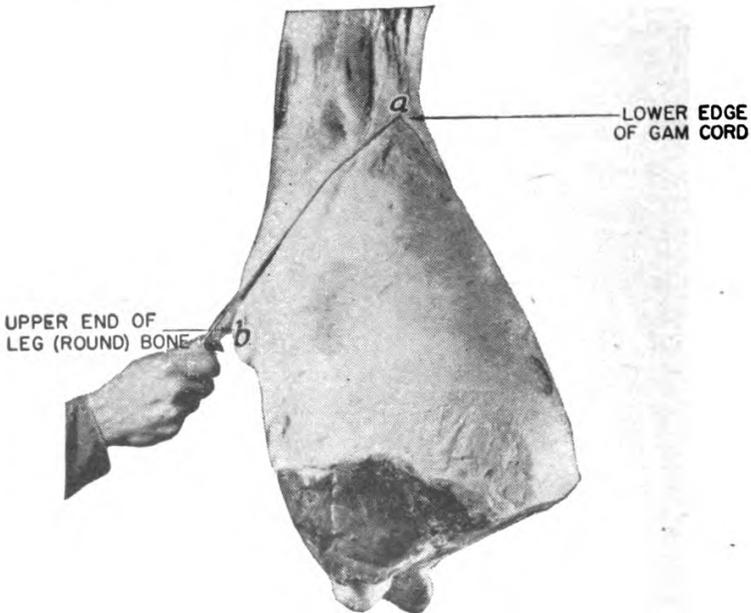


Figure 75.

Cut through the seam to separate the inside (bottom) round (figure 76).

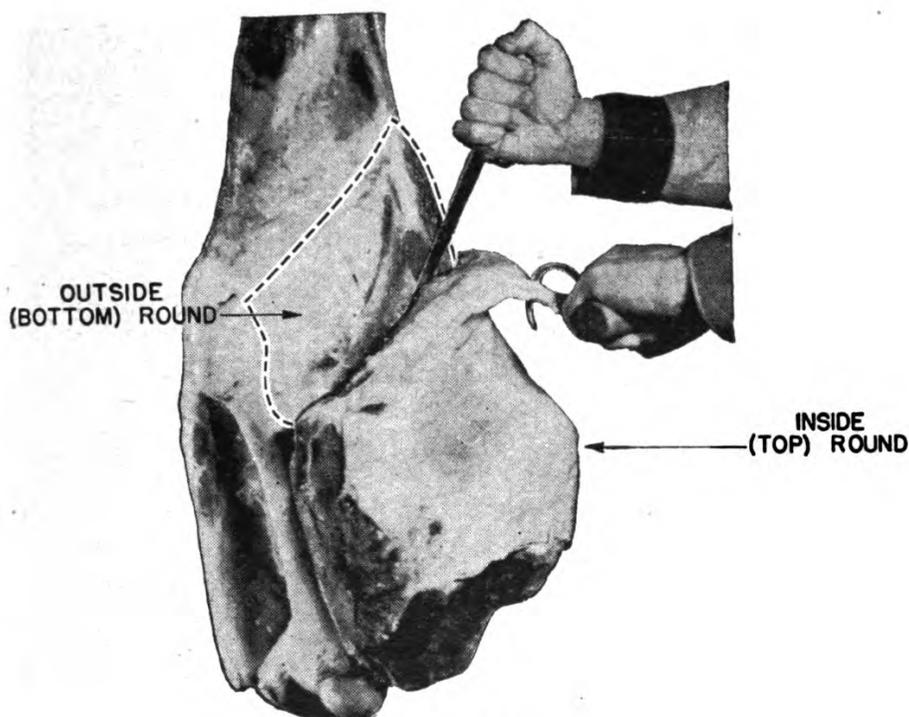


Figure 76.

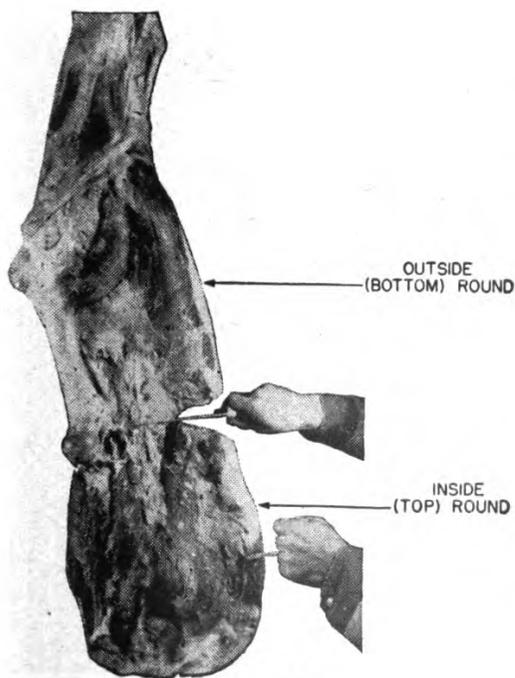


Figure 77.

Continue cutting through the seam to remove the inside (top) round (figure 77).

Cutting with the grain of the meat, split the inside (top round) into 2 or 3 pieces of equal size (figure 78). Trim the thin meat from the shank end of these pieces. Use for roasts and steaks.

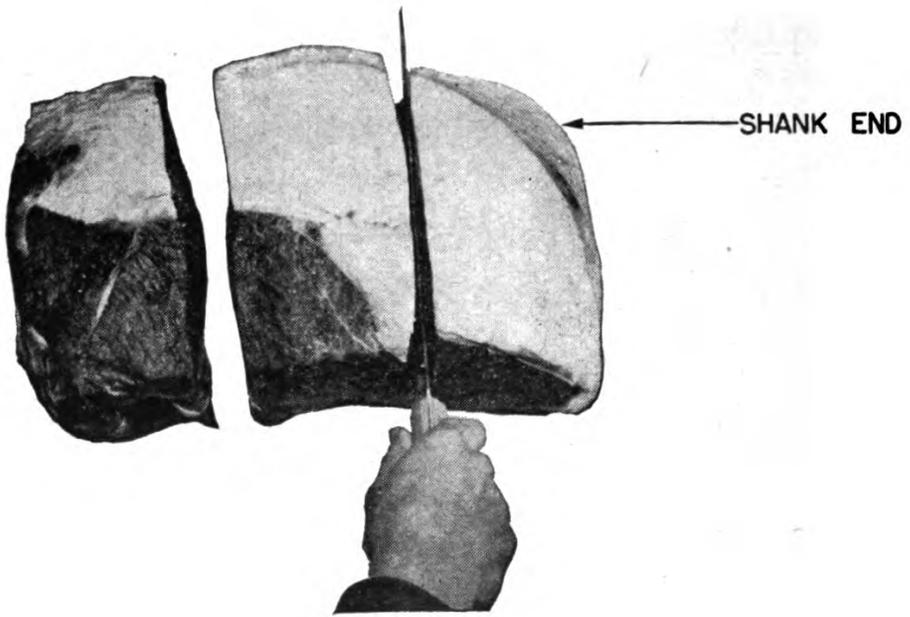


Figure 78.

REMOVING THE OUTSIDE (BOTTOM) ROUND

Cut through the end of the "eye" muscle to the first natural seam (figure 79).

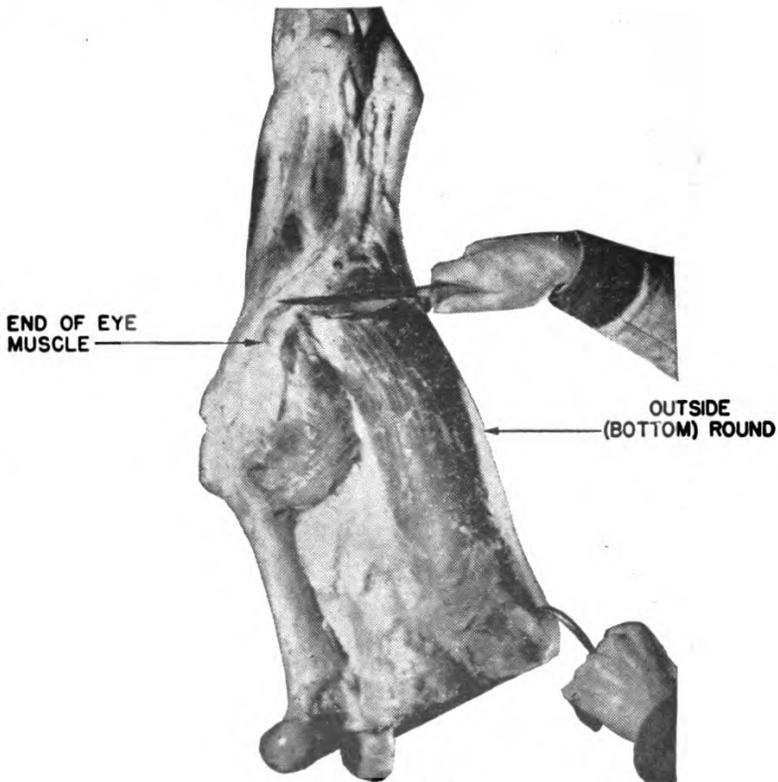


Figure 79.

Continue cutting with tip of knife (figure 80).

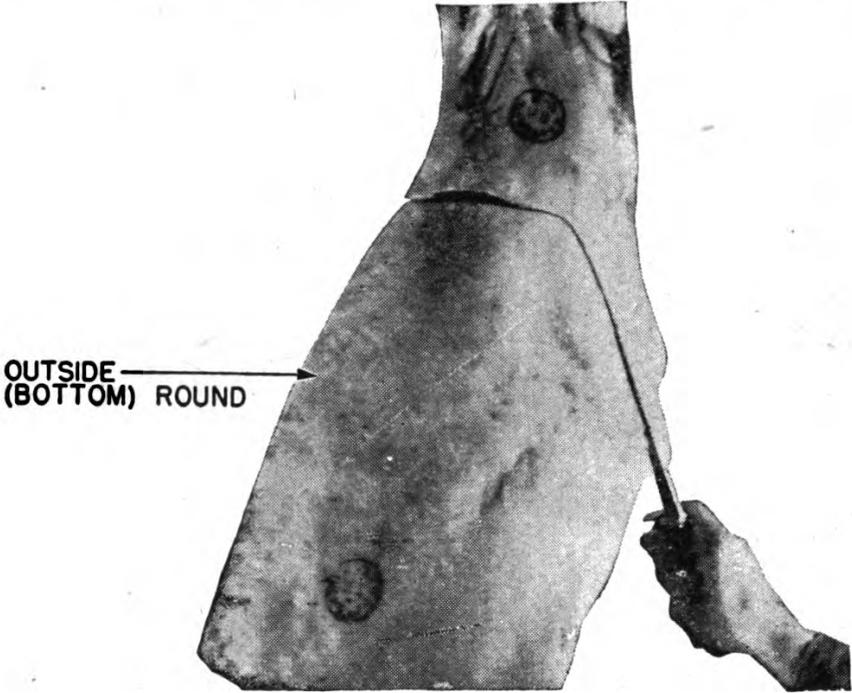


Figure 80.

Cut through the seam between the heel and the outside (bottom) round (figure 81).

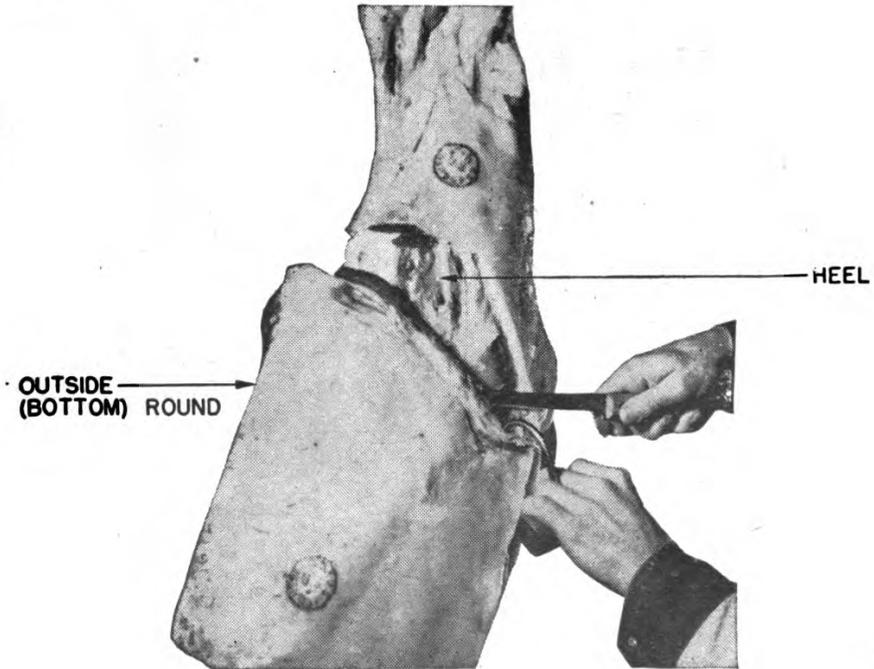


Figure 81.

Cut through the seam around the heel muscle (figure 82).

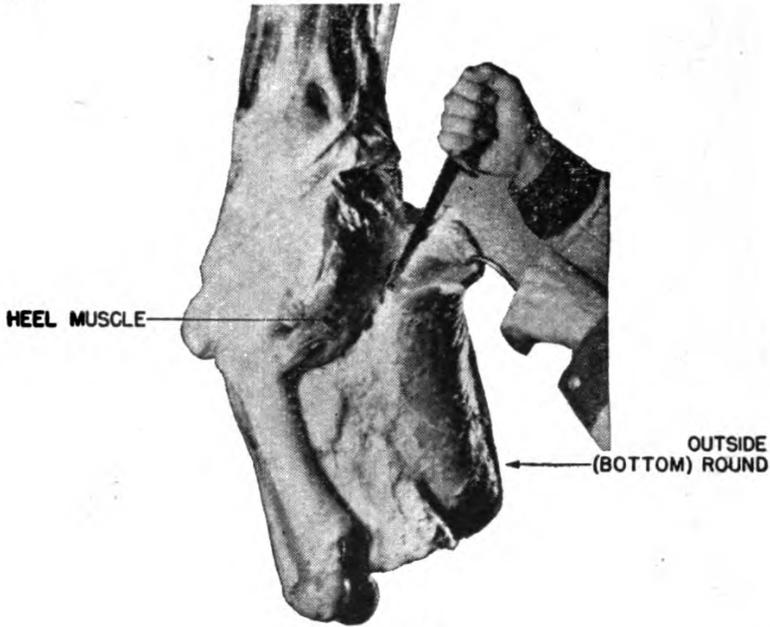


Figure 82.

Finish cutting through seam around heel: remove outside (bottom) round by freeing meat from leg (round) bone (figure 83). Trim surplus fat (section X).

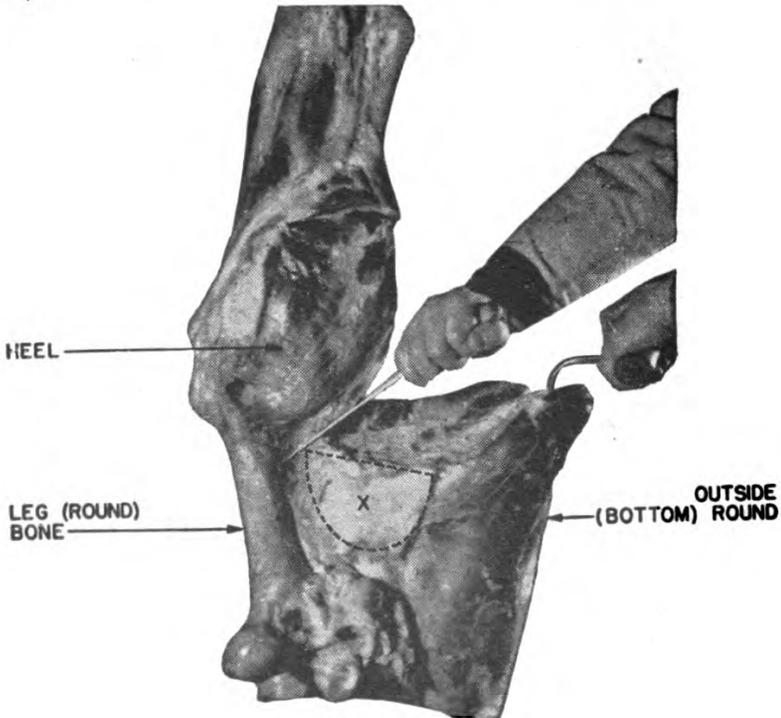


Figure 83.

As shown in figure 84, cut the tough membrane X from the edge of the outside (bottom) round. Divide outside (bottom) round into two pieces by cutting, with the grain of the meat, along line *a* to *b*.

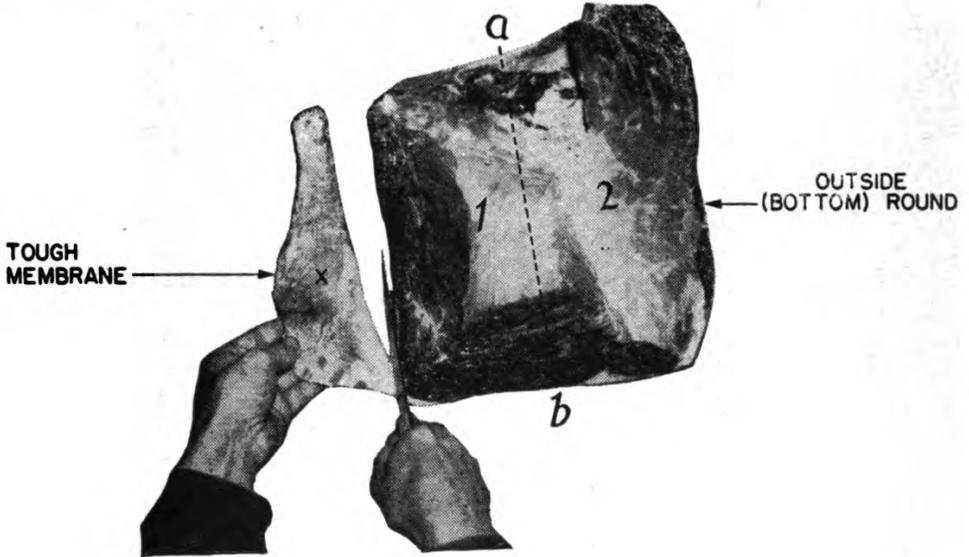


Figure 84.

Trim the thin meat from shank end of cuts #1 and #2 (figure 85). Cut #2 may be tied with 2 strings.

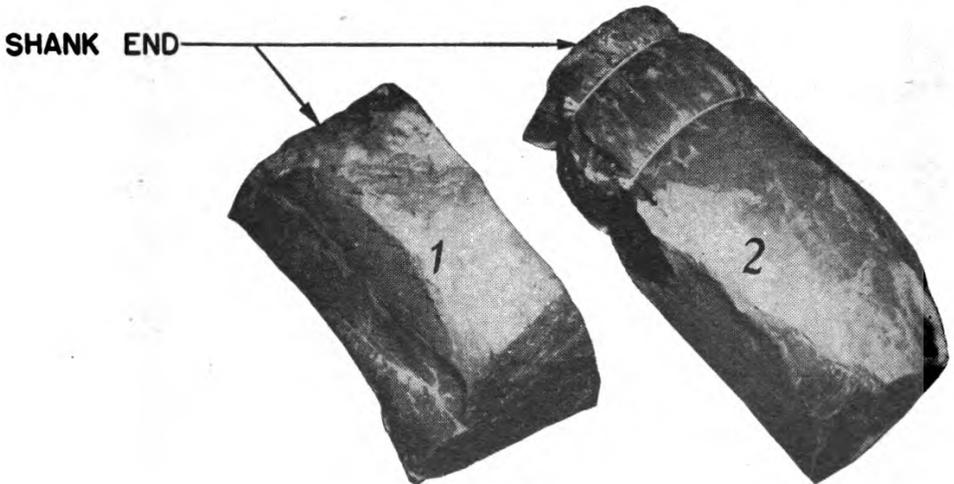


Figure 85.

These two cuts are used for braising as pot roasts or Swiss steaks. Use for roasting or as steaks for griddle broiling only when necessary.

REMOVING AND TRIMMING HEEL AND SHANK MEAT

Cut around the shank and leg bones to remove heel and shank meat (figure 86).

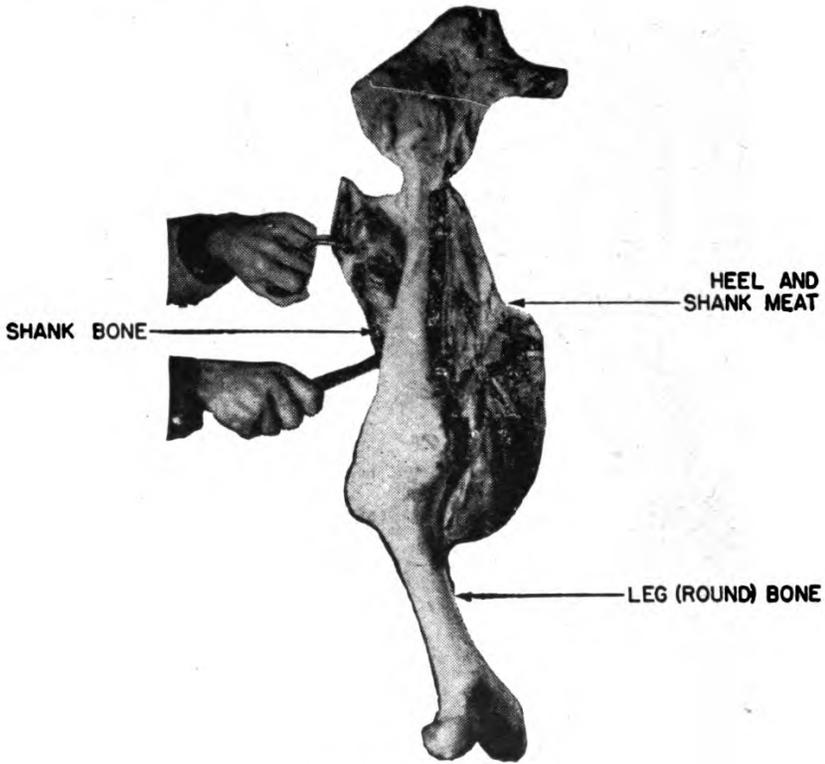


Figure 86.

Cut through the seam to separate the shank meat 1 from the heel meat 2 (figure 87). Trim the thin meat 3 from the end of the heel.

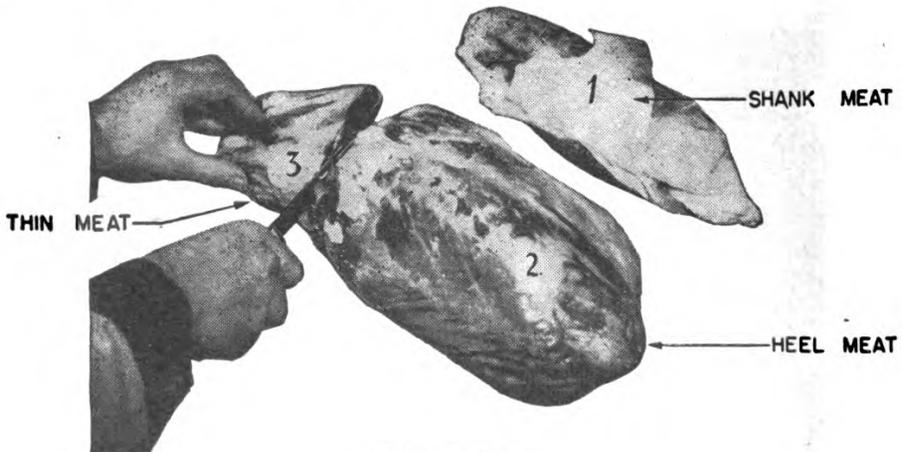


Figure 87.

The heel of the round 2 is used for braising as a pot-roast or for cutting into pieces for stewing or grinding.

USING MEAT TRIMMINGS, BONES, AND FAT

Cut the lean trimmings into pieces for stew, or grind, and use for meat loaf, beefburgers, salisbury steaks, or meat balls.

All fresh clean fat trimmed from beef quarters or cuts should be cut into strips, ground through a coarse plate, and rendered immediately for use in cooking.

Saw the bones into pieces and use for making stock for soups, gravies, or meat loaves.

MAKING BEEF FOREQUARTER CUTS

Now move up forward. Figure 88 shows the names

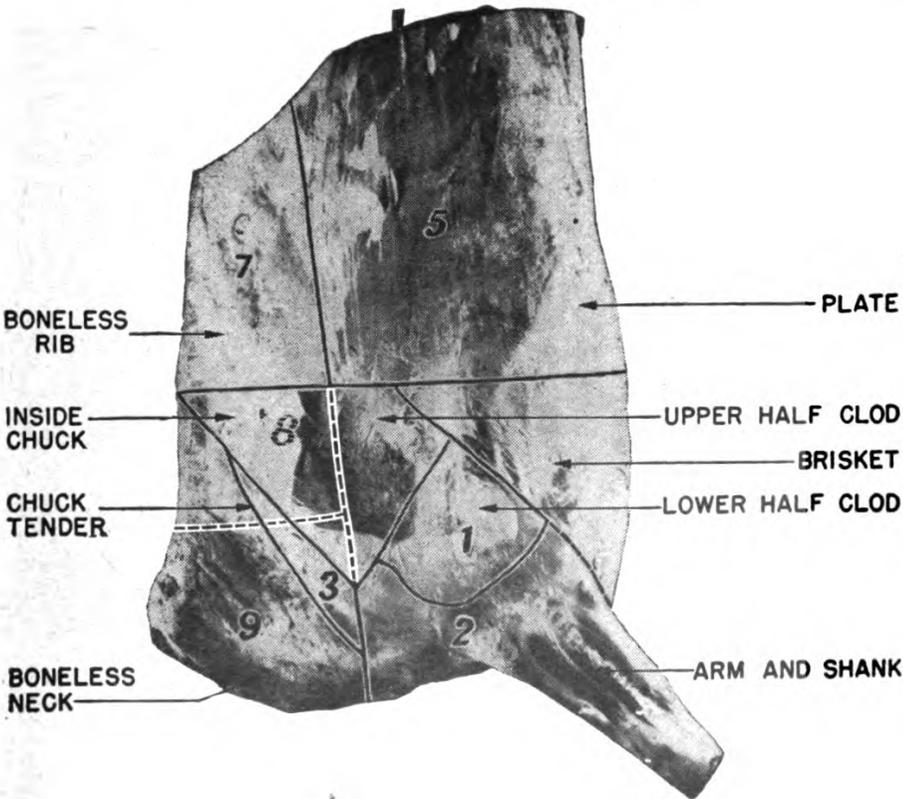


Figure 88.

and locations of the cuts that are made from the beef forequarter. Numbers 1, 3, 4, 7, and 8 are used for roasts and steaks. This makes up 20% of the quarter. Numbers 2, 5, 6, and 9 are used for braising, stewing, or grinding. About 53% of the quarter is included in these cuts. Surplus fat makes up 7% and bones 18% of the quarter. Again, only 2% is allowed for cutting and trimming.

TRIMMING

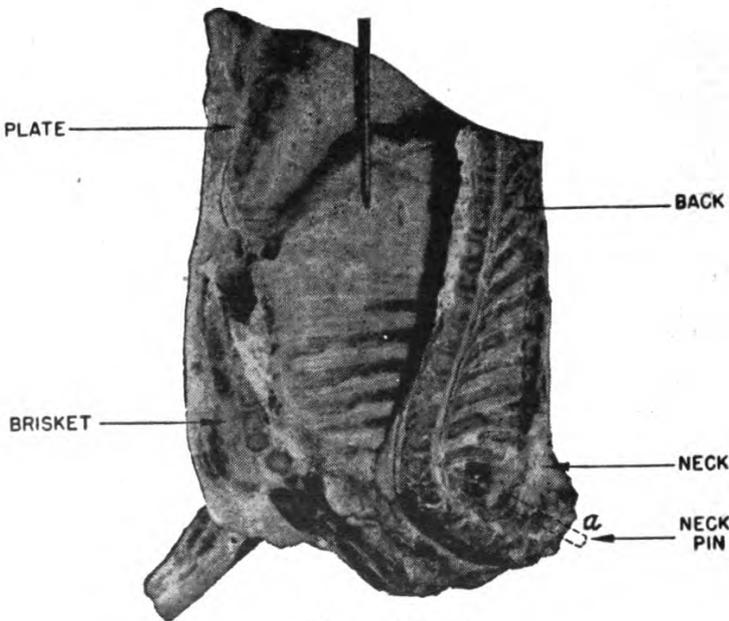


Figure 89.

First of all, hang the forequarter on the hook so it hangs evenly from its own weight (figure 89). Then do whatever trimming may be necessary from around the neck, plate, brisket, and back.

Use a knife to loosen and remove the neck pin shown in *a* of figure 89. Then cut between the 1st and 2nd vertebrae to remove the atlas bone (figure 90).

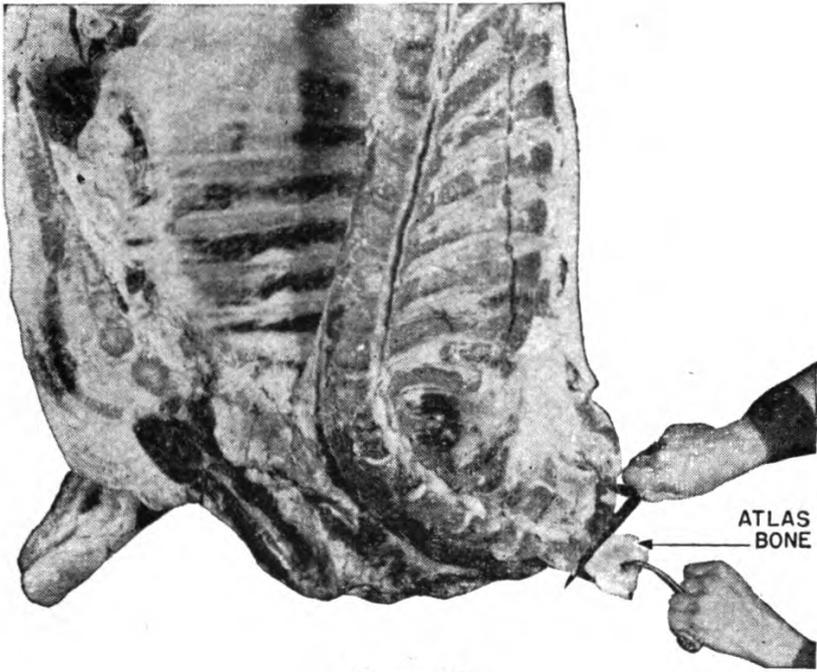


Figure 90.

Remove the heart fat lying along the edge of the breastbone as indicated in X of figure 91. Then trim the bloody meat from the throat side of the neck as illustrated.

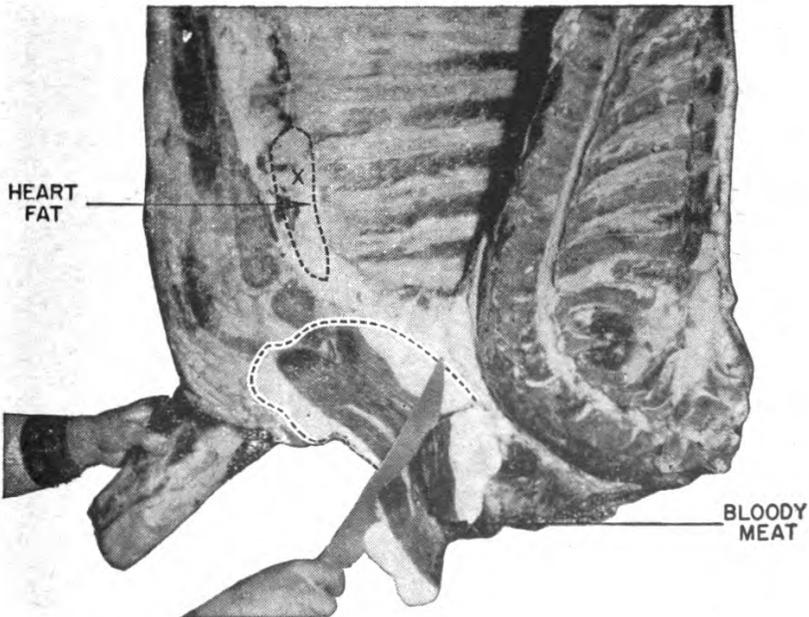


Figure 91.

Cut a thin strip (*x*) from the navel side of plate (dotted line in figure 92). Cut a narrow strip from the thin edge of the skirt (diaphragm) *a* to *b*.

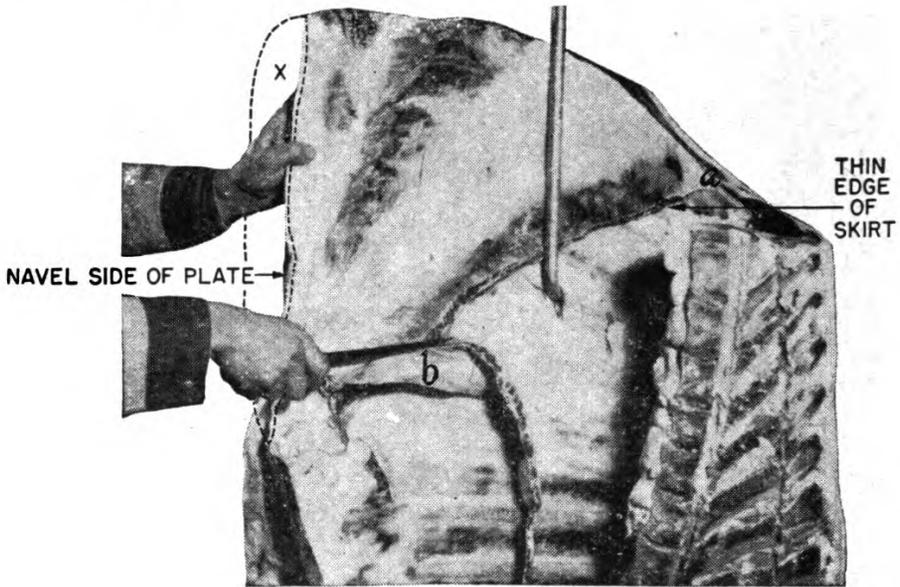


Figure 92.

The steps completed as shown in figure will enable you to pull the membrane from the skirt and plate meat (figure 93).

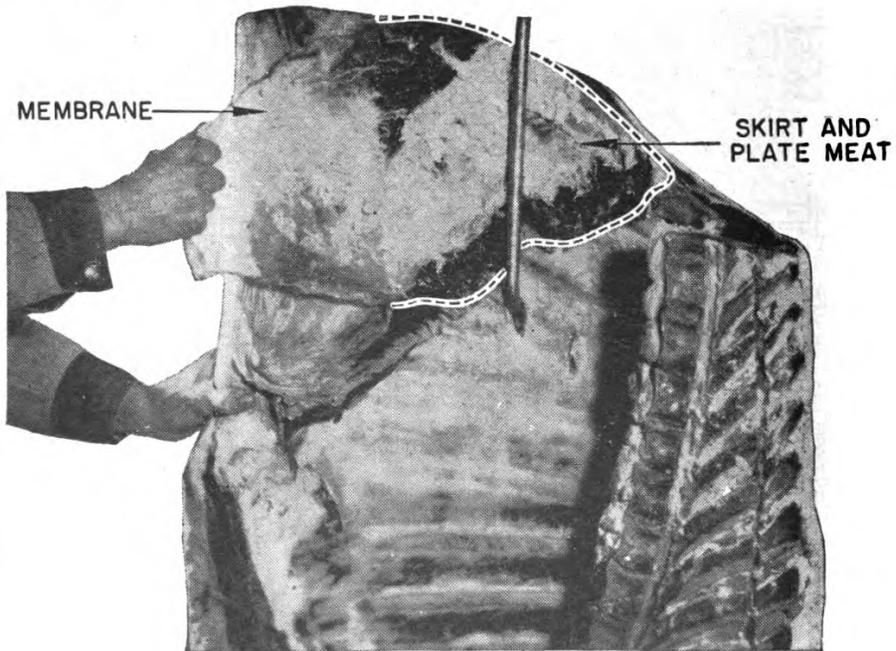


Figure 93.

REMOVING SKIRT AND PLATE MEAT

Start cutting under the skirt and plate meat at *a* and continue cutting close to ribs to point in figure.

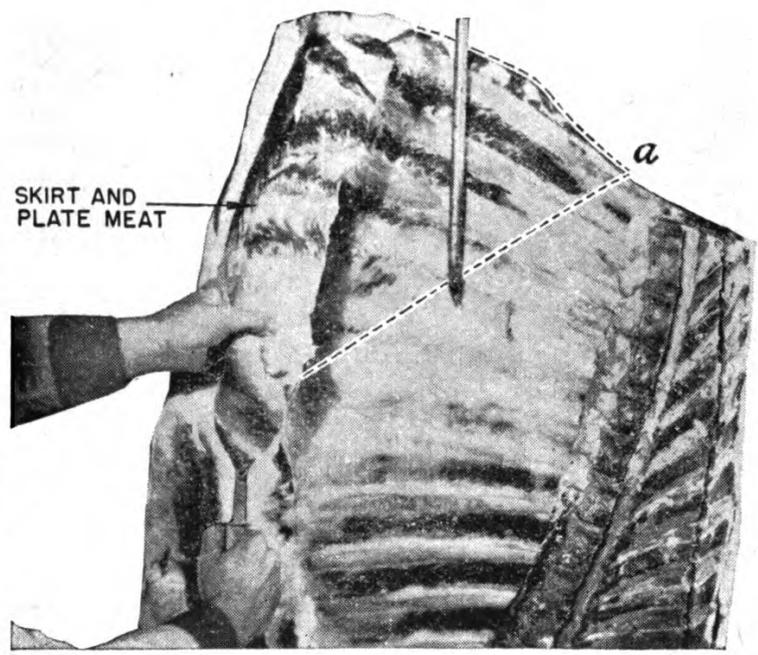
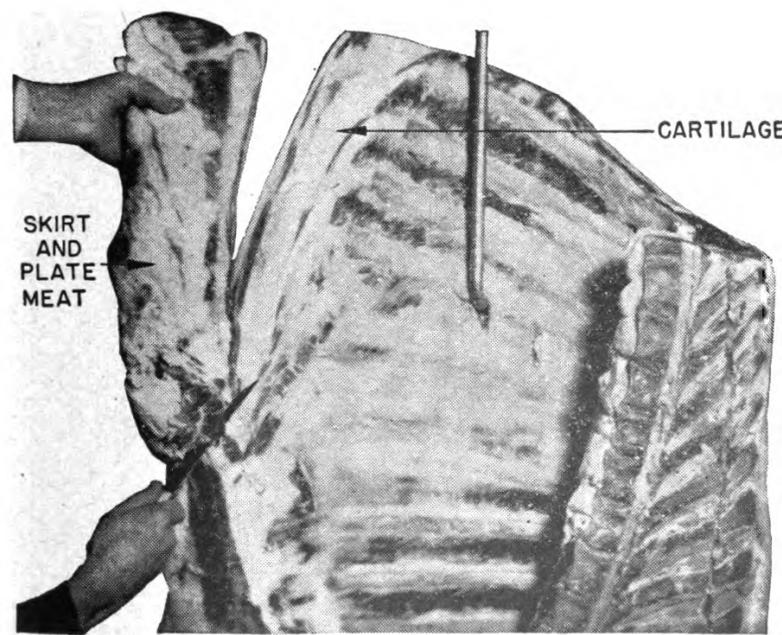


Figure 94.

After cutting the meat free from the cartilage at the end of the rib bone, remove the roll of skirt and plate meat. See figure 95.



This meat is used for stewing or grinding.

Figure 95.

LOOSENING PLATE AND BRISKET

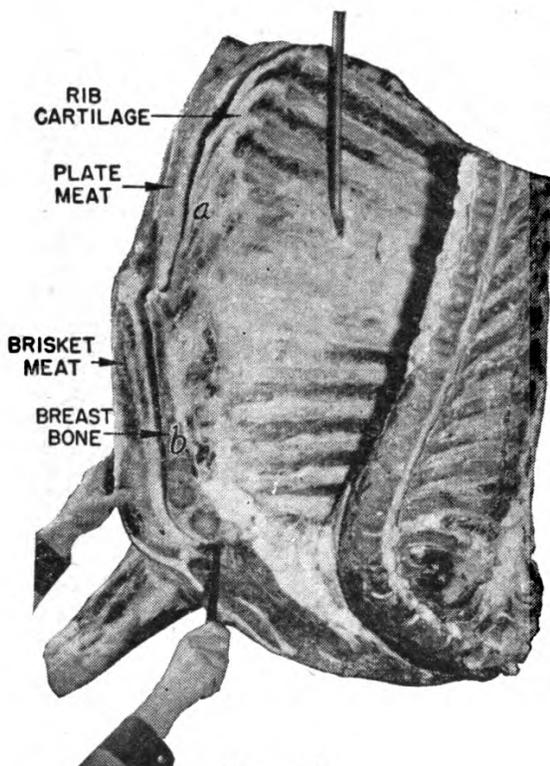


Figure 96.

After removing the excess fat from the edge of the brisket, cut under the rib cartilage *a* and breastbone *b* to loosen the plate and brisket meat, (figure 96). Remove the strip of fat which covers the top part of the feather bones. Then remove the ends of the feather bones at point where they were scribed with saw (figure 97).

TRIMMING THE BACK

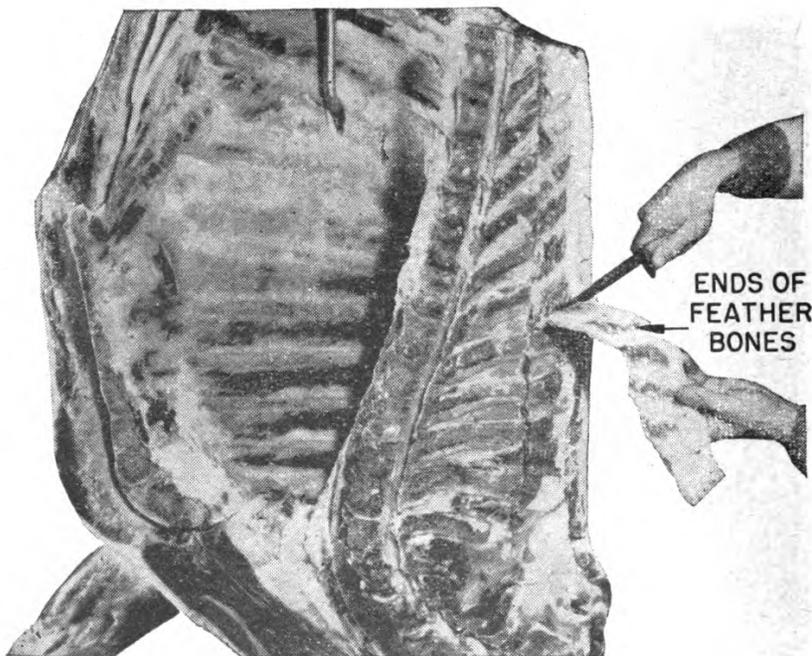
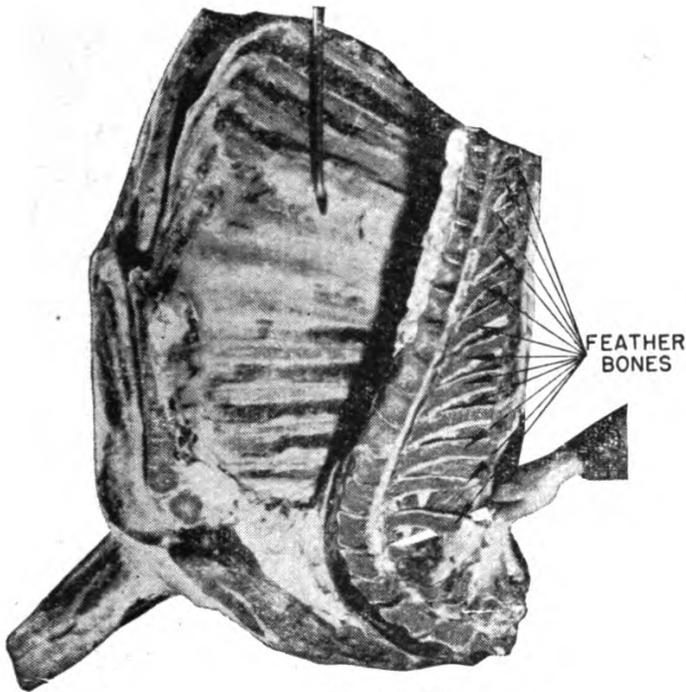


Figure 97.



Cut back under remaining sections of the feather bones to loosen these bones from the meat (figure 98).

Figure 98.

Pull the back strap from full length of forequarter (figure 99).

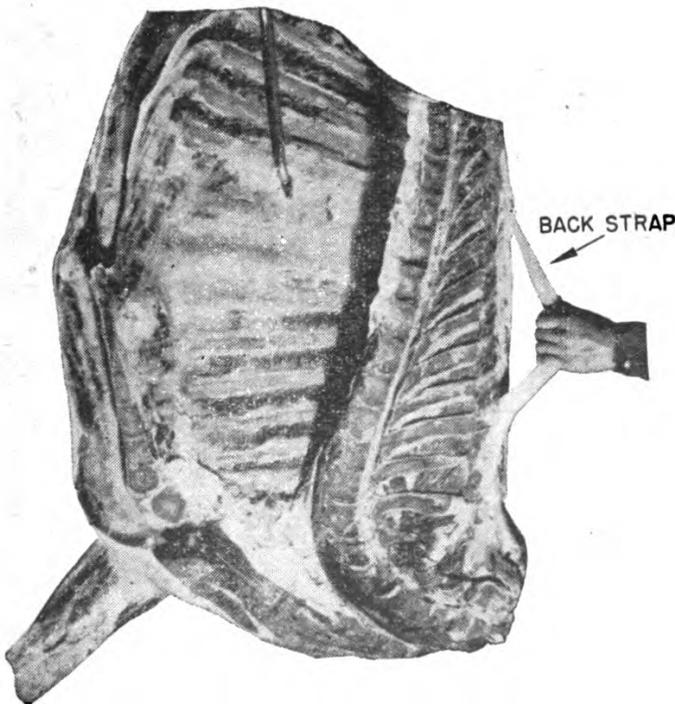


Figure 99.

MAKING THE OUTSIDE CHUCK CUTS

So far, all you have been doing is trimming. Now for some cuts. Figure 100 shows what should be done.

The cut between the 5th and 6th ribs from *a* to *b* is made first. Then, the arm and shank are removed. This is done by first cutting from *c* to *d* to *e*. A cut through the seam over the brisket beginning at line *c-f* makes it possible for you to remove the arm and shank from the rest of the quarter.

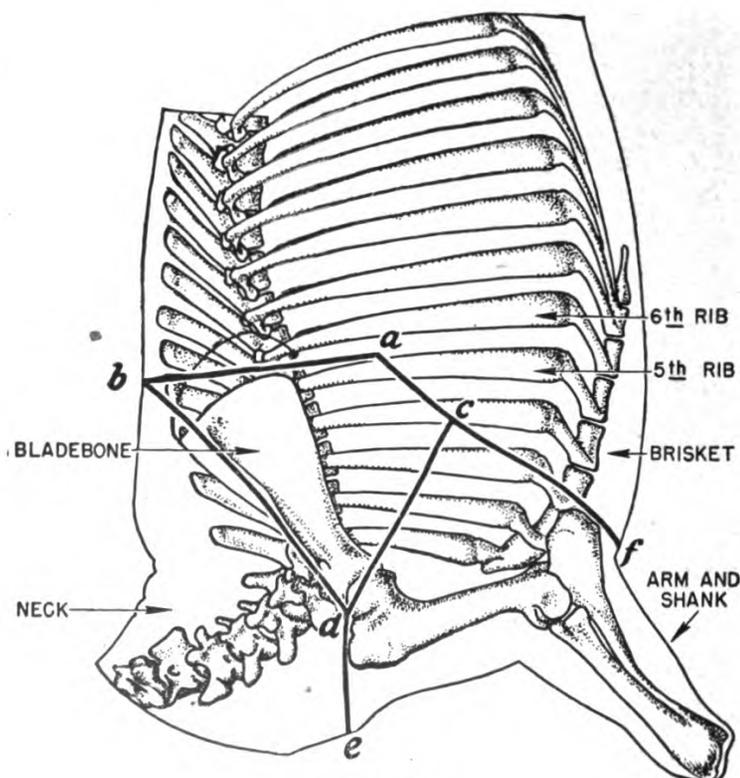


Figure 100.

A cut is then made over the ridge of the bladebone from *d* to *b*. The thin outside neck meat and fat pocket is next removed by cutting along the seam over the neck.

The remaining section of the outside chuck is removed by starting a cut at line *a-c* and cutting through the seam under the bladebone. The bladebone will be included with this piece.

Does it sound complicated? It will become clearer as you do it step by step. First of all, mark the fore-

quarter by inserting a boning knife between the 5th and 6th ribs so that the blade will show through on the opposite side (figure 101).

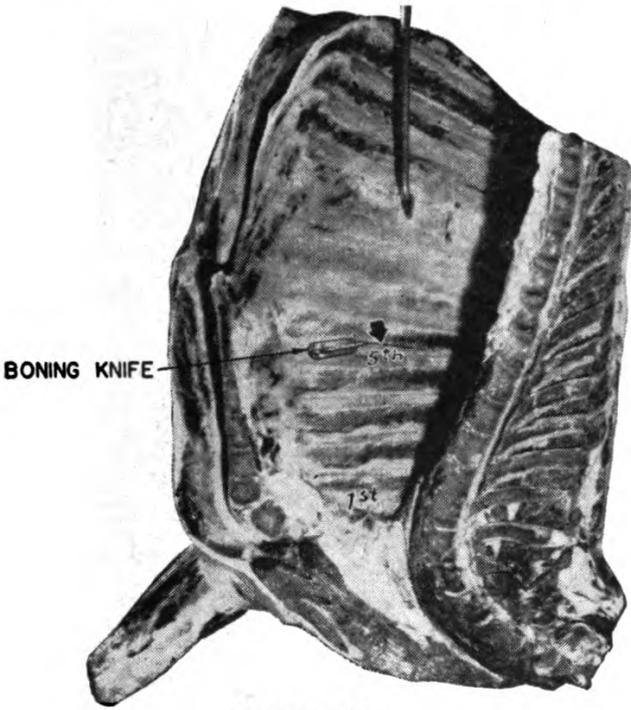


Figure 101.

Using the mark on the outside of the quarter as a guide, cut through the meat to the backbone from *a* to *b*, (figure 102).

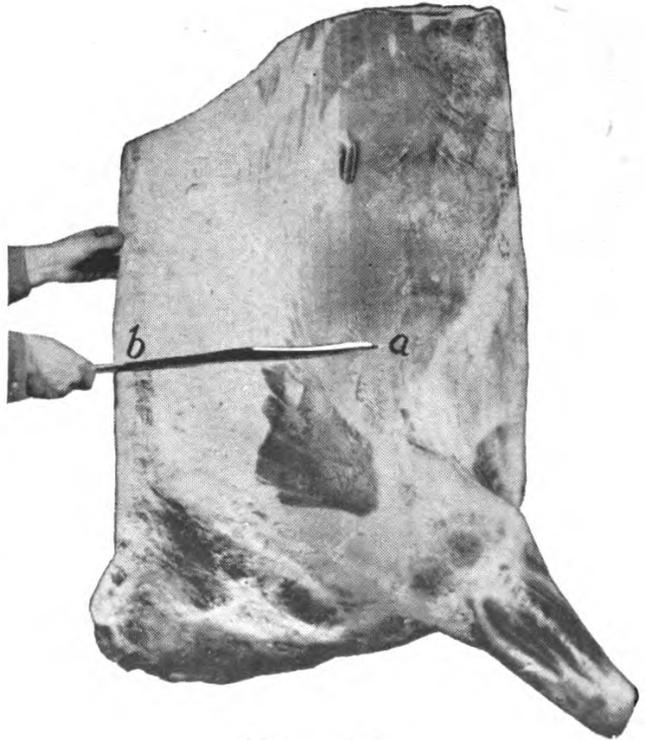


Figure 102.

Cut across clod and over the socket joint (*c* to *e*, figure 103). Cut through seam between arm shank and the brisket, starting along dotted line *c* to *f*.

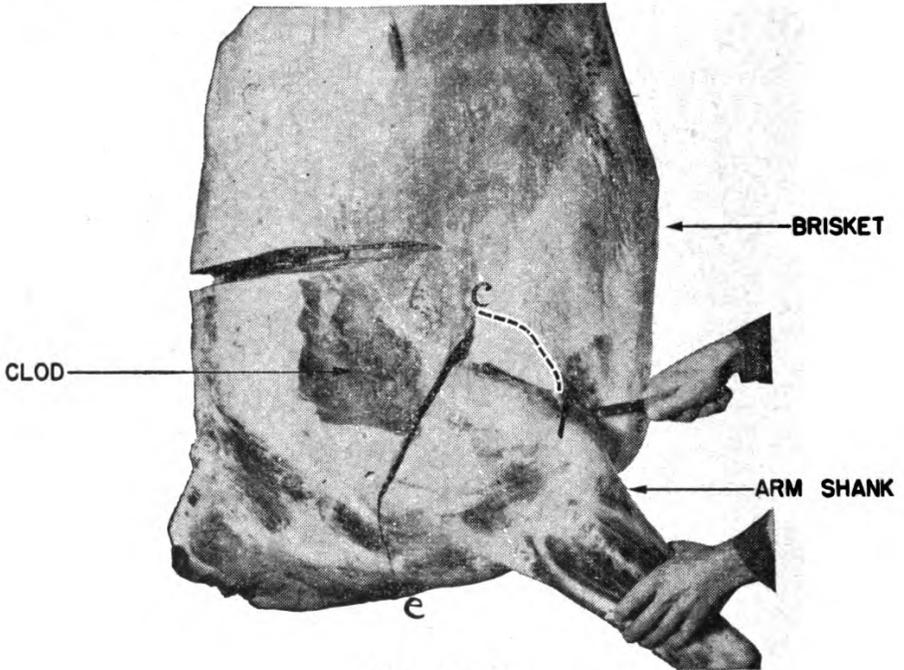


Figure 103.

The next step is to cut through the ball and socket joint and remove the arm shank (figure 104).

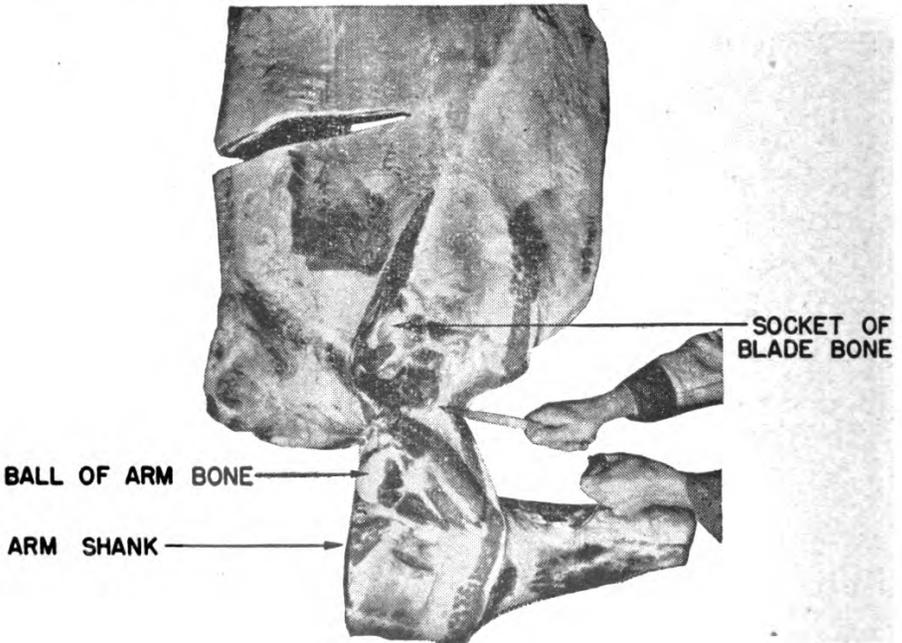


Figure 104.

Separate the lower half clod *a* from the arm shank *b* (figure 105). (The lower half clod is used for braising or roasting.)

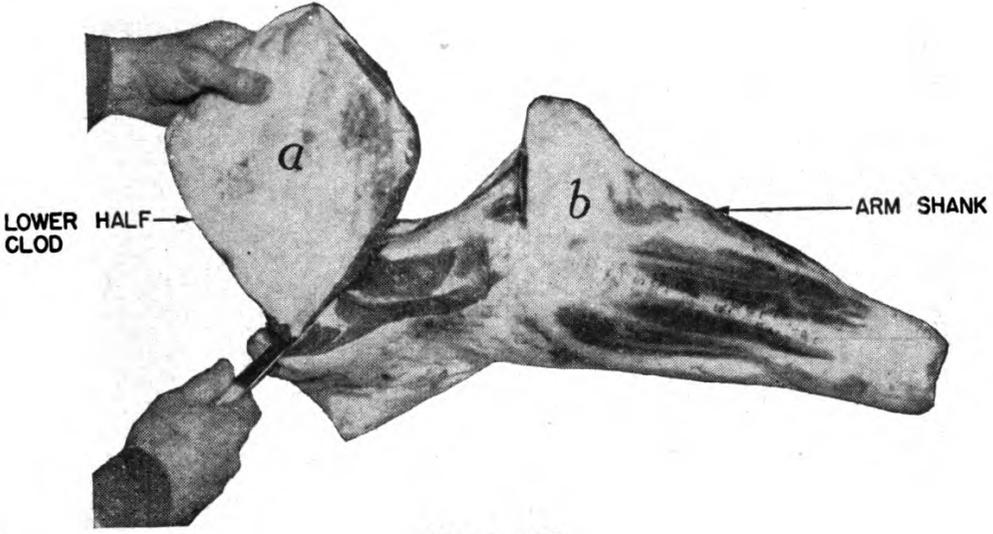


Figure 105.

Trim the meat from the arm and shank bones, (figure 106).

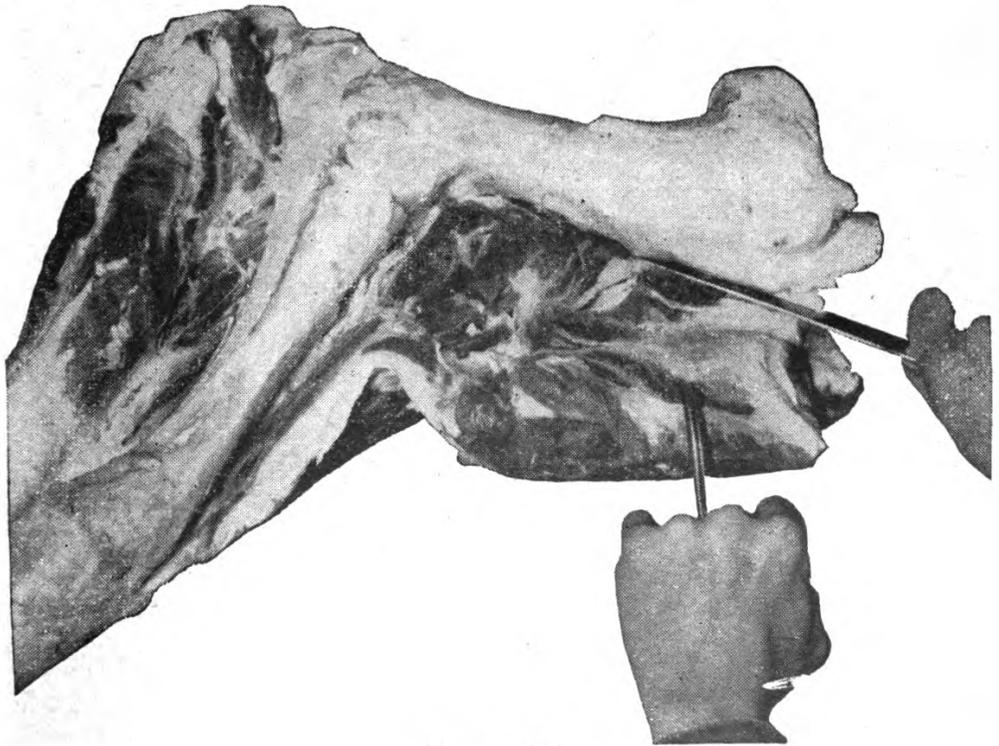


Figure 106.

Use this for stewing or grinding.

REMOVING OUTSIDE NECK MEAT

Cut through the meat from *b* to *e* over the edge of the ridge bone (figure 107). Remove the outside neck meat and pocket of fat by following the seam (figure 107) that separates it from the thick meat of the neck.

Trim out the surplus fat and use this thin meat for stewing or grinding.

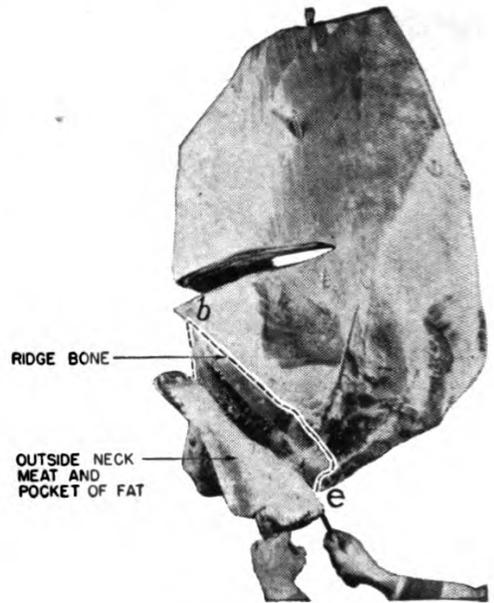


Figure 107.

REMOVING REMAINDER OF OUTSIDE CHUCK

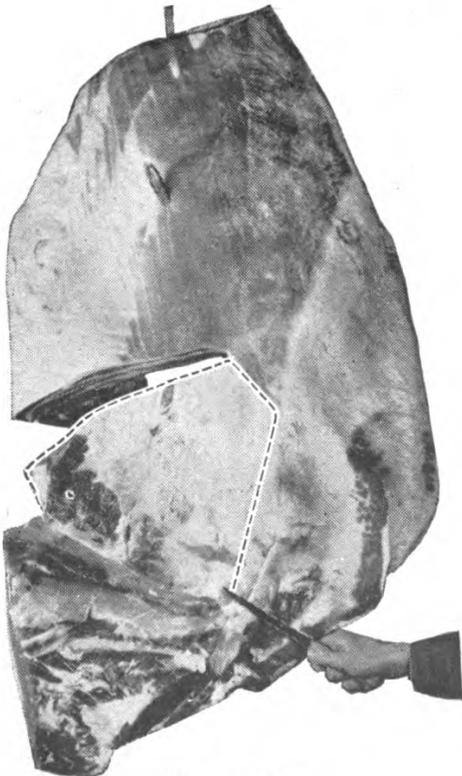


Figure 108.

Follow the seam to remove the remainder of the outside chuck (figure 108). This piece includes the blade bone.

REMOVING THE CHUCK TENDER

Take the piece just removed and cut along the ridge of the blade bone to remove the chuck tender (figure 109).

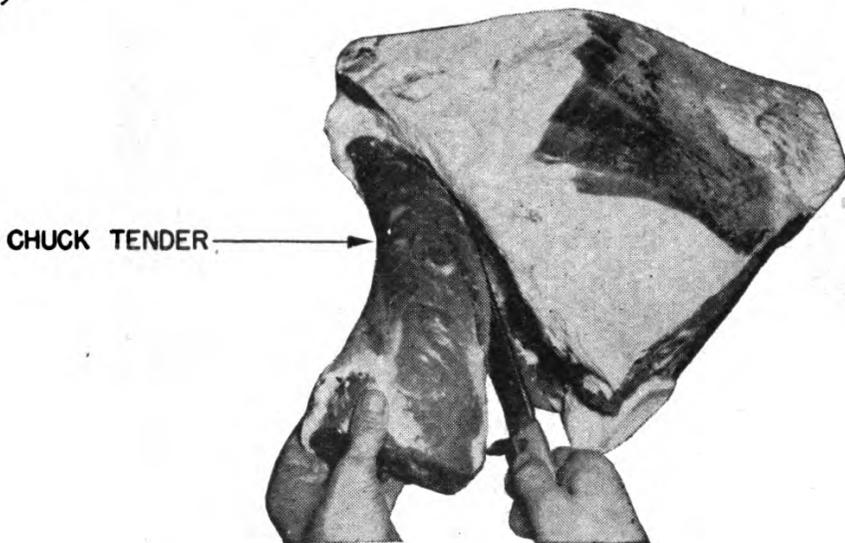


Figure 109.

The chuck tender is used for braising. It should be used for roasts only when absolutely necessary.

REMOVING BLADE BONE FROM UPPER HALF CLOD

Cut along the ridge and around the socket of blade bone as indicated in figure 110.

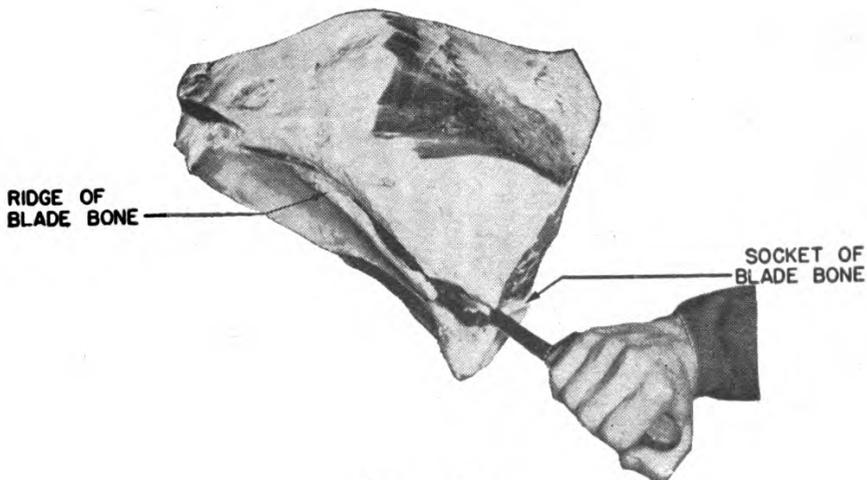


Figure 110.

Trim the thin layer of meat from the underside of blade bone (figure 111).

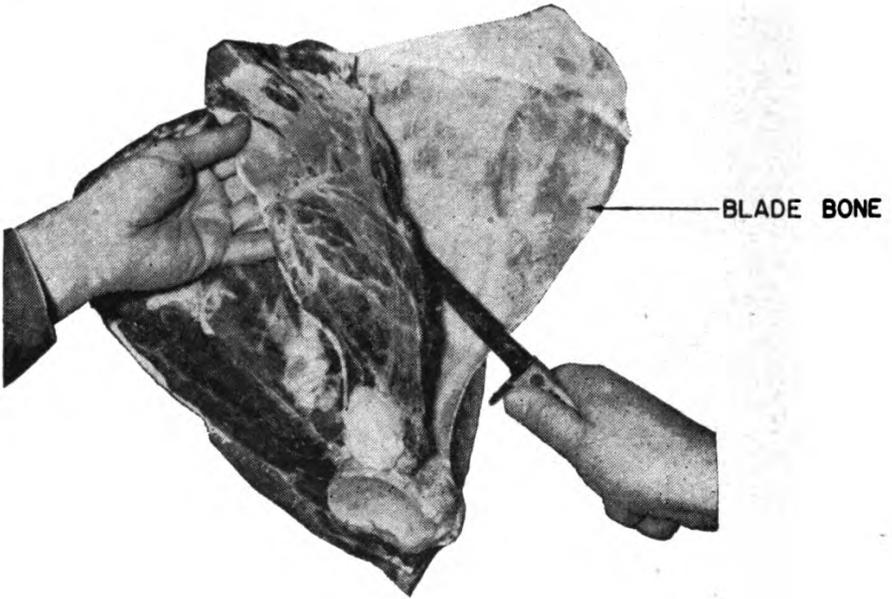


Figure 111.

Turn the cut over and remove the blade bone (figure 112).

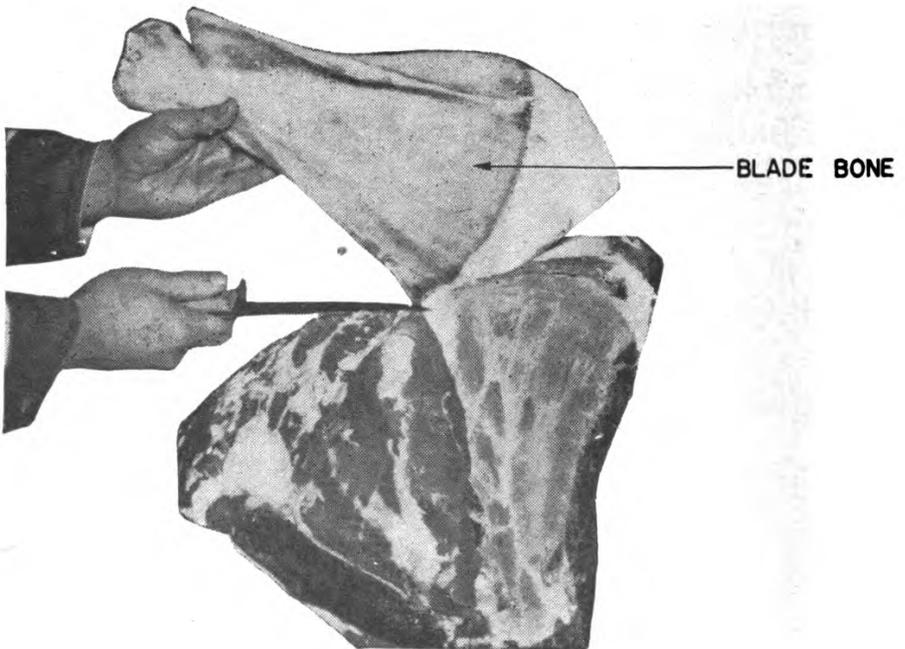


Figure 112.

TRIMMING THE UPPER HALF CLOD

Cut the thin meat (1 and 2) from the upper half clod as shown in figure 113.

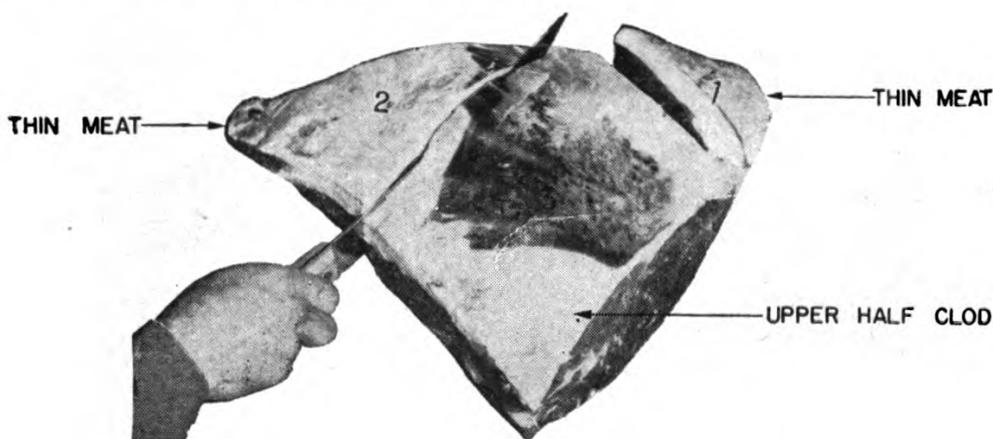


Figure 113.

Use the upper half clod (3) for braising, or roasting when necessary.

CUTTING REMAINDER OF FOREQUARTER

Separate the thin meat from the thick meat by cutting from *a* to *b* (figure 114) through all the meat

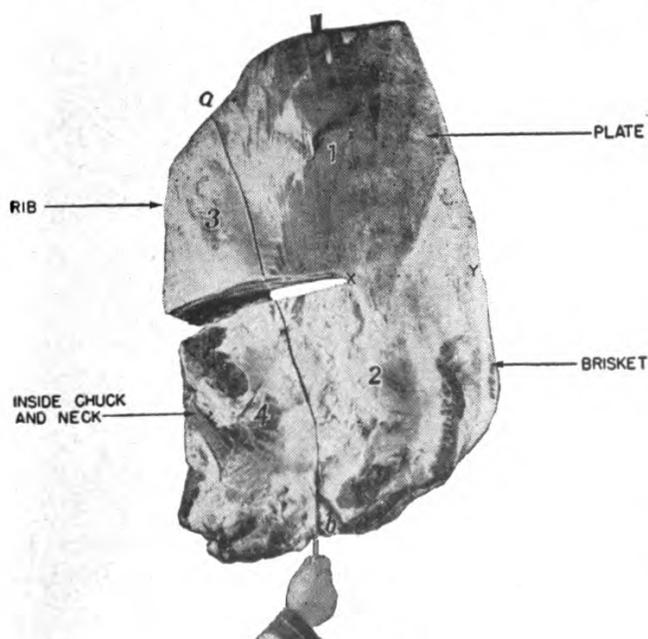


Figure 114.

to the rib bones. This cut separates the plate, 1 and the brisket, 2 from the rib 3 and the inside chuck and neck, 4. Now cut between 5th and 6th ribs (*x* to *y*) to separate brisket from plate.

Cut close to the ribs to remove the plate meat (figure 115). Figure 116 shows the boneless plate.

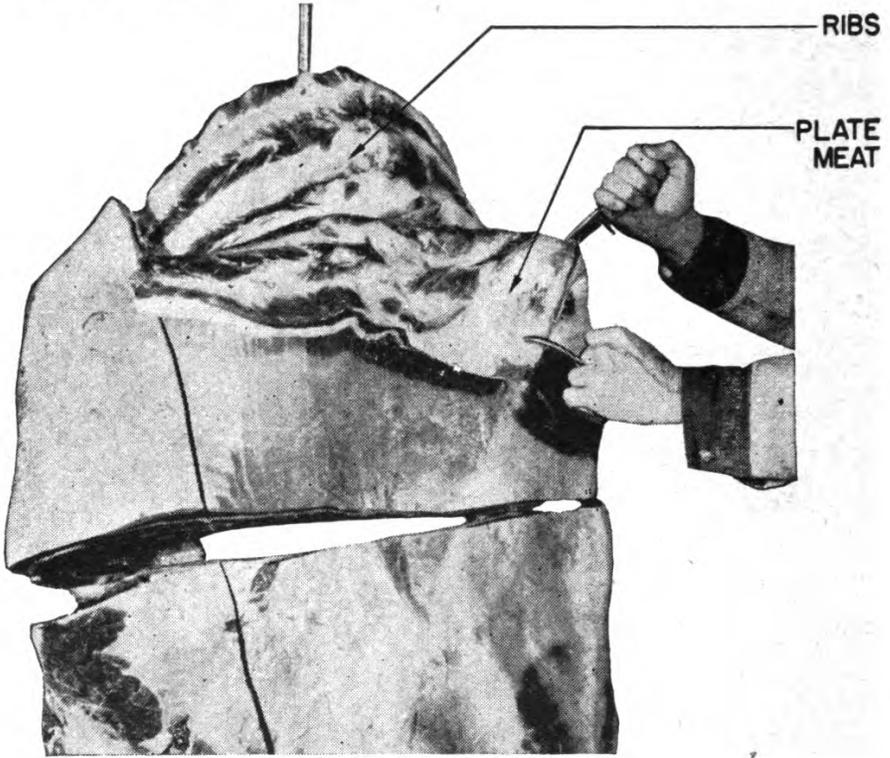


Figure 115.

Trim off the surplus fat and use meat for braising, stewing, or grinding.

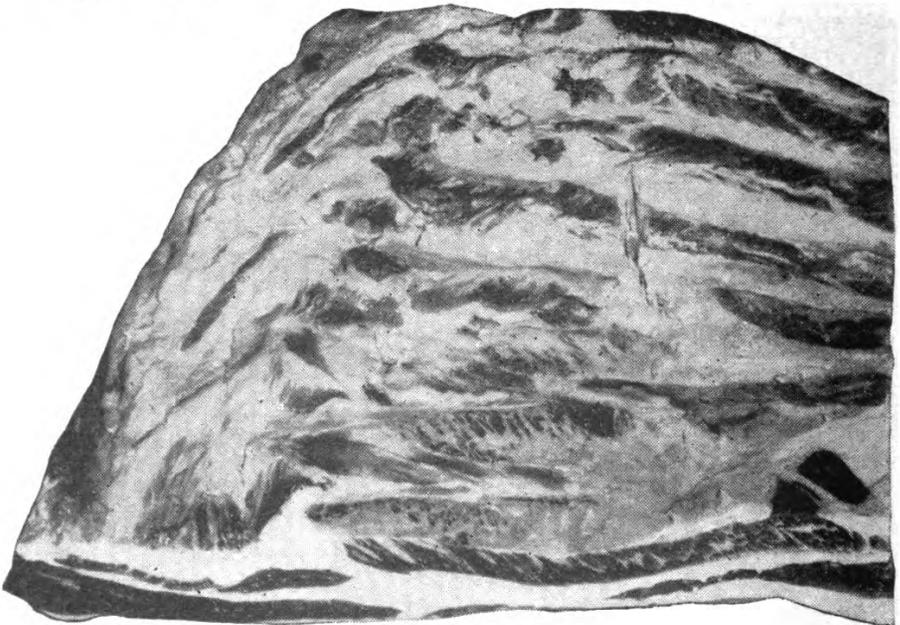


Figure 116.

REMOVING THE BONELESS BRISKET

Cut close to the ribs to remove the boneless brisket (figure 117).

Cut point (piece number 1) from brisket. (Figure 118). Divide the remainder into two pieces by cutting as indicated by dotted line.

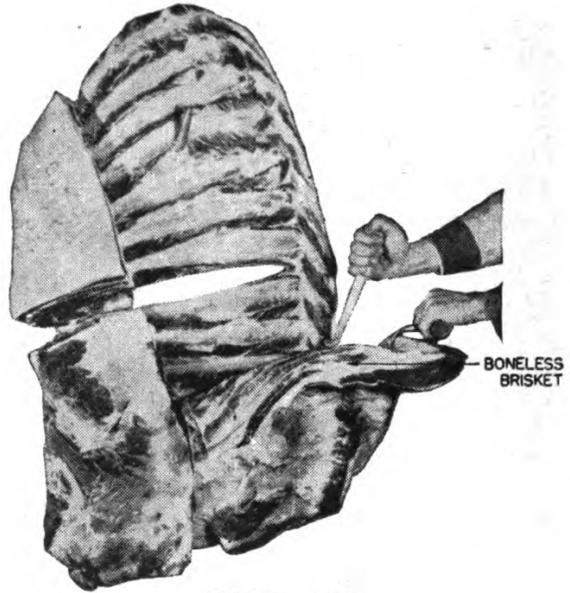


Figure 117.

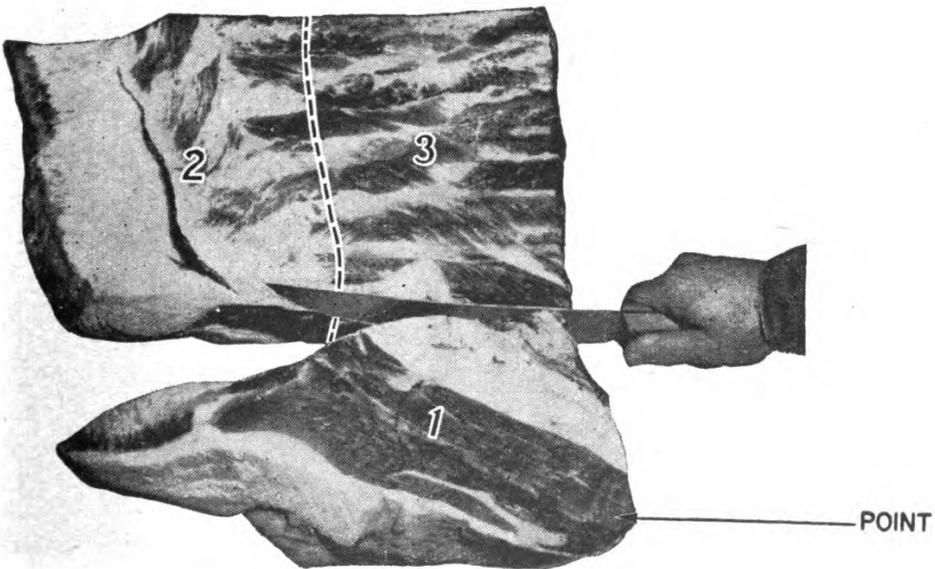


Figure 118.

Remove the excess fat from piece number 2 and use for braising, stewing, or grinding. Separate the lean from the fat in pieces 1 and 3. Use the lean meat for stewing or grinding. Render the fat.

REMOVING AND TRIMMING THE BONELESS RIB

Remove the boneless rib by cutting close to the rib bones (figure 119)

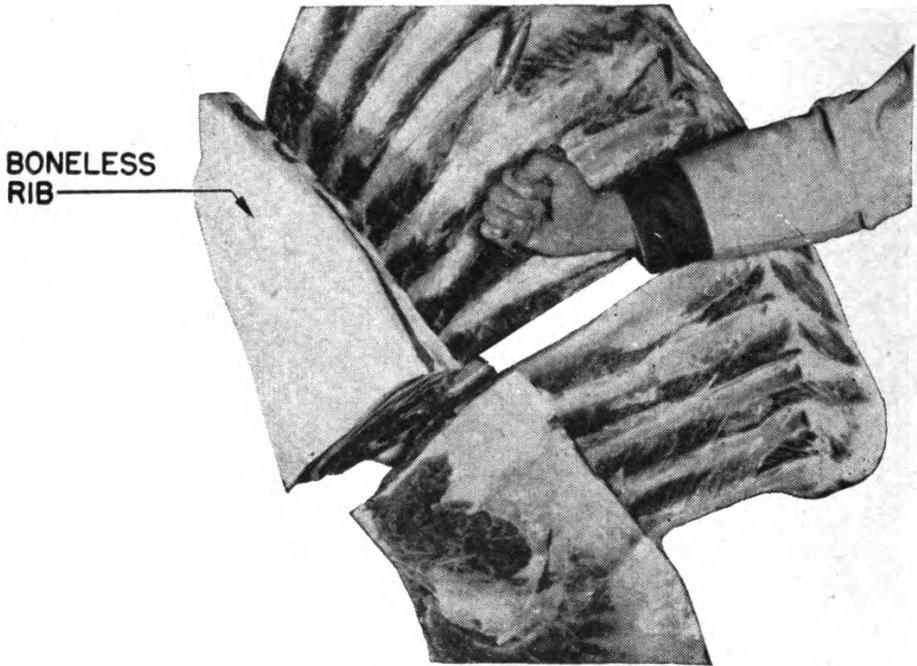


Figure 119.

Following line *a* to *b* (figure 120) cut through the thin meat above the rib "eye" just back of the blade bone cartilage. Remove the piece of thin meat and blade cartilage by following the natural seam.

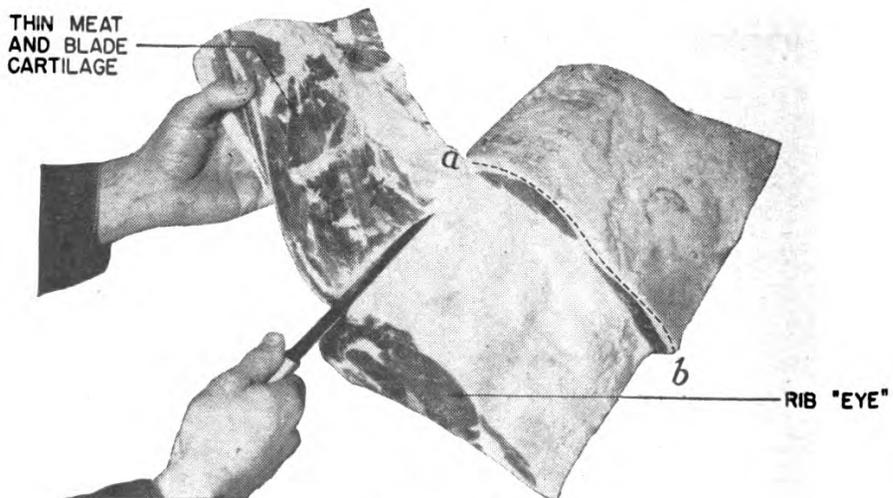


Figure 120.

After removing the blade cartilage, separate the remaining lean from fat and replace the layer of fat over the unprotected section of the boneless rib (figure 121). The boneless rib is excellent for roasts or steaks.



Figure 121.

Cut close to the ribs to partially remove the inside chuck and neck (figure 122).

REMOVING THE INSIDE CHUCK AND NECK

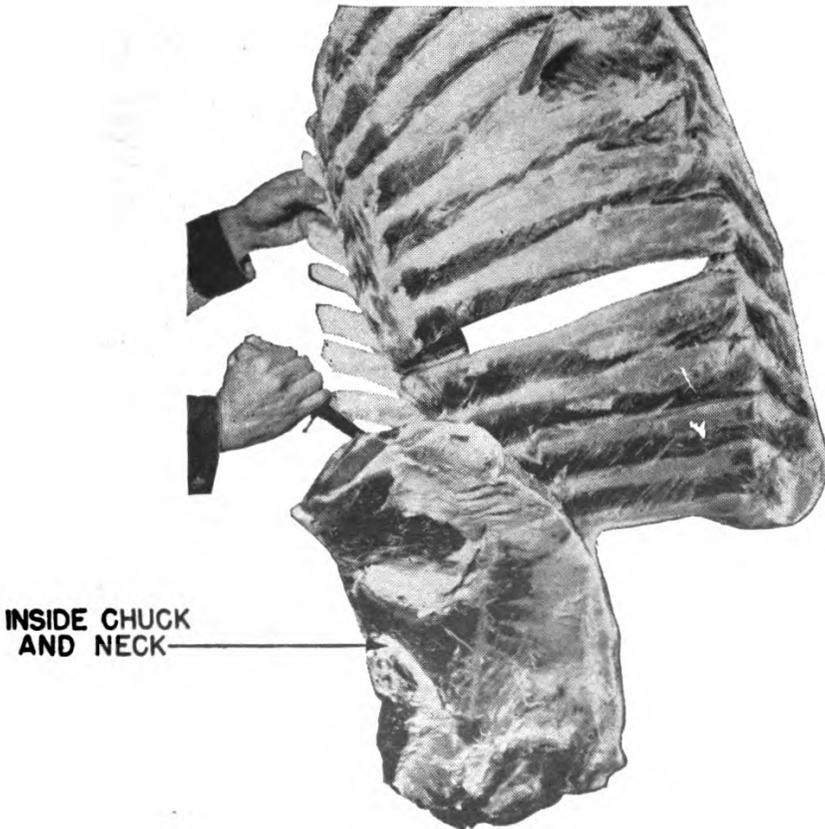


Figure 122.

Finish removal by cutting through the joint just ahead of the 1st rib shown in figure 123. This separates the neck bone from the back bone.

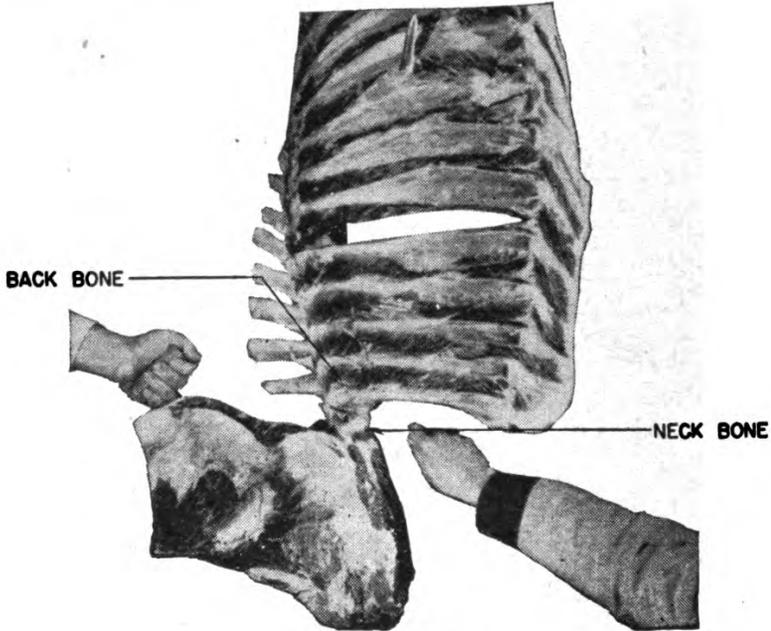


Figure 123.

CUTTING THE INSIDE CHUCK AND NECK

Remove strip of meat from the throat side of the neckbone, (figure 124).

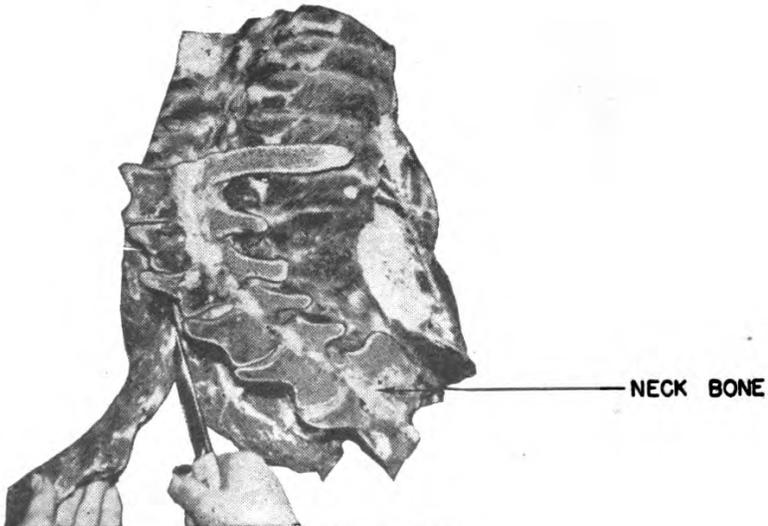


Figure 124.

Cut underneath the neck bone and lift it from the neck meat (figure 125).

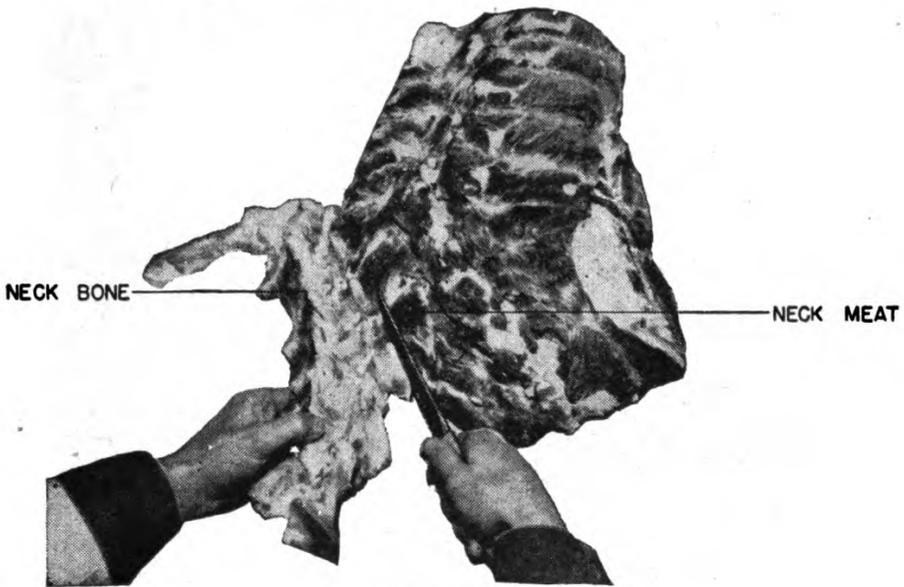


Figure 125.

Trim off the thin meat (pieces number 1 and 2) in figure 126. Cut remainder into the two pieces numbered 3 and 4.

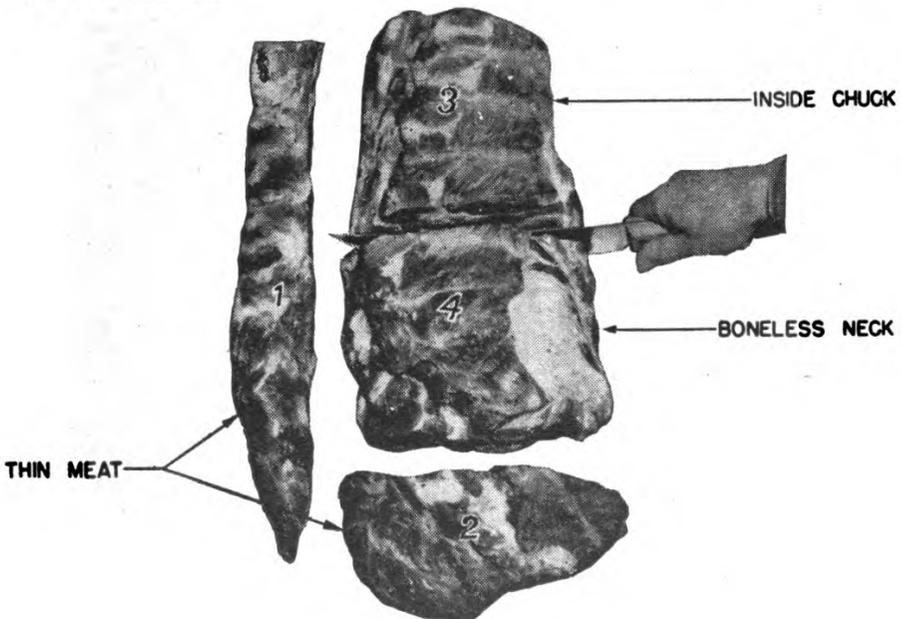


Figure 126.

The inside chuck, number 3, is used for roasting or steaks. The boneless neck, number 4, is used for braising, stewing, or grinding.

TRIMMING THE BONES

Trim fat and strip of meat from inside of chine bone (figure 127).

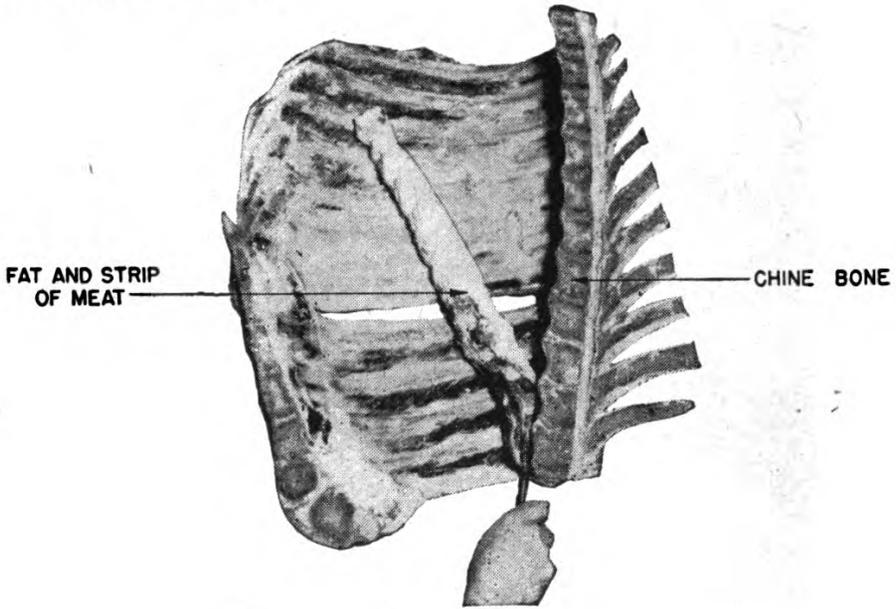


Figure 127.

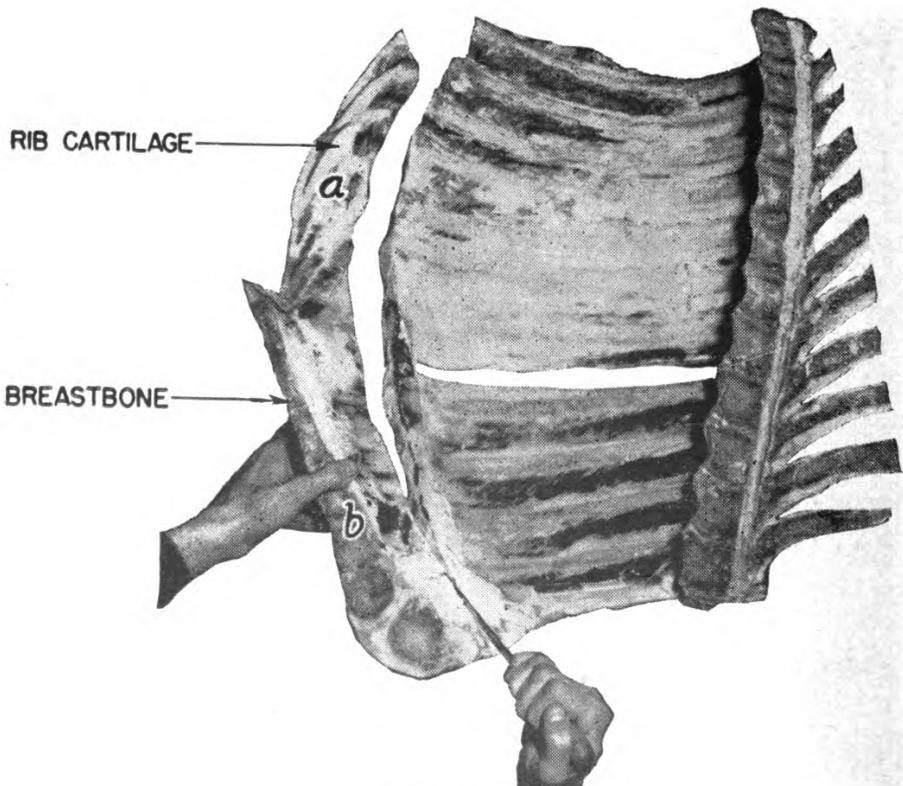


Figure 128.

Cut through cartilage at ends of rib bones to remove rib cartilage *a* and breastbone *b* in figure 128.

Look at figure 129. Trim the meat (1) from the rib cartilage and the breastbone (2). Remove the rib fingers (3) by cutting along the sides of each rib bone.

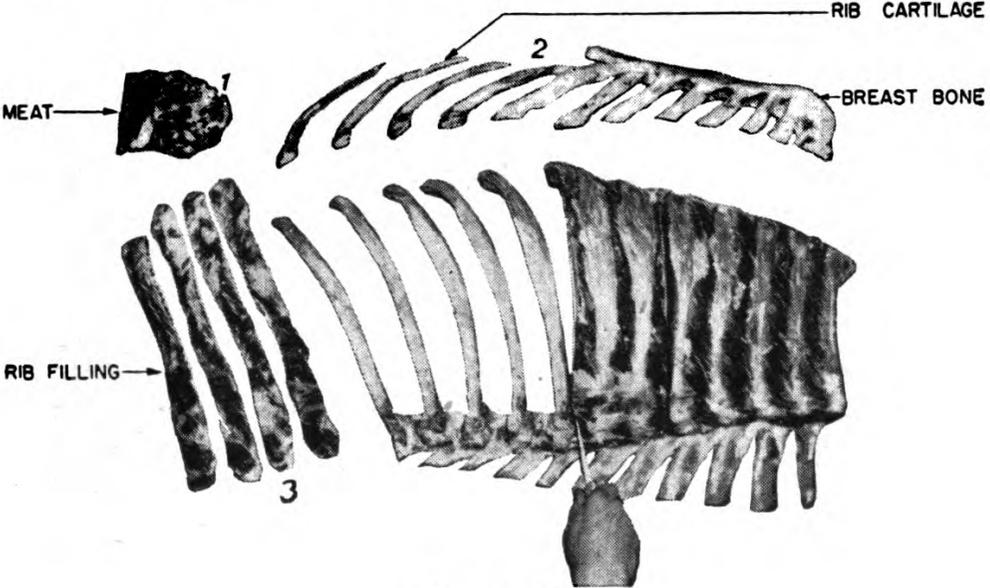


Figure 129.

Use the boneless meat for stewing or grinding. Saw and use the bones for stock.

LAMB

Even though lamb and beef carcasses don't look much alike, their framework of bones is the same.

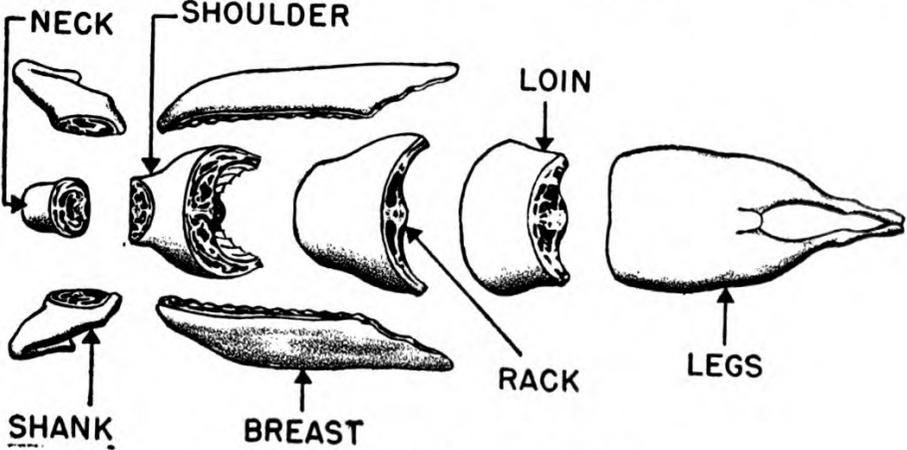


Figure 130.—Main cuts of lamb.

Fresh frozen beef is usually delivered in quarters. As lamb is much lighter than beef, it is brought aboard in whole carcasses. Your cutting job will be a little different.

The lamb chart (figure 130) shows the lamb carcass broken into the usual main cuts.

The heavy lines in figure 131 show from a side view where these same cuts are made.

Notice the framework of bones in this figure. Here's how to make these cuts—

MAKING THE CUTS

Put the lamb on the block with the back up. Remove the neck at the point where it joins the shoulder.

Turn the carcass on its side, and remove the breasts

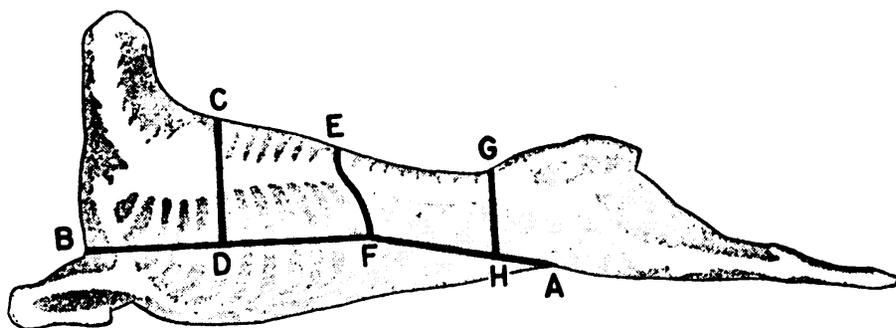


Figure 131.—Cutting the lamb carcass.

and shoulder by cutting along the line *a-b* shown in figure 131.

Then separate the shanks from the breasts.

Turn what's left of the lamb on its back. Cut between the 5th and 6th ribs through the backbone (line *c-d* in figure 131) to separate the shoulders from the rack.

Then cut the rack from the loin by cutting across both flanks to the backbone. This cut is to be made back of the 13th rib (line *e-f* in figure 131). There should be eight ribs in the rack and five ribs in the shoulder.

Now separate the loins from the legs by cutting along *g-h* in figure 131. This cut is made just in front of the hipbones.

How can these cuts be used?

LAMB FOR ROASTS

The shoulders, rack, loin, and legs are best for roasting. You can usually get 6 good roasts from these cuts—2 from the legs, 1 each from the loin and rack and 2 from the shoulder.

You can make the cooking and carving jobs easier by boning and rolling these roasts.

LAMB FOR STEWS

The thin cuts—the breasts, shanks, and neck are best suited for stew and ground meat dishes. If you need some of the other cuts to get enough meat, use the shoulders. Remove all bones and excess fat from the meat and cut the meat into small pieces. Never use the cleaver when doing this as splinters of bone will remain in the meat.

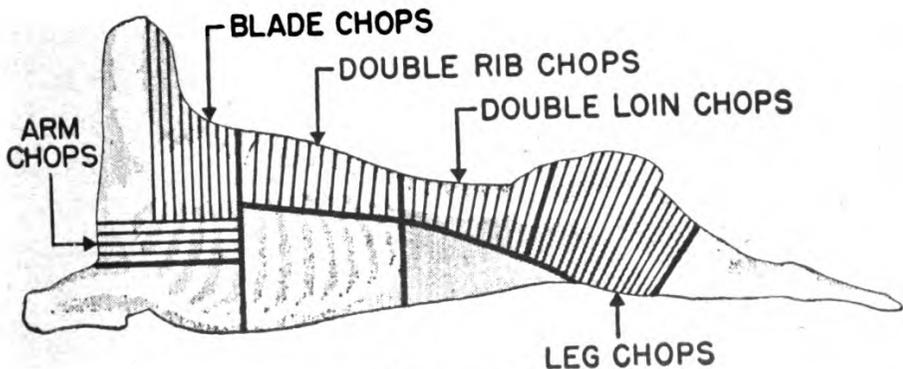


Figure 132.

LAMB CHOPS

Chops can be cut from the legs, the loin, the rack, and the shoulders. But, if you want to serve chops, it's better to cut up the carcass with that in mind. About $\frac{1}{2}$ of the lamb carcass is suitable for chops.

Two-fifths of what's left can be used for other servings—mostly stew and chopped lamb.

Chops are particularly easy to cut if you have an electric meat saw. Here's how it's done—

CUTTING LAMB CHOPS

The heavy lines in figure 132 show where the main cuts are to be made. The lighter lines show the cuts to make in order to get the separate chops. Now, take it step by step.

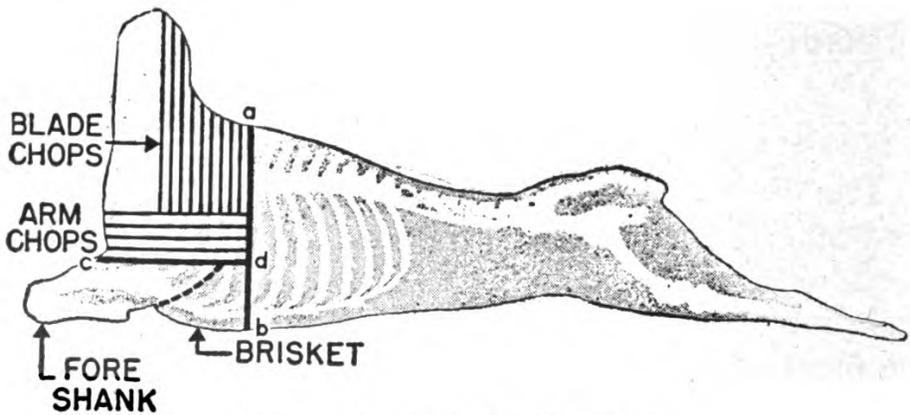


Figure 133.—Lamb shoulder chops.

SHOULDER CHOPS—Remove the chuck by cutting through the 5th and 6th ribs (*a-b* in figure 133). Then cut from *c* to *d* to remove the shank and brisket from the shoulder. Cut the shoulder into arm and blade chops as indicated in this same figure.

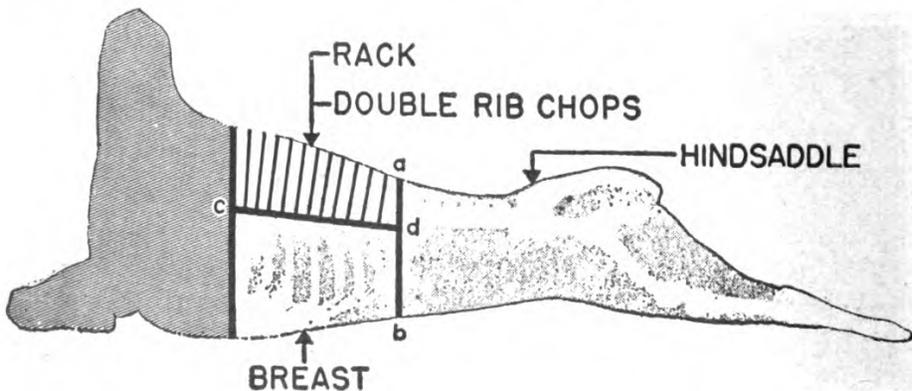


Figure 134.—Lamb double rib chops.

DOUBLE RIB CHOPS—Separate the rack and breast from the hindsaddle by cutting back of the 13th rib (*a-b* in figure 134). Cut across the ribs about one inch from the rib eye muscle (*c-d* in figure 143). This cut separates the breast from the rack. Cut the rack into chops as indicated.

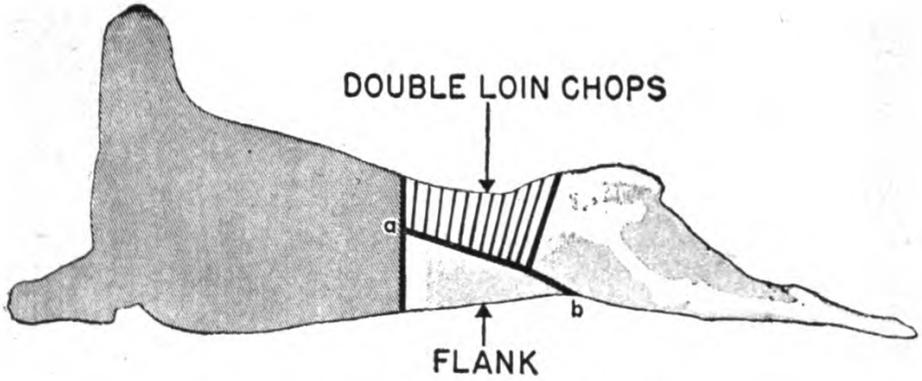


Figure 135.—Lamb double loin chops.

DOUBLE LOIN CHOPS—Remove the flank from the hindsaddle by cutting along line *a-b* in figure 135. Then cut your chops as pictured.

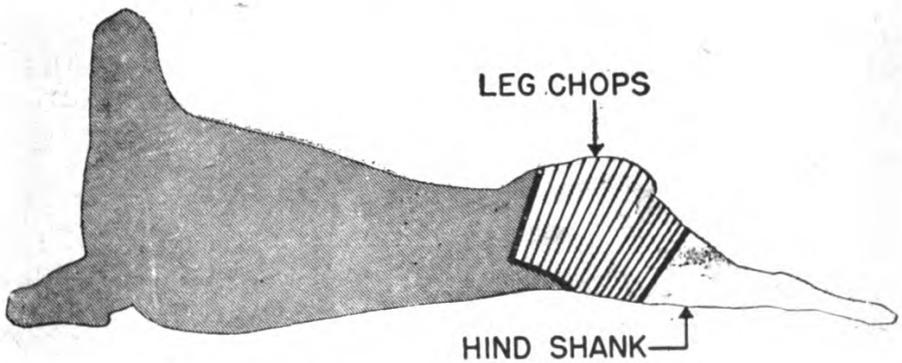


Figure 136.—Lamb leg chops.

LEG CHOPS—Split the legs and cut them into chops as shown in figure 136.

USING WHAT'S LEFT—The light section in figure 137 shows you what's left of the carcass after the chops have been cut. These sections should be boned and used for hamburgers or lamb patties.

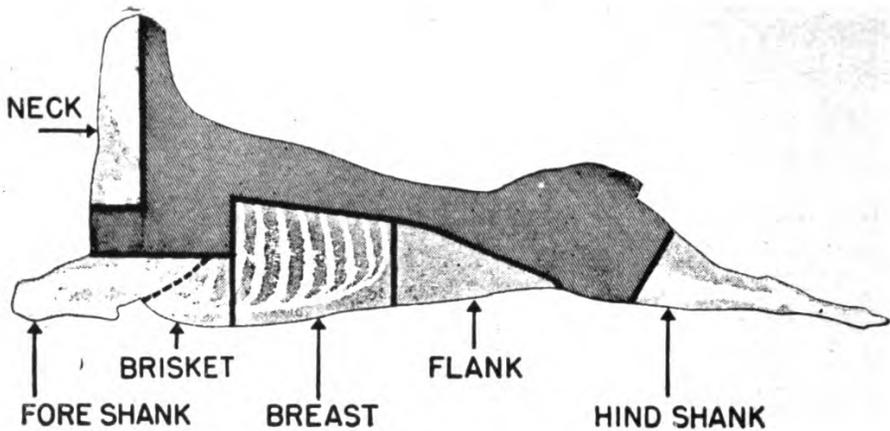


Figure 137.—What's left.

CUTTING VEAL

The bone structure of veal is the same as that of beef. Veal is usually brought aboard as whole carcasses or as sides. Heavy veal carcasses should be split down the center of the backbone.

The sides should then be divided into quarters. These quarters may be cut up in the same way as you cut beef.

Light veal carcasses may be cut into boneless roast and boneless stew meat in the same way recommended for the major cuts of lamb.

PORK

Packing plants cut hog carcasses into the wholesale cuts shown in figure 138.

The usual fresh cuts brought aboard are picnics, butts, loins, and spareribs. Fresh hams aren't used very often.

You'll find it easy to prepare these cuts for use.

PICNICS AND BUTTS

Picnics and butts can be used as roasts or as steaks. The steaks are cut much like the arm and blade bone

lamb chops. See page 134. The steaks from the picnics are similar to the arm bone lamb chops. The steaks from the butt are cut like the blade bone lamb chops.

PORK LOINS

Pork loins are used most commonly for chops. These chops may be boneless or have the bone left in. The loins also make good roasts.

Remove the bones from the roasts before cooking to make the carving job easier. The boneless pork loin should then be cut into two pieces of equal length. Lay these two pieces together, fat sides out. Keep the thick ends of the loins at opposite ends of the boneless roast. Tie the two pieces together to make your roast compact.

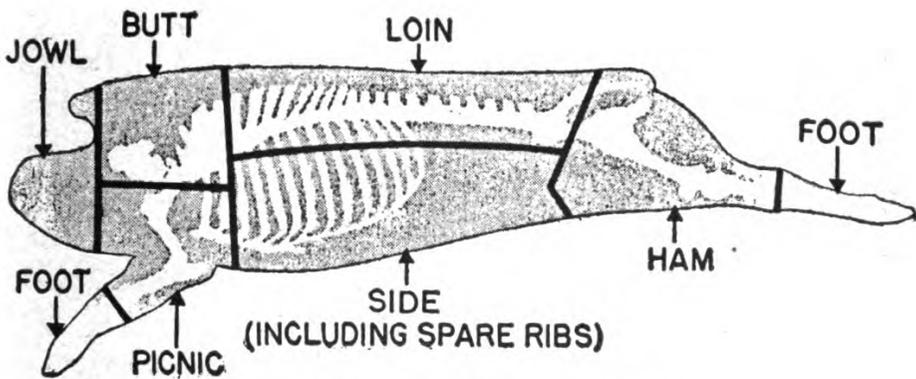


Figure 138.—Wholesale cuts of pork.

SPARERIBS

A good way of cutting spareribs is to remove the breastbone and then slice between the ribs. This method of preparation makes the ribs easy to serve.

THE HAMS

A fresh ham weighing less than 12 pounds may be made into a single boneless roll suitable for roasting. Heavier hams should be cut into two roasts of uniform size.

SMOKED MEATS

Smoked meats are important in the Navy menu especially when refrigeration facilities are limited. Fresh meat can't be kept very long unless it is frozen and frozen meat must be kept at a low temperature. Smoked meats keep for a long time at moderate temperatures.

CUTTING SMOKED MEATS

Smoked hams and picnics are the only two cuts that may give you any trouble in cutting. These cuts are easier to carve and serve if you remove the bones before cooking.

Remove the bones in a smoked ham the same way as you do in a beef round. See page 104. Take the shank off at the stifle joint. Remove the aitch (rump) bone. Cut along the leg bone on either side to remove the knuckle section. Lift the leg bone out. Divide the cushion side of the ham into two pieces by following the natural seam, separating the inside and outside muscles. Uniform slices of ham may be cut from the knuckle and the two cushion pieces by slicing the cuts from end to end.



CHAPTER 9

COOKING MEAT

THE FINE POINTS

There are many different methods of cooking meat. Your job is to choose the method that's best suited to the meat you have.

The tender cuts should be used for broiling, griddle-broiling, or roasting; the tougher ones for stewing and for grinding into meat suitable for meat loaves or hamburgers. Cut the meat into pieces of about the same size so it will be done at about the same time.

You can improve lean meat by inserting lard between the tissues with a larding needle. Be sure to save any excess fat. Fats are rich in calories and can be used for cooking.

The seasoning of meat can be done satisfactorily at any time. You'll probably find it more convenient to do it at the beginning of the cooking.

Pork, veal, mutton, and fowl must always be well done. There are NO EXCEPTIONS to this rule. You

may prepare beef rare, medium, or well done. You'll soon learn the desires of the officers you feed, and then you'll know about how much of your beef to cook rare, how much medium, and how much well done. A good meat thermometer will help you determine the various stages.

If carving is necessary, let the meat set for 30 minutes after it is done. Then the job of carving will be much easier. Carve the meat across the grain. Keep meat hot if it is to be served hot. If you let it cool and then have to re-heat it, the meat won't taste as good.

The two basic methods for cooking meat are by dry heat and by moist heat. Cooking with dry heat includes roasting, broiling, and griddle broiling. Cooking with moist heat includes braising and cooking in water.

HOW TO ROAST MEAT

Roast meat in the ovens at a constant temperature of 300° to 350°F. Don't let your oven temperature go higher. At these low temperatures, there will be little shrinkage, the meat will be juicy, and it will be uniformly done throughout. In addition, you will not have to watch it constantly.

The amount of time that you keep the roast in the oven depends on the temperature of the oven, the weight and shape of the roast, and the kind of meat—and whether you want the meat rare, medium, or well done. Boneless meat must be roasted somewhat longer than meat containing bones. A small roast requires more minutes of roasting per pound than a large one. A lean roast gets done more quickly than a fat one. Look at the timetable for roasting on page 94 of the 1944 *Navy Cook Book*. It will help you decide how long to leave the meat in the oven. A meat thermometer, inserted in the center of the main muscle away from bones and fat, will tell you when the roast is done. If the thermometer reads 140°F., the meat is rare; if it reads 160°F. it's medium; and at 170°F., it's well done.

Searing the meat by subjecting it to a very high oven heat for a few minutes is not necessary. There used to be an idea that this method would seal in the juices, it does not. Both roast and drippings will be sufficiently browned if a constant low temperature is used.

Always place the meat in an open roasting pan with the fat side up. Don't cover the pan at any time during the entire cooking period. A covered roast is not really roasted at all. It is braised, making it a pot roast. If you have a rack to put in the roasting pan, use it. Then you will get an even browning over the entire surface.

Do not add liquid to the meat. Enough fat and juices will drip from the meat during the roasting period to keep it from burning or from sticking to the pan. As the meat roasts, the melted surface fat and juices soak through the meat. Thus basting is done naturally without having to pour fat over the meat by hand.

HOW TO BROIL MEAT

Broil meat by cooking it directly over hot coals or directly under either a gas flame or an electric heating unit. Use thick slices of meat—1 to 2 inches thick. Lamb chops are an exception. They may be broiled if they are not less than $\frac{3}{4}$ of an inch thick. Don't try to broil thin steaks or chops as they will cook through completely before the outside is brown.

You can broil sliced liver—whether beef, veal, or pork. Other cuts of veal or pork must be cooked **WELL DONE** and should **NEVER** be broiled.

Now for the actual broiling. Pre-heat the broiler to 550°F. After making several cuts in the fat edge of the meat to keep it from curling, lay the meat on the broiler rack. Put the broiler rack in position so as to leave 2 or 3 inches of space between the meat and the heat unit. When the upper side of the meat is nicely browned (or the lower side if meat is over

hot coals), pull the rack out, salt the meat, and turn it over. Then broil the other side. Salt the meat when done and serve immediately.

HOW TO GRIDDLE-BROIL

You can griddle-broil meats by cooking them on a heated metal surface. Place the meat on an **UN-GREASED** griddle. Cook it slowly. As the meat cooks, turn it frequently to develop the flavor and to obtain more even browning and cooking. Pour or scrape off the fat drippings as fast as they collect. Don't add water. Keep the meat uncovered. Season each side with salt and pepper as soon as it is browned.

HOW TO FRY MEAT

Properly fried meat has a crisp, brown outside covering and an excellent flavor. Do **NOT** fry meat that is more than $\frac{1}{2}$ inch thick.

Frying is much like griddle-broiling. The only difference is that the meat is cooked in a small amount of fat. This method of cooking is often called **SAUTE-ING**—pronounced saw-TAY-ing. Be sure the fat is hot before you place the meat in it—otherwise the meat will absorb much of the fat and won't taste good.

Deep-fat frying involves the complete covering of the meat with **HOT** fat. Meat prepared in this manner should be breaded.

The three types of meat most commonly braised are pot roasts, chops, and some of the tougher steaks. Make the tough steaks a bit more tender before braising by pounding them or by putting them through a cubing machine. Brown the meat thoroughly on all sides in a hot greased pan to develop flavor and color. When it is browned, add a **SMALL** amount of liquid to the pan. Put a tight-fitting cover over the pan to hold the moisture in. Keep the temperature at a point where the liquid will simmer but will not boil (185° to

200° F.) Cook the meat until it is tender. You may need to add a little liquid from time to time.

The drippings in the braising pan contain both flavor and food value—so save them for gravy or sauces. Serve gravy or sauce with braised meat.

HOW TO STEW MEAT

Cooking in water includes stewing and simmering. Small pieces of meat cooked in water are said to be STEWED; large pieces are said to be SIMMERED. In both cases the meat is just covered with water, which is already heated to the simmering temperature (185° to 200° F.). This temperature is maintained constantly until the meat is done. It usually takes 1½ to 2 hours. Make your stews from the less tender cuts of beef, veal, or lamb—never use pork for a stew.

To get added flavor, brown the pieces of meat before you add the water. Like soups, stews give you a chance for much variety. All sorts of herbs and spices can be used for seasoning. And different vegetables, such as carrots, peas, onions, tomatoes, beans, and potatoes, can be added to give a variety of good combinations.

Be sure you select vegetables that differ in color, texture and flavor. You might use celery, green peppers, potatoes, and tomatoes in combination. Don't use combinations of potatoes, turnips, and rutabagas—they are too much alike for good results. Cut the vegetables into different sizes and shapes in order to provide additional contrasts.

Partially cook the meat before adding the vegetables—then the two will be done at the same time. You can provide additional variety by adding dumplings, baking powder biscuits, noodles, spaghetti, or macaroni. A meat pie is really a stew topped with a crust or with baking powder biscuits.

SIMMERING is used most frequently in preparing cured pork and beef cuts and in cooking variety meats,

such as tongue and heart. Smoked ham that has been simmered is improved by covering it with a mixture of brown sugar and flour and putting it in the oven to brown.

SMOKED HAM

Smoked ham—whether commercial, domestic, or regular cure—has a low salt content. It is suitable for baking without parboiling or soaking beforehand. However, smoked hams need a bit of preparation before they are cooked.

If a smoked ham is frozen, defrost it completely before doing anything else. Then remove the hock at the stifle joint (figure 139). Leave as much meat as possible on the cushion section. Trim off the outside skin and remove any outside fat that is over $\frac{1}{2}$ inch

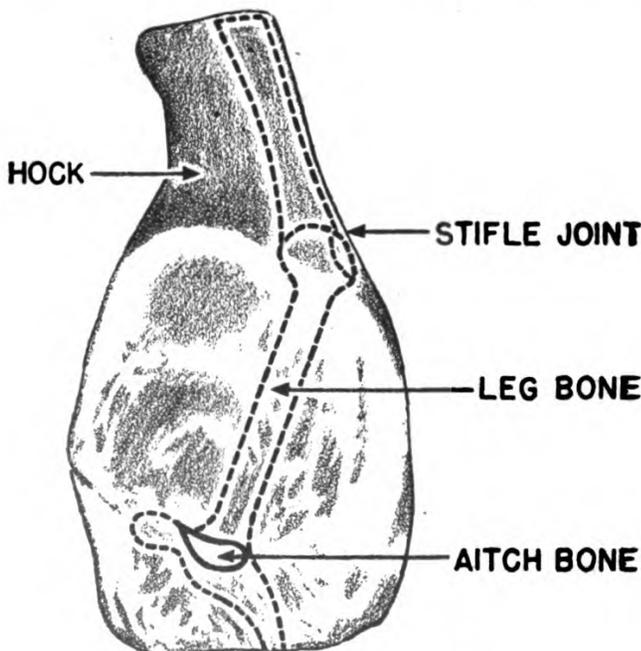


Figure 139.—Removing hock.

thick. Take out the aitch bone (figure 140). Loosen the meat around the knuckle ends of the leg (round) bone (figure 140).

All this cutting helps you in several ways. The hams require less space in the oven. They will be

easier to carve. The shanks can be held back for seasoning purposes. The surplus fat can be rendered and used for frying and baking. Also you avoid the possibility of cooking spoiled hams because you can see the interior of the ham around the leg bone.

THE OVERSEAS HAM

The overseas ham is a specially cured ham with a high salt content. If it has been out of cure for only



Figure 140.—Taking out the aitch bone.

a short time, it may be cooked whole. But before placing the ham in the oven, you should boil it in water for about an hour or soak it overnight in cold water. (Throw this water away.) Either treatment will remove some of the salt content.

If the ham has been packed in salt for a month or longer, it is almost impossible to cook the ham whole with good results. Therefore, cut it into slices not over 1 inch thick. Boil these slices in water before you cook them in the oven.

POULTRY

You need remember only two general rules for cooking poultry.

First, use moderate heat (325° to 350°F.) so the meat will be juicy, tender, and evenly done throughout. This rule holds for birds of all ages and kinds from the spring chicken to the old hen.

Second, vary the cooking method according to the age and fatness of the bird. Broiling, frying, and roasting are best for young, tender, well-fatted birds. Braising in a covered pan makes lean young birds and old birds just past their prime both tender and savory. Very old birds need long, slow cooking in water or steam to make them tender all through. Then they may be fricasseed, creamed, or curried.

PREPARING POULTRY FOR COOKING

Poultry received by the Navy has usually been killed and bled, then dressed and either chilled or frozen. Dressed means that the feathers only have been removed. A few things must be done before the bird is ready for cooking.

First of all, singe and wash it thoroughly. The singeing is done by holding the bird over a flame and turning the bird so that all parts of it come in contact with the flame. This singeing removes the fine hair and feathers which were not removed during the dressing process.

Chop off the bird's head with a cleaver or heavy butcher knife. Then, if it is chicken or duck, remove the feet simply by cutting through the hock joint (figure 141).

The legs of turkeys contain a number of heavy tendons that must also be removed. To do this, loosen the skin and the ligaments on each side of the hock joints with a knife. Then twist the feet until they are free except for the tendons. Hang the turkey up by the feet. Pull downward on the turkey until the tendons pull out of the leg muscles. These tendons will

come loose from the turkey and remain attached to the feet.

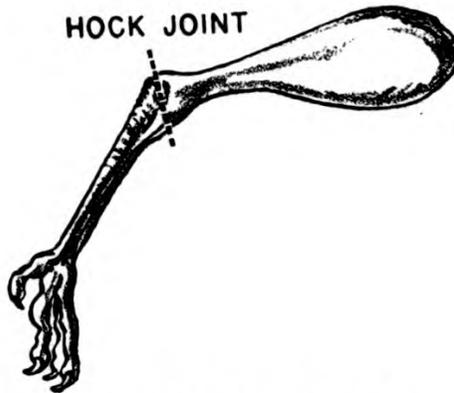
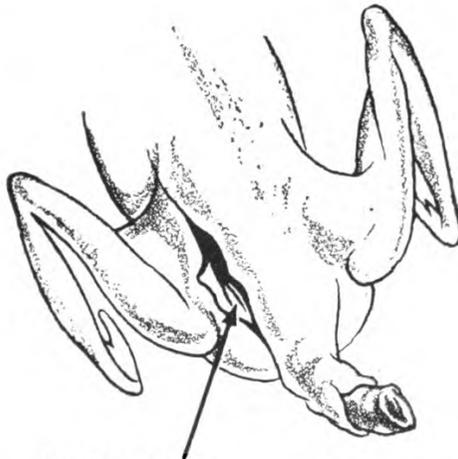


Figure 141.—Hock joint.

Now, for all poultry, make a slit in the neck skin all the way back to the shoulder (figure 142). Free the neck skin, gullet, windpipe, and crop from the neck.



SLIT FOR
REMOVAL OF CROP
AND GULLET

Figure 142.—Slit in neck skin.

Pull the gullet, windpipe, and crop as far as possible from the body. Be careful not to tear the crop. Cut and remove.

Remove the neck from the body at the shoulder by cutting through the neck muscle. Twist to separate the vertebrae and pull the neck loose.

The insides must be removed next. This process is called **DRAWING**. Make a cut around the vent (figure 143) with a sharp pointed knife. Then cut across the

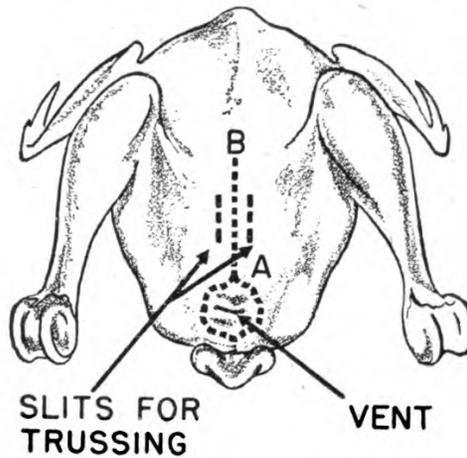


Figure 143.—Cuts to be made for drawing.

abdomen through the inside body fat (*A-B* in figure 143.)

Don't cut any deeper than the fat. Insert your finger and loosen the intestines all around the inside of the body. Lift the lungs that are attached to the ribs. Remove the gizzard and all the other entrails at one time.

Cut out the oil sac—on the back just above tail. See figure 144. Wash the carcass inside and out. Do

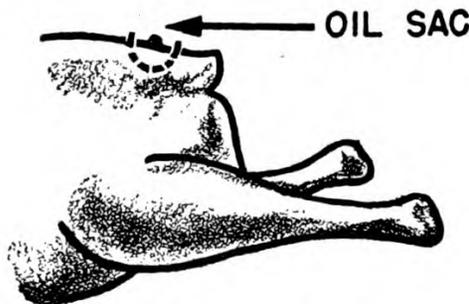


Figure 144.—Removing oil sac.

it quickly but thoroughly. Do not soak. Separate the giblets—gizzard, heart and liver—from the entrails. Always use the giblets—they have a good flavor as well as a high nutritive value.

PREPARING AND COOKING THE GIBLETS

Before the liver can be used, the bile sac must be cut away. This bile sac is found on the under side of the liver. You can recognize it by its greenish brown or yellow color. To remove the bile sac, slip your knife carefully under it and cut it away. At the same time cut away any part of the liver that may be stained by contact with the bile sac. Whatever you do—don't let the sac break. If this should happen accidentally, throw away any part of the bird on which the bile falls.

Cut the fat away from the gizzard. Then cut into one of the gizzard's thick sides as far as the inner sac—don't cut into this sac. Put your thumbs on either side of this cut and pull the sides of the gizzard away until the inner sac drops out. Throw this sac away.

Slit the heart open and remove the blood vessels and any blood clots that might be present. Then wash all the giblets in cold water.

Now for the cooking. Place the giblets in a kettle containing just enough salted water to cover them. Let the giblets simmer until they become tender. This takes from 1 to 1½ hours for chicken giblets and from 2 to 3 hours for turkey giblets. Then you can chop or grind them and add them to the gravy or serve them just as they are.

Use the bones and feet for making soup stock. Be sure to skin the feet before using.

HOW TO TRUSS FOR ROASTING

Poultry to be roasted requires trussing for best results. Cut the skin at the abdomen above the tail, parallel to the cut made for drawing. Look again at figure 143. Put the drumstick ends through the slits so that the ends extend underneath the strip of skin. In this position the legs are held close to the body

during cooking. Draw the neck skin over the front opening and onto the back. Fold the wings into place.

HOW TO PREPARE BROILERS

Broilers require a little different preparation. After singeing and washing, lay the bird on its side. Cut off the tail. Cut at an angle so that both the oil sac and the vent are included with the tail. Then make cuts from the neck down on both sides of the backbone (figure 145).



Figure 145.—Cutting on both sides of backbone.

Grab the head and rip out the back, neck, and backbone in one piece. Save the neck and backbone for soup. Now chop off the head. Open the bird and remove the entrails. Be sure to lift out the lungs.

Flatten the bird by breaking or chopping the wish-bone. Snap the joints to keep the bird flattened during the cooking. Separate the giblets from the entrails. Be sure to cut out the bile sac from the liver and throw the bile sac away.

Finally, wash the bird quickly but thoroughly. Do not soak.

HOW TO DISJOINT FRYERS AND FOWLS

Cut fryers and fowls into 12 pieces. First of all, remove each wing at the joint next to the body. Dis-

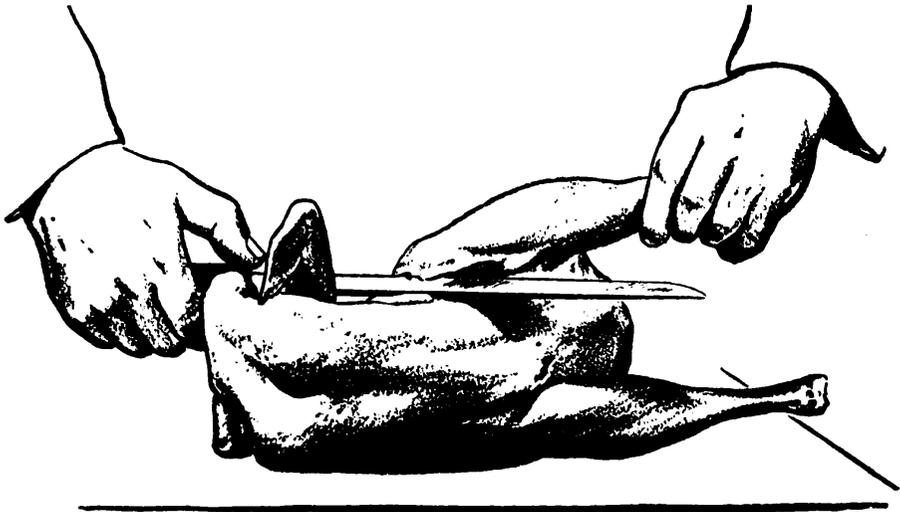


Figure 146.—Cutting off the legs.

joint the legs at the back (figure 146) and cut each leg at the knee so as to form two pieces.

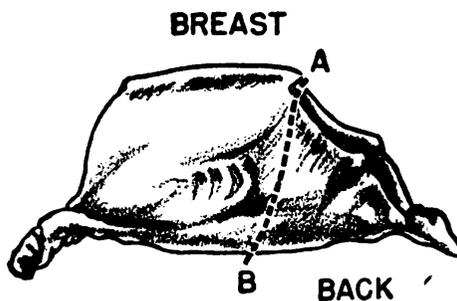


Figure 147.—Cut to separate back from breast.

Make an incision through the thin muscle tissue at the rear of the breast or "knee" bone (*A* in figure 147).

Pass the knife forward and downward to the juncture of the last rib and back (*A-B* in figure 147).

Repeat this cut on the opposite side. Bend the back and break it at the cut just made. Remove the intestine, giblets, and lungs.

Separate the breast from the part of the back containing the ribs as shown in figure 148. Then cut the

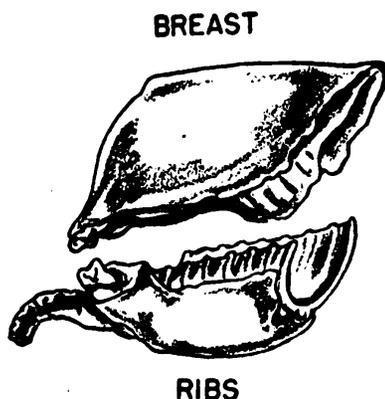


Figure 148.—Breast separated from ribs.

breast into three pieces as indicated by the dotted lines in figure 149. Make the cut from *A* to *B* first.

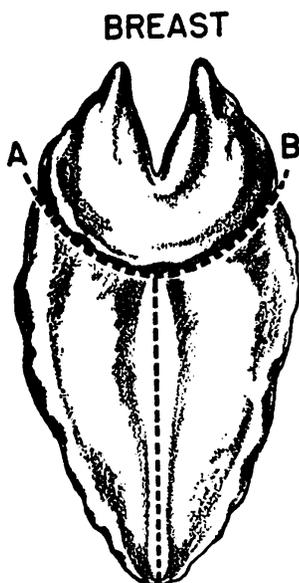


Figure 149.—Cutting the breast.

You now should have the 12 pieces shown in figure 150. You also have the giblets.

FISH

Fish is about the best source of protein there is. Sometimes when it's badly prepared you can't see the fish for the bones. That's when it seems like more

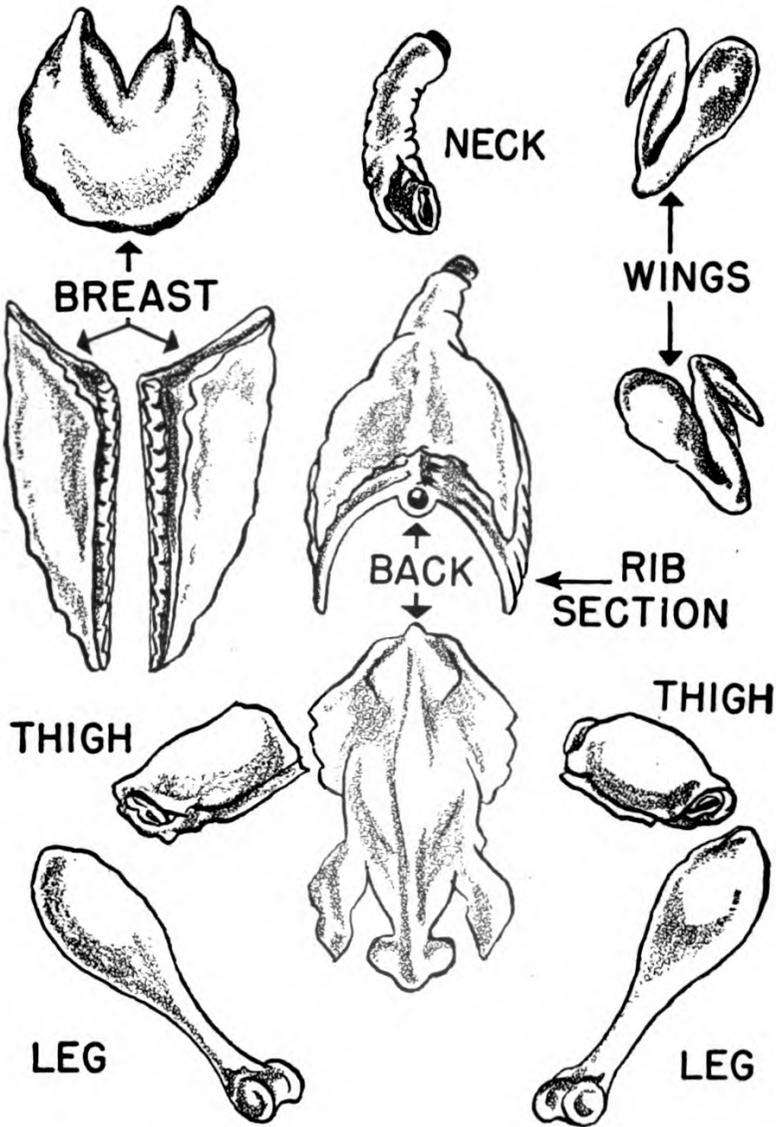


Figure 150.—Chicken cut into pieces for frying.

trouble than it's worth. Here's how to prepare fish the **RIGHT** way.

First you'll have to fin it. You do this by cutting into the flesh of the fish at each side of the base of the larger fins. Grab the rear part of the fin and jerk

forward suddenly toward the head of the fish. This should remove both fin bones and fins.

To fillet or bone a fish, cut down the flesh just behind the head until the knife reaches the backbone. Then turn the knife flat and cut the flesh along the backbone to the tail, as shown in figure 151. Lift off

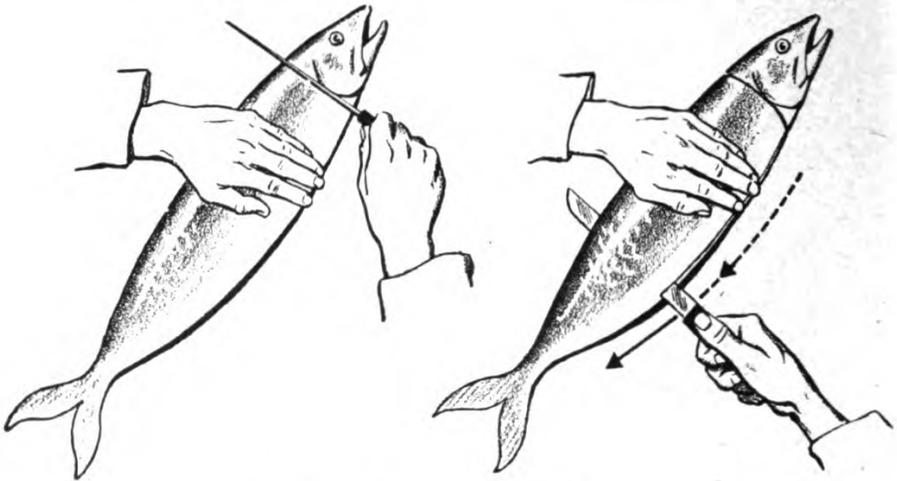


Figure 151.—Filleting a fish.

the whole side of the fish in one piece. Turn the fish over and loosen the meat from the other side in the same way. Take out any small bones that may remain. Look CAREFULLY for them.

To remove the skin, first dip the fish in boiling water for a few minutes. Place the fillet with the skin side down and loosen the skin from the meat by holding the knife flat against the skin. Start at either end of the fillet.



CHAPTER 10

BAKING

YOU MAY HAVE TO DO IT

If you're on a big ship, you'll do little baking. You get your bread and cakes from the general mess, where Ship's Cooks or Bakers turn them out. But you may be transferred to a small ship or station where you'll have to do ALL the baking for the officers' mess. That's why all men in the ratings of Cook 3/c or Steward 3/c are required to know how to bake bread, pies, and simple pastries.

BREAD

As a rule, Stewards and Cooks don't often have to make ordinary bread. It nearly always comes from the general mess. Then why should you learn how to do it? For three reasons. First, you might get into a billet where you WILL have to bake ordinary bread. Second, the knowhow will help you in making such items as sweet rolls, doughnuts, biscuits, and muffins.

Third, you will probably have to show that you can bake bread before you are advanced in rating.

Navy bread has seven ingredients—yeast, water, sugar, salt, milk, flour, and shortening. The *Navy Cook Book* gives two formulas for white bread—an average formula and a rich formula. The rich formula requires more yeast, sugar, milk, and shortening, and less water and salt. The rich formula is used when making bread for special occasions. In addition, the cook book includes formulas for rye bread, whole wheat bread, field bread, and rolls.

MIXING THE DOUGH

The *Navy Cook Book* emphasizes the straight-dough method of mixing bread dough. If that doesn't



Figure 152.—Testing for the punch.

work out very well for you, try the sponge-dough method. It is explained on page 320 of the 1944 *Navy Cook Book*. Here's how the STRAIGHT-DOUGH works—

Dissolve the yeast completely in a little lukewarm water. Mix this yeast solution with the salt, sugar, milk, and the rest of the water. Then add the flour

and mix well. You'll use a dough mixing machine if you have one, and otherwise you'll do it by hand.

Add the shortening next and mix for about 10 minutes. The temperature of the dough should be kept at about 80°F. When the dough is well mixed, put it in dough troughs (if you have any) or leave it in the mixing bowl to ferment.

PUNCHING

After about two hours, test the dough to see if it is ready for punching. Push your extended fingers into the dough as shown in figure 152 and withdraw them quickly. If the dough falls away, it is ready for



Figure 153.—The punch.

the punch. If it swells and fills in the gap made by the fingers, it must be allowed to stand a while longer.

When the dough is ready for punching, pound and press it with your hands as shown in figure 153.

PROOFING AND FORMING

Let the dough stand for about 20 minutes after punching—so it can loosen up. Then divide it into pieces just large enough for loaves. Under ordinary conditions, a pound loaf of bread is produced by 18

to 18½ ounces of dough. If you do the dividing by hand, each piece of dough should be weighed. If a machine is used, only an occasional piece need be weighed.

Allow the dough to rest for 10 or 15 minutes. This is called **INTERMEDIATE PROOF**. Bakers use the term "proof" to mean additional fermentation (that is, time for the yeast to work).

The next step is to mold or form the pieces into loaves. Grease the pans lightly to prevent the loaves from sticking. Place each loaf so that the molding seam faces the bottom of the pan. The loaves should be long enough to reach the ends of the pan.

After all this handling, it is necessary for the loaves to rise again. This is known as **PROOFING**. Place the pans of dough in the proofing cabinet, if you have one, or otherwise in a warm, damp place. During proofing, a temperature of 95° to 98° F. and a relative humidity of 80 to 85 percent are best.

Let the loaves proof until they have about doubled their original size. This should take from 30 to 60 minutes. Then the loaves are ready for the oven.

BAKING THE BREAD

Oven temperatures should be between 375° and 450°, depending on the type and size of the loaves. The **LARGER** or **THICKER** the loaf, the **LOWER** the temperature should be. Keep the heat even. Space the pans about ¾ of an inch apart so the heat can get at each part of the loaf equally.

The bread bakes in 30 to 45 minutes. Cool the bread gradually so it won't crack at the crust. However, if you are having difficulty with ropy bread, you should cool it quickly.

IS YOUR BREAD GOOD?

Use the check list on page 159 to find out where your bread needs improvement. Common sense will

BREAD CHECK LIST

OUTSIDE

POINTS TO CHECK	WHAT YOU WANT	POSSIBLE FAULTS
Color of crust	Golden brown	Light, dark, dull.
Size of loaf	Standard size	Large or small.
Shape of loaf	Symmetrical (even in shape)	High, one end high, dumbbell shaped, overlapping sides.
Evenness of bake	Baked the same on all sides	Light side, or bottom, dark side or bottom, not uniform.
Break and shred	A uniform meeting of the top and sides	Wild or coarse break, not enough break or shred on the ends, "shell" crust.
Crust	Tender, even surface and thin	Tough, thick, hard, brittle.

BREAD CHECK LIST

INSIDE

POINTS TO CHECK	WHAT YOU WANT	POSSIBLE FAULTS
Grain	Close, even uniform	Open, large holes, coarse, non-uniform, thick cell walls.
Color of crumb	Creamy white	Chalky or dead white, yellow, gray, dull streaked, spotted.
Texture	Firm, velvety soft and elastic	Rough, harsh, doughy, crumbly lumps.
Aroma	Pleasing sweet odor	Sour, cheesy, musty, moldy, ropy, rancid.
Taste	Pleasing sweet taste	Too salty, flat, too sweet, sour, rancid, cheesy.

tell you what to do for some of the faults. For instance, if the crust is dark instead of a golden brown, the bread may have been baked too long. If the texture or taste aren't right, perhaps you didn't mix the dough properly or didn't follow the recipe on the amount of ingredients. Were the ingredients in the best of condition?

You'll also find some suggestions for improving your bread on page 406 of the 1944 *Navy Cook Book*.

BASIC SWEET DOUGH

Just mix up a batch of basic sweet dough and you can serve coffee cake for breakfast, cinnamon rolls for dinner, and cakes for supper—all made from the original batch. Doughnuts, tarts, raisin buns, and Parker House rolls are some more of the forty different kinds of cakes and rolls you can make with basic sweet dough. So learn how to mix and use it in all forty ways if you can.

Here's the formula recommended for general use—

Sugar	.....	2 lb. 8 oz. to 3 lb. 4 oz.
Salt	.....	2½ oz. to 4 oz.
Shortening	.....	2 lb. 4 oz. to 3 lb.
Mace	.....	½ oz.
Eggs	.....	15 eggs
Lemon grating	.....	2 lemons
Milk or water	.....	8 lb. 3 oz.
Flour	.....	17 lb.
Yeast	.....	1 lb.

The *Navy Cook Book* gives a good system for mixing the dough. You place all the DRY ingredients and shortening in the mixing bowl. Then dissolve the yeast in part of the milk, add the eggs and remaining milk, and add the whole mixture to the mixing bowl. Mix to a smooth dough, about 2 to 5 minutes.

Allow about two hours for the yeast to get in its work. Then test the dough for the punch (just the same as with bread dough). If the dough is ready, punch it. Let the dough rest for another 20 minutes before you cut it up into the sizes you wish. When

you've cut it, let the pieces proof until they have doubled in size. Bake them at 425° F.

Basic sweet dough may be kept in the refrigerator up to 72 hours before using. You can mix it up at times when you aren't busy and then make it as needed.

If you're going to refrigerate the dough, cut the fermentation time down to about one hour (instead of two). Make it up into rolls, buns or twists before you put it in the refrigerator. Keep it at a temperature between 32° and 40° F. When you're ready to bake, take the dough from the refrigerator and let it stand until it comes to room temperature. Then proof and bake it in the usual way.

If you want to make the mix richer, use butter instead of shortening or half butter and half shortening. If you use all butter, leave out the mace.

You can make Danish pastry by "rolling in" the shortening after the dough is mixed. Use 2 to 5 ounces of shortening or butter to one pound of dough. The more shortening you roll in, the richer the pastry will be.

CAKE-MAKING

You're not a good cook until you can make good cakes. All kinds of things can go wrong if you don't know exactly what you're doing, and that means knowing about temperatures, mixing times and speeds, and the effect of an increase or a decrease of each ingredient.

The best cakes are light. They can get the lightness in three ways. Ordinary layer or loaf cake is made light by the action of baking powder. Pound cakes are light because of the air that gets in during the mixing process. Sponge cakes are made light by beating the eggs and sugar.

LAYER CAKE

The Navy has developed a simple cake-mixing method that makes things easier for you. The way

you do it is to blend ALL the DRY ingredients, including the shortening, with the eggs and part of the milk until you have a smooth batter. Add the rest of the milk as you are doing the mixing. That's all there is to it. You can mix by this method in less than 7 minutes with a mixing machine. For layer or loaf cake, it's best to use the first speed of a three-speed machine or the second part of a four-speed machine to mix the batter.

For best results, cake batters should be mixed at temperatures between 60° F. and 85° F.—preferably 75° F. The temperature of the ingredients should also be about 75° F. during the mixing. If shortening is cold, the batter will be lumpy and won't mix well. Cold milk or eggs make the batter stiff. The cakes either come out too small or they split.

If the batter is much warmer than 75° F. the cake will have coarse grain. It may also have tunnels and huge holes. If the batter is likely to be too warm, use cold milk and eggs to keep the temperature down.

POUND CAKE

Mix batter for pound cake the same as for layer cake but use a higher speed so as to get more air into the batter. Use the second speed on a three-speed machine or the third speed on a four-speed machine.

It's important to keep the batter temperature at 60° to 85° F. Mix enough batter so it will COVER the mixing arm on the mixer or the cake will be coarse. Be sure to scrape down the batter clinging to the sides of the mixing bowl—do this frequently if you want to produce a uniform batter.

SPONGE CAKE

Sponge cakes and angel cakes get their lightness from beaten eggs and sugar. Eggs and sugar beat up best when they are at a temperature of 120° F.

This foamy mixture must then be mixed carefully with the other ingredients. You can do this in either of two ways. One way is to add the other ingredients, one by one, to the beaten eggs and sugar. The other way, you mix the other ingredients into a batter and fold the egg and sugar mixture carefully into the batter. Either way works well if you do it right.

ICINGS

Top your cakes with varied icings—fudge, cream, marshmallow, or other kinds. There are lots of different cream icings and they are easy to make because no cooking is required.

Always let the cakes cool to room temperature before you add any icing.

All icings except marshmallow can be stored for a week if kept under 60° F. Put them in the refrigerator and cover with waxed paper to prevent crusting. Make up marshmallow icing only as needed, because it toughens after standing for a little while.

Cream and marshmallow icings go farther per pound of sugar than fudge. In other words, they are more economical.

EASY AS PIE

Pie has long been one of the favorite desserts. A good pie is easy to eat but not quite so easy to make. Two things make it good—a tasty filling and a light, tasty crust. There are three different kinds of good crusts. Here's how they're mixed.

For a **FLAKY** crust, mix **ALL** the shortening with **ALL** the flour. The mixture should be full of small lumps. Add cold water, but mix very little.

For a **MEALY** crust, mix **ALL** the shortening with **HALF** the flour. Then add the balance of the flour and mix it enough to break up the creamy mass.

For a **SHORT FLAKY** crust, mix **HALF** the shortening with **ALL** the flour until there is a good distribution

of the shortening. Then add the rest of the shortening and mix it in lightly so that only small lumps are left in the dough. Add the cold water and mix lightly.

If you're not going to make your pies immediately after mixing the crust dough, cover the dough with waxed paper to prevent crusting, and place it in the refrigerator until you are ready to use it. When you remove the dough, be sure to bring it to room temperature before you roll it out.

TWO-CRUST PIE

Suppose you want to make a two-crust pie. Roll out a piece of dough for the bottom shell until it is about $\frac{1}{8}$ inch thick, and slightly larger than the pie tin. Fold this piece over as shown in figure 154 and lay it

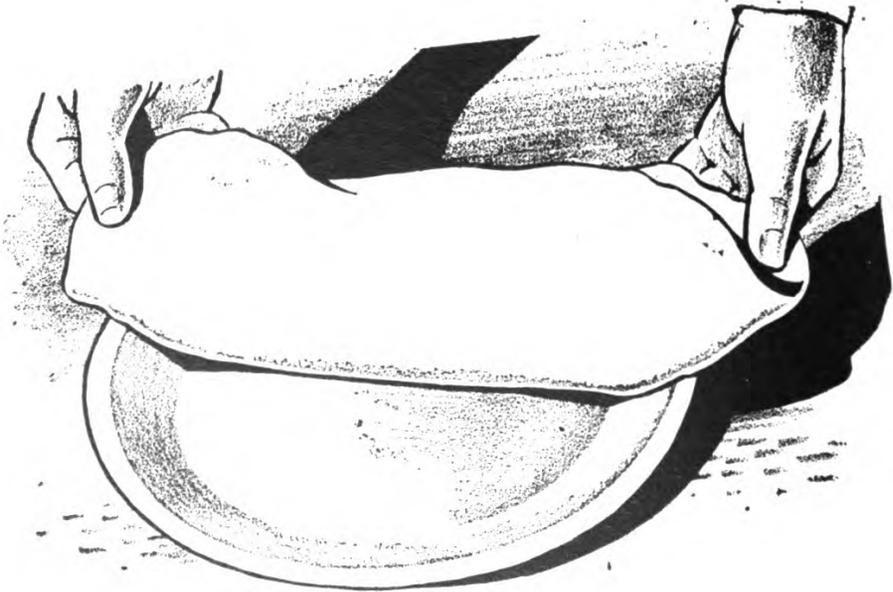


Figure 154.—The bottom shell.

over one side of the tin. Then unfold it so the whole tin is covered. See that there are no air bubbles under the paste.

Next, put in the filling. Roll a piece of dough $\frac{1}{8}$ inch thick for the top crust. Moisten the upper edge of the lower crust and lay the top crust dough over

the whole thing. Trim off the edge. Seal the edges of the crust by pressing down on them with your fingers or with a fork that has been dipped in flour. Slit the upper crust here and there to permit the escape of steam when the pie is baking. If you want a golden glow on the top crust, brush it lightly with milk, cream, or butter before you begin baking.

OPEN PIE

Soft pies—custard, cream, chocolate, and butter-scotch—are as popular as two-crust pies. They must be absolutely fresh. If you are not going to serve cream pies right away, cover them, cool them to luke-warm temperature, and place them in the refrigerator

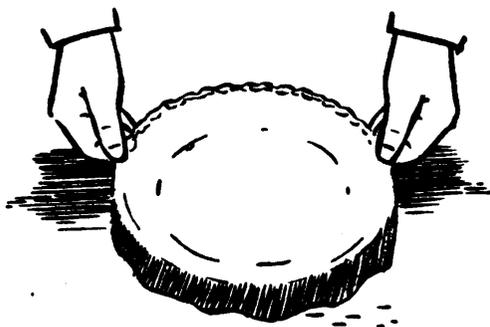


Figure 155.—Making a fluted rim.

until ready to serve. Cream fillings provide a good growing place for poisonous bacteria, and bacteria grow best in warm temperatures. So be careful.

To make a fluted rim for an open pie, trim the pastry about one inch larger than the tin. Turn the edge in and under all the way round. Raise this double fold so that it stands up with the cut side resting on the rim. Then pinch the dough in and down all the way round the rim. Figure 155 shows you how.

If you're making a pie where the bottom shell is baked separately, dock (puncture) the pastry with a fork at a number of different points on the bottom of the pan.

COOKIES

You can round out a simple dessert by serving cookies—and they're easy to make.

Put the proper ingredients into the mixing bowl and mix. They should be well-blended after 2 or 3 minutes, using medium speed on a mixing machine. Over-mixing makes a tight dough that won't spread right during baking. The cookies may turn out tough and leathery. Under-mixing makes cookies spread too much during baking. The finished cookies may be dry and coarse.

Sometimes cookies have a bad habit of sticking to the pan. Yours won't stick if you use pans that have been completely cleaned and dried and then properly greased. Pans should be both greased and floured for moist dough, and greased for dough that is fairly rich in shortening. Shortbreads, ice box cookies, and other rich dough cookies require no pan greasing at all, since the shortening keeps them from sticking.

Before using a NEW PAN, you should grease it lightly and bake in a hot oven (400° F.) for about 4 hours. This will put a hard film over the pores in the metal and help do away with sticking.

Don't use battered, bent, or scratched pans. The heat from the oven won't reach the cookies uniformly through a pan that's uneven on the bottom.

Bake most cookies at a constant temperature between 375° and 400° F. It's a good idea to under-bake slightly, since the heat in the pan will finish up the baking process after you've removed the cookies from the oven.



CHAPTER II STEWARDS' COUNTRY

A BIGGER JOB

The Steward's job goes a little farther than the Cook's. Men of both ratings may do about the same kind of work in the galley. But Stewards also must see that the officers' rooms and clothing are taken care of, that the mess tables are set correctly, and that the meals are served properly.

If you are rated as a Cook, you might figure that you don't have to worry about the Steward's duties. Remember, though, that you may find yourself on a small ship where you'll have to carry on as BOTH Cook and Steward.

If you're a Steward on a large or medium-size ship, chances are that you won't have to do much of the actual room-cleaning, table-setting, and meal-serving. Instead, you'll be in charge of Steward's Mates who do the work. In other words, you'll be a SUPERVISOR—especially after you get your second-class rating.

You'll get at least part of the credit if the Steward's Mates do good work. And you'll get most of the blame

if they do poor work. If mistakes are made, they'll be your mistakes as much as those of the men who make them. Don't think that because you've given an order it will be carried out exactly as you wish. FOLLOW IT UP. Double-check until the job is done right. Set your standards high at the very beginning. Your men may grumble at first but sooner or later they'll take pride in doing their best work.

It's a good idea to assign jobs according to a schedule. Aboard ship there are hours set for just about everything—meals, muster, general quarters. In between all these, you'll set times for room service, collecting and returning laundry, cleaning in the wardroom and pantry, setting the table, preparation of salads and desserts. Insist on jobs being done promptly. Give yourself time to make unofficial inspections.

As official inspection of Steward's Mates is made every day by the Division Officer. Usually they are mustered after lunch and inspected for personal cleanliness. As petty officer you will muster the men and report any absentees to the Division Officer.

Inspections are also made before meals—another check on cleanliness. On a large ship this would be the job of the Chief Steward; on a small ship it would be your job. Before meals you will also check the wardroom to see that the table is properly set. In port be sure to find out well in advance of the meal if there are guests. See that places are set for them according to their rank.

ROOM SERVICE

Each Steward's Mate is assigned to take care of several officers' rooms. He makes a point of finding out how each of the officers like things done. Either the leading steward or the room steward will make the assignment.

Staterooms are cleaned and tidied up every morning after breakfast. When the work is done, the room

steward should make a thorough inspection. Read over the Navy Training Course for Steward's Mates to be sure you remember what's to be done and how. Make a daily and weekly check list to use in your inspections. Here are some examples of check lists—

DAILY

Uniforms and pajamas put away.
Bed made correctly.
Clean towels put out.
Shoes shined.
Wastebasket and ashtrays emptied and cleaned.
Desk, chairs, shelves and tops of clothes lockers cleaned.
Deck swept.
Mirror, wash basin and soap dish cleaned.

WEEKLY

Bed linen changed.
Stateroom thoroughly dusted.
Brass and brightwork polished.
Paintwork cleaned.
Deck swept and swabbed.
Soiled clothes taken to laundry.
Windows and ports cleaned.

A Steward's Mate will make out a list and take soiled laundry down to the laundry room once a week. Usually laundry is taken down Monday morning and picked up Friday afternoon. If anything is missing when the laundry comes back, the Steward's Mate will report to the room steward. You can then make a complaint to the laundryman.

You will issue clean sheets and pillow cases once a week and clean towels twice a week. The Steward's Mates bring the soiled linen to you and you draw a clean supply from the locker. The Chief Steward will work with you in making out a schedule. This will

naturally depend on the laundryman and HIS schedule.
You will also issue clean linen for the wardroom.

THE WARDROOM

Sometimes the Head Boy is a Steward's Mate who has shown exceptional ability. If you've ever been Head Boy you'll know plenty about wardroom duties. Read over the details of wardroom service in the Steward's Mates book. In general, the duties are these—

DAILY check for cleanliness of tables, chairs, ash-trays, deck, brightwork, scuttlebutt.

WEEKLY check of bulkheads, drawers, chair-covers, silver, salt-cellars.

Care of linen, silver, and china.

Correct setting of tables before meals.

Correct seating of officers and guests.

The Head Boy will be responsible for making arrangements for guests. If the Head Boy is a Steward's Mate he will confer with the Wardroom Steward. If you are Wardroom Steward, you should find out from the mess treasurer if there are special rules for seating and serving of guests aboard your ship.

The Steward selects the Buck. The Head Boy places it correctly at every meal.

The Wardroom Steward or Head Boy should stand where he can see the whole wardroom. Watch for promptness and correct service.

See that the table is cleared properly after meals, and the wardroom cleaned.

THE PANTRY

You may be chosen to be Pantryman if you have shown special ability as Pantry Boy. Read over *Steward's Mates* for a review of their pantry duties. You will direct the Steward's Mates under you in—

Cleaning the pantry.
Keeping the food.
Drawing stores.
Cleaning refrigerators.
Washing and drying dishes.
Care of dishes, silver, pots and pans.
Washing dishcloths and dish towels.
Disposing of garbage.

It's your job to see that the Pantry Boys keep themselves and the pantry spotlessly clean. Dirt in a pantry can spread germs and cause disease. This means constant scrubbing.

Never leave leftover food on shelves. It will attract insects and spoil. Turn back to page 75 of this book and review the section on food poisoning.

WATCHES

The Watch Boy and the Relief Boy will be responsible to you. Here's what they should do—

Answer calls in pantry and wardroom.
Keep the wardroom in good order.
Set out food for officers having late watch.
Keep dishes washed and pantry clean.
Take care of chairs which are not being used.
Announce meals and changes in uniform.
Enforce all wardroom and pantry regulations.
Serve soft drinks and tobacco as requested.

If the Watch Boy does a poor job, complaints will come to you through the mess caterer. It's a good idea to prevent such complaints by checking up on the Watch Boy now and then. Remind him of the importance of the job. He has sole responsibility for good service in the wardroom and pantry during his watch.

How Well Do You Know The Duties Of A—

STEWARD AND COOK

3c AND 2c

QUIZ

CHAPTER 1

FEEDING THE NAVY

1. How does your job change when you get a petty officer rating?
2. Why should a Steward know how to cook?
3. When might a Steward or Cook need to know some arithmetic?
4. Why is meat-cutting a qualification for both Cook and Steward 2/c?
5. When is a Cook 3/c a supervisor?
6. What are some of the duties of a Cook 2/c in connection with storage?

CHAPTER 2

GALLEY AND WARDROOM EQUIPMENT

1. Why should you be careful not to waste electricity in the galley?
2. What precaution should you take in cleaning a griddle?
3. When do you drain the oil tank of an oil range?
4. How should you defrost a refrigerator?
5. How often should you clean a coffee urn?
6. What valve of a copper do you open before turning on the steam?
7. How do you keep a meat block in good condition?
8. How do you request replacements for broken equipment?
9. Why should you report damaged mechanical equipment immediately?

CHAPTER 3

SOMETHING ABOUT NUTRITION

1. What foods provide muscle-building protein?
2. Why are calcium and phosphorus important in your diet?

3. How can you keep your blood in good condition?
4. Which gives you more immediate energy—proteins or carbohydrates?
5. What is the best way to preserve vitamins in cooking?
6. What vitamin helps night vision? In what foods is it found?
7. What is added to white bread to make it “enriched?” Why?
8. Why is milk a nearly perfect food?

CHAPTER 4

FOOD QUALITY

1. How can you tell whether beef is old or young?
2. What marks a chicken as young and tender?
3. Why should shellfish be tightly closed when you buy them?
4. What does heaviness in a grapefruit indicate?
5. What should be the appearance of the scar at the stem end of a ripe cantaloupe?
6. What kind of sound does a ripe watermelon make if you thump it with your knuckles?
7. Why is it dangerous to eat food contained in a “sweller?”

CHAPTER 5

STOWING AND BREAKING OUT

1. In storing food, where do you put the older stores?
2. How can you tell insects have been around provisions?
3. Why should egg cases be stacked on dunnage?
4. Why do you cover butter in a refrigerator?
5. How do you prevent your refrigerator from getting overcrowded?
6. How long does spinach last in cold storage? At room temperature?
7. Why shouldn't you defrost meat or fish in water?
8. How do you keep insects away from jams and jellies?

CHAPTER 6

ACCOUNTING FOR THE AMOUNTS

1. How are you responsible for the size of the officers' mess bill?
2. What is your record of purchases from the general mess?
3. If you keep a ledger, when should you make a record?
4. How do you divide a number decimally by 100?
5. How many pounds of mashed potatoes does it take to feed 15 men? (50 pounds are required to feed 100 men.)
6. How many tablespoons are there in 6 teaspoons?
7. How many ounces are there in $1\frac{1}{2}$ pounds?

CHAPTER 7

COOKING 'ROUND THE CLOCK

1. What is one of the secrets of good coffee?
2. What should you do to soup stock before using it in soup?
3. How can you use the liquids from canned vegetables?
4. How can you preserve the food values in potatoes?
5. When should dressing be added to fruit and raw vegetable salads?
6. Why do you refrigerate left-over food as soon as possible?
7. How long do bacteria require to grow in food?
8. Should you keep an opened tin can in the refrigerator?

CHAPTER 8

CUTTING MEAT

1. When you're cutting up a beef hindquarter, which part is removed first?
2. For what should the boneless hanging tender of beef be used?
3. For what should the beef tenderloin be used?
4. What use can you make of beef bones?

5. When the beef forequarter is hung up properly, is the arm and shank toward the bottom or toward the top?
6. Why should you stick a boning knife between the 5th and 6th ribs when you cut the beef forequarter?
7. For what should the beef chuck tender be used?
8. Which carcass is best for cutting into chops—beef, lamb, or veal?

CHAPTER 9

COOKING MEAT

1. In roasting meat, why should you keep your oven temperature below 350° F.?
2. Why is it a poor idea to broil thin steaks or chops?
3. Why do you place meat to be sauted in HOT fat?
4. Why should the meat for a stew be partially cooked before you add the vegetables?
5. What heat should you use in cooking poultry?
6. Should you use chicken giblets or throw them away? Why?
7. What precaution should you take if the bile sac of a chicken accidentally breaks?
8. How do you prepare the feet of chicken and turkeys for soup stock?

CHAPTER 10

BAKING

1. Are bread dough and basic sweet dough ready for baking immediately after the punch? Explain.
2. How long can you keep basic sweet dough in the refrigerator before using?
3. How does a pound cake get its lightness?
4. If your cake turned out too small or split, what might be the reason?
5. What precaution should you take before adding icing to a cake?

6. In what proportion do you mix shortening and flour in making a flaky crust?
7. How do you get a golden glow on the top crust of a pie?
8. Why must you be sure to refrigerate cream pies until you are ready to serve them?
9. How do you prevent cookies from sticking to the pan?

CHAPTER II

STEWARDS' COUNTRY

1. What part does the Steward play in the daily inspection of Steward's Mates?
2. Why is each Steward's Mate permanently assigned to certain rooms?
3. How often does the Steward issue clean sheets and pillow cases?
4. Who makes arrangements for seating and serving guests?
5. What does the Steward watch for during meals?
6. What is the most important part of the Pantryman's job?
7. What are the Steward's responsibilities during all watches?

ANSWERS TO QUIZ

CHAPTER 1

FEEDING THE NAVY

1. As a petty officer you will have a greater responsibility than you had before. More men will be working under you. You'll be a supervisor, a leader.
2. Stewards usually prepare all desserts, and bake pies, cakes, and pastries. Stewards must also be able to show the Cook how to cook anything they have planned on the menu. Also, on small ships the same man may have to serve as both Steward and Cook.
3. You'll need to know arithmetic for buying of all kinds, for estimating quantities both in buying and cooking, and for keeping records.
4. Either the Cook or the Steward may have to do the cutting of meat that comes aboard ship in the form of carcasses, quarters and sides.
5. A Cook 3/c is in charge of the Galley Boys and instructs them in safety and sanitation rules as well as cooking.
6. A Cook 2/c keeps storage places clean and knows the best ways of storing food and getting it out of storage.

CHAPTER 2

GALLEY AND WARDROOM EQUIPMENT

1. Fuel oil is used to generate electricity. If you waste electricity you waste fuel oil.
2. When cleaning a griddle, keep your ammonia-soaked cloth away from electric wiring or it will eat off the insulation.
3. Drain the oil tank of the oil range every night before you secure the galley.
4. You defrost a refrigerator by turning the current down and letting the ice melt off.
5. Clean a coffee urn after each using.

6. Before turning on the steam for a copper, open the exhaust valve that controls the steam.
7. Scrape the meat block after use with a scraper and a wire brush.
8. To request replacements for broken equipment, fill out Form 307 and have it approved by the Supply Officer.
9. Report damaged equipment immediately so that accidents will not be caused by trying to use it while it is damaged.

CHAPTER 3

SOMETHING ABOUT NUTRITION

1. Meat, milk, eggs, cheese, fish, poultry, peas and beans provide muscle-building protein.
2. The proper supply of calcium and phosphorus will keep your teeth and bones in good condition.
3. The foods that contain iron — eggs, liver, fish, vegetable greens, dried beans and peas, and oatmeal—will make you red-blooded.
4. Carbohydrates and fats give you more immediate energy. They are “pep foods” or fuel foods, whereas protein builds body tissues.
5. To preserve vitamins, cook with steam or use as little water as possible. Save cooking waters for soup and gravy.
6. Vitamin A helps night vision. It is found in yellow foods, and in kidneys, liver and giblets.
7. White bread is “enriched” with thiamin because that B-family vitamin, which gives you energy and a good appetite, is lost in the ordinary baking process.
8. Milk is a nearly perfect food because it contains almost all the food values necessary to life—vitamins and minerals as well as proteins and fats.

CHAPTER 4

FOOD QUALITY

1. The feather bones of a young beef will be soft and red and there will be white “buttons” on the tips.

2. A young, tender chicken has lots of pin feathers, soft feet and a smooth skin.
3. Shellfish are dead or dying if they aren't tightly closed.
4. Heaviness in a grapefruit indicates it has a thin skin and contains lots of juice.
5. The scar at the stem end of a ripe cantaloupe should be slightly sunken and calloused.
6. A ripe watermelon, when thumped by your knuckles, will make a dull hollow sound.
7. The food contained in a sweller (swollen can) may be fatally poisonous.

CHAPTER 5

STOWING AND BREAKING OUT

1. In storing food, put the older stores in front or on top so you can get at them first.
2. You will see webs or silky tubes, holes in the containers, or brown specks in flour or sugar if insects have been around.
3. Egg cases should be stacked on dunnage so that air can circulate around each case. In this way the eggs will stay fresh longer.
4. Butter should be covered because it picks up odors from other food.
5. You can prevent your refrigerator from getting overcrowded by making daily trips to the general mess storeroom and taking out only the perishable foods needed for one or two days.
6. Spinach lasts for a month in cold storage. At room temperature it wilts in a few days.
7. Meat or fish defrosted in water will lose much of its taste and food value.
8. Keep insects away from jellies by closing the jars tightly and cleaning the outsides of the jars.

CHAPTER 6

ACCOUNTING FOR THE AMOUNTS

1. The officers' mess bill is for food that you have bought according to your planned menu. If you have been economical, the bill will be smaller.
2. Your carbon copies of Form 307 are a record of purchases from the general mess.
3. You should make a record in your ledger every time the mess treasurer gives you money and every time you make a purchase.
4. Divide a number by 100 by placing a decimal point two places to the left.

$$\frac{80}{100} = .80 \text{ or } .8 \quad \frac{8}{100} = .08$$

5. It takes $7\frac{1}{2}$ pounds of mashed potatoes to feed 15 men. Since it takes 50 pounds to feed 100 men, you can figure it this way—

$$\frac{50}{100} \times 15 = \frac{750}{100} = 7.5 = 7\frac{1}{2}$$

6. There are 2 tablespoons in 6 teaspoons.
7. There are 24 ounces in $1\frac{1}{2}$ pounds.

CHAPTER 7

COOKING 'ROUND THE CLOCK

1. Good coffee is always FRESH. That means you must use fresh ground coffee and serve the coffee as soon as possible after brewing.
2. Before using soup stock, skim off the layer of fat that has formed on the top.
3. You can use the liquid from canned vegetables in soups, sauces and gravies.
4. You can preserve the food values in potatoes by cooking them with the skins on, or, if they are peeled, by making the peelings as thin as possible.
5. Dressing should be added to fruit and raw vegetable salads just a few minutes before serving.

6. Left-over food may breed bacteria if it is not quickly refrigerated.
7. Bacteria require only about four hours to grow in food.
8. It is perfectly all right to keep food in a tin can after the can has been opened. A tin can is as sterile as any dish.

CHAPTER 8

CUTTING MEAT

1. The flank is removed first from the beef hindquarter.
2. The boneless hanging tender of beef is used for stewing and grinding.
3. Beef tenderloin is used for steaks or roasts.
4. Beef bones can be used to make stock for soup, gravy, or meat loaf.
5. The arm and shank is toward the bottom when the beef forequarter is hung up properly.
6. The boning knife serves as a guide for cutting.
7. The beef chuck tender is good for braising.
8. Lamb is better than beef or veal for cutting into chops.

CHAPTER 9

COOKING MEAT

1. If the oven temperature is below 350° F. while roasting meat, there will be little shrinkage of the meat, and it will be juicy and uniformly done.
2. If thin steaks or chops are broiled, they will cook through completely before the outside is brown.
3. If the fat is not hot, the meat will absorb it and won't taste good.
4. The meat for a stew should be partially cooked before vegetables are added so that both will be done at the same time.
5. In cooking poultry, use moderate heat—325° to 350° F.
6. Use the chicken giblets; they taste good and have a high nutritive value.
7. Throw away any part of the chicken on which the bile falls.

8. Be sure to skin the feet of chicken and turkeys before using them for soup stock.

CHAPTER 10

BAKING

1. After punching, bread dough and basic sweet dough must be allowed to stand for about 20 minutes to loosen up. After the dough is formed into the shape and size you want, it must proof until the pieces have about doubled in size. Then they are ready for baking.
2. You can keep basic sweet dough in the refrigerator up to 72 hours before using.
3. A pound cake is light because air gets in the dough during the mixing process.
4. If a cake turns out too small or split, the temperature of your batter has probably been below 60° F. The best temperature is 75° F.
5. Before adding icing, be sure you've allowed the cake to cool to room temperature.
6. For a flaky crust, mix all the shortening with all the flour.
7. You can get a golden glow on the top crust by brushing it lightly with milk, cream, or butter before you begin baking.
8. Poisonous bacteria grow well in cream fillings and warm temperatures.
9. To prevent cookies from sticking to the pan, use pans that have been completely cleaned and dried and then properly greased.

CHAPTER 11

STEWARDS' COUNTRY

1. The Steward musters the Steward's Mates and report absentees to the Division Officer.
2. Each Steward's Mate is permanently assigned to certain rooms so that he can give the officers individual service by knowing what each likes.

3. The Steward issues clean sheets and pillow cases once a week.
4. The Head Boy and the Wardroom Steward make arrangements for seating and serving guests.
5. The Steward watches for promptness and correct service during meals.
6. Keeping the pantry clean is the most important part of the Pantryman's job.
7. The Steward's responsibility during all watches is to make sure that the Watch Boy is doing a good job.

APPENDIX A

WEIGHTS PER BUSHEL

	<i>Lb. per bushel</i>		<i>Lb. per bushel</i>
Apples.....	45-50 pounds.	Peas, green.....	32 pounds.
Beans, green....	24 pounds.	Pickles, cucum-	
Beans, wax.....	24 pounds.	ber.....	48 pounds.
Beets.....	60 pounds.	Potatoes, Irish..	60 pounds.
Carrots.....	50 pounds.	Potatoes, sweet.	50-60 pounds.
Cranberries....	33 pounds.	Quinces.....	48 pounds.
Cucumbers.....	48 pounds.	Rutabagas.....	50 pounds.
Gooseberries...	40 pounds.	Spinach.....	12 pounds.
Onions.....	50-57 pounds.	Tomatoes.....	56 pounds.
Parsnips.....	42-50 pounds.	Turnips, white..	55 pounds.
Peaches.....	48-50 pounds.		

YIELD PER POUND

Asparagus.....	15 to 20 stalks.	Carrots, winter..	3 medium.
Beans, green or wax.	3 cups ready to cook.	Onions, Bermuda	1 or 2.
Beans, lima, in pod.....	$\frac{2}{3}$ cup shelled.	Onions, red,	5 or 6.
Beans, lima, shel'd.....	3 cups.	cooked.	
Brussel sprouts.	50 to 60 head.	Peas in pod.....	$\frac{2}{3}$ to 1 cup.
Cabbage (cooked shr'd.)	$2\frac{1}{2}$ cups.	Potatoes.....	3 medium size.
Cabbage, raw,	$3\frac{1}{2}$ cups.	Spinach.....	4 quarts; $2\frac{1}{2}$ cooked.
		Tomatoes.....	3 or 4 medium.

APPENDIX B

QUANTITIES OF FOOD REQUIRED TO FEED 100 MEN AND 20 MEN*

	100 MEN	20 MEN
Fish fried	40 lb.	8 lb.
BEEF		
Boiled	50 lb.	10 lb.

	100 MEN	20 MEN
Corned	60 lb.	12 lb.
Creamed dried beef	12 lb.	2.4 lb.
Meat loaf	40 lb.	8 lb.
Pot roast of beef	60 lb.	12 lb.
Roast beef	60 lb.	12 lb.
Beef steak	70 lb.	14 lb.
Hamburger steak	40 lb.	8 lb.
Beef stew	40 lb.	8 lb.

PORK

Pork chops	45 lb.	9 lb.
Boiled pork	50 lb.	10 lb.
Roast pork	50 lb.	10 lb.
Fried pork sausage	35 lb.	7 lb.
Fried bacon	30 lb.	6 lb.
Ham, boiled	55 lb.	11 lb.
Ham, fried	60 lb.	12 lb.

OTHER MEAT

Veal cutlets	60 lb.	12 lb.
Veal fricassee	50 lb.	10 lb.
Veal roast	65 lb.	12 lb.
Leg of mutton roast	65 lb.	13 lb.
Chicken fricassee	60 lb.	12 lb.
Chicken, fried	80 lb.	16 lb.
Chicken, roast	80 lb.	16 lb.
Turkey, roast	100 lb.	20 lb.
Liver, fried	30 lb.	6 lb.
Steamed frankfurters	35 lb.	7 lb.

VEGETABLES

Asparagus, fresh	30 lb.	6 lb.
Asparagus, canned	24 lb.	4.8 lb.
Beans, lima or Navy, boiled	15 lb.	3 lb.
Baked pork and beans	15 lb.	3 lb.
String beans, canned	24 lb.	4.8 lb.

	100 MEN	20 MEN
String beans, fresh	30 lb.	6 lb.
Beets boiled, fresh	25 lb.	5 lb.
Cabbage:		
Boiled	40 lb.	8 lb.
Fried	40 lb.	8 lb.
Carrots, creamed	30 lb.	6 lb.
Cauliflower, creamed	50 lb.	10 lb.
Green corn on cob	100 lb.	20 lb.
Corn, canned	24 lb.	4.8 lb.
Eggplant, fried	25 lb.	5 lb.
Boiled greens	40 lb.	8 lb.
Onions, boiled	25 lb.	5 lb.
Onions, fried	30 lb.	6 lb.
Parsnips, boiled	40 lb.	8 lb.
Peas, canned, creamed	20 lb.	4 lb.
Peas, buttered	24 lb.	4.8 lb.
Peppers, stuffed	25 lb.	5 lb.
Potatoes:		
Baked	45 lb.	9 lb.
Boiled	40 lb.	8 lb.
Creamed	40 lb.	8 lb.
French fried	60 lb.	12 lb.
Mashed	50 lb.	10 lb.
O'Brien	50 lb.	10 lb.
Fried	50 lb.	10 lb.
Sweet potatoes:		
Baked	40 lb.	8 lb.
Boiled	50 lb.	10 lb.
Candied	50 lb.	10 lb.
Mashed	60 lb.	12 lb.
Rice, steamed	12 lb.	2.4 lb.
Cabbage for cole slaw	30 lb.	6 lb.
Spinach, fresh	40 lb.	8 lb.
Baked winter squash	60 lb.	12 lb.
Canned tomatoes, stewed	40 lb.	8 lb.
Turnips, boiled	40 lb.	8 lb.
Stewed canned vegetables	24 lb.	4.8 lb.

* This table can be used to figure quantities of food to feed any number of men. Figure the proportion of the amount listed for 100 men. Here are some examples—

Roast beef for 14 men.

$$\frac{14}{100} \times 60 = \frac{840}{100} = 8.4 \text{ lb. or about } 8\frac{1}{2} \text{ lb.}$$

Canned corn for 48 men.

$$\frac{48}{100} \times 24 = \frac{1152}{100} = 11.52 \text{ lb. or about } 11\frac{1}{2} \text{ lb.}$$

Mashed potatoes for 118 men.

$$\frac{118}{100} \times 50 = \frac{5900}{100} = 59 \text{ lb.}$$

APPENDIX C

TIMETABLE FOR COOKING VEGETABLES

Vegetable	Boiled (minutes)	Steamed (minutes)	Baked
Asparagus.....	15 to 30	20 to 40	
Beans, string, green, or wax..	35 to 60	40 to 80	
Beets, young.....	30 to 45	40 to 60	
Beets, old.....	*3 to 4	.....
Brussels sprouts.....	15 to 30	20 to 40	
Cabbage, young, whole.....	25 to 30	30 to 40	
Cabbage, quartered.....	10 to 15	12 to 20	
Cabbage, sliced.....	5 to 50	8 to 13	
Cabbage, old, whole.....	30 to 60	40 to 90	
Carrots, young, whole.....	15 to 25	20 to 30	
Carrots, young, sliced.....	10 to 15	15 to 20	
Carrots, old, whole.....	30 to 60	40 to 90	
Carrots, old, sliced.....	15 to 30	20 to 40	
Cauliflower.....	20 to 30	.....
Eggplant.....	15 to 20	20 to 30	15 minutes.
Green corn.....	5 to 15	.....	15 to 25 minutes.
Greens, in general.....	15 to 40	.....	20 to 45 minutes.
Kohlrabi.....	25 to 45	30 to 55	375° F.
Okra.....	20 to 40	25 to 50	
Onions.....	30 to 60	40 to 90	1 to 2 hours.
Onions, young (scallions)...	15 to 35	20 to 45	15 to 20 minutes.

Vegetable	Boiled (minutes)	Steamed (minutes)	Baked
	30 to 45		375° F.
Parsnips.....	20 to 35	.....
Peas, green.....	25 to 40	25 to 45	45 to 60 minutes.
Potatoes.....	25 to 30	30 to 55	30 to 45 minutes.
Sweet potatoes.....	20 to 30	30 to 40	450° F.
Squash, summer.....	15 to 25	25 to 40	30 minutes.
Tomatoes.....	30 to 50	.....	375° F.
Turnips.....		40 to 70	

* Hours.

APPENDIX D

FRUIT SALAD COMBINATIONS

- Oranges, bananas, grapes, pineapples.
- Oranges, bananas, grapes, peaches.
- Apples, lemon juice, celery, dates or raisins, oranges.
- Grapefruit, celery, green pepper, sweet red pepper.
- Oranges, bananas, raisins.
- Raisins, chopped dates, or figs.
- Watermelon, oranges, French dressing.
- Pineapples, kumquats, red and green peppers.
- Apricots (fresh or dried), grapefruit, coconut, dates.
- Cantaloup balls, oranges, pimientos, honey dressing.
- Grapefruit, dates, coconut, paprika.
- Oranges, tomatoes, sliced green onions.
- Dates, cream cheese or cottage cheese, pecans.
- Dates, cream cheese, peanuts.
- Dates, oranges, coconut.
- Dates, celery, grapefruit.
- Apples, dates, celery, nuts.
- Bananas, peanuts, dates or coconut.
- Twelve dates, 3 cups cabbage, 1 cup pineapple.
- Two parts cantaloup cubes, one part white grapes.
- Oranges and figs.
- Oranges, figs, red bananas, lemon juice.
- Oranges, apples, pineapples.

Grapefruit, apples, pineapples.
Grapefruit, apples, pineapples, cucumbers.
Apples, pineapples, cucumbers.
Celery, apples, nuts.
Celery, apples, nuts, pineapples.
Celery, apples, nuts, cherries.
Celery, apples, nuts, grapefruit.
Pineapples, bananas, oranges, marshmallows.
One part of oranges, one part pears.
Peaches, bananas, red raspberries.
Plums, grapefruit, blackberries.
Cherries, pineapples, almonds.
Three oranges, $\frac{3}{4}$ cup Spanish onions, French dressing.
Celery, apples, red and green peppers.
Pears, tomatoes, romaine.
Oranges, apples, pears, lemon juice, lettuce.
Grapefruit, oranges, red and green peppers, endive.
Alligator pears, oranges, pineapples, strawberries.
Oranges, apples, grapefruit, romaine.
Pears, cherries, lettuce, cream cheese.
Tangerines, bananas, pineapples, romaine.
Alligator pears, ripe olives, pimientos.
Oranges, grapefruit, pears, strawberries, pickled walnuts.
Apples, pineapples, celery, nuts.
Oranges, strawberries, endive.
Figs, cherries, strawberries, cream cheese.
Oranges, bananas, cucumbers, lettuce, romaine.
Bananas, cucumbers, cherries.
Apples, pineapples, bananas, tangerines, ripe olives.
Pineapples, cherries, bananas, almonds.
Cantaloup, watermelon, honeydew melon.
Pineapples, apples, grapefruit, oranges, cherries.
Persimmons, oranges, pears, pistachio nuts.
Apples, pineapples, almonds.
Persimmons, celery, nuts.

VEGETABLE SALAD COMBINATIONS

Green peppers, carrots, cabbage.
Peanuts, carrots, cabbage.

Cabbage, celery, apples, onions, or green pepper, pimientos.
 Equal quantities of cubed cooked turnips and carrots.
 Equal quantities of grated raw turnips and carrots.
 Shredded green peppers, chopped chives, sliced radishes, lettuce,
 water cress or romaine.
 Sliced scallions, chilled radishes cut in wafer slices, water cress,
 French dressing.
 Endives, cubed marinated tomatoes, green string beans, mari-
 nated 30 minutes.
 Cauliflower flowerettes, minced pimientos, and chopped parsley
 to garnish.
 Marinated string beans, peas, minced celery.
 Marinated carrots, chopped parsley garnish.
 Green peas, pimientos.
 Carrots, potatoes, peas, green or wax beans.
 Lettuce, tomatoes, parsley and chopped chives to garnish.
 Lettuce previously marinated, spinach ground and chopped,
 pickled beets and garnish.
 Shredded lettuce, tomatoes, green peppers.
 Cauliflower, shrimps, lettuce.
 Celery, pimientos, or green peppers, and lettuce.
 Tomatoes, cucumbers, nuts, lettuce.
 Tomatoes, cucumbers, chicken, nuts, lettuce.
 Shredded lettuce, sliced bananas, apricots (fresh or canned).
 Mushrooms, water cress, endives.
 Cauliflower, fried bacon bits, lettuce.
 Asparagus, celery, mushrooms, truffles, water cress.
 Artichoke bottoms, eggs, truffles, lettuce.
 Celery, shredded lettuce, water cress, endives.
 Asparagus, artichokes, mushrooms, bacon, lettuce.
 Tomatoes, eggs, pickled beets, and walnuts, pimientos, water
 cress.
 Endives, beets, truffles, lettuce.
 Tomatoes, wax beans, peas, cauliflower, cheese.
 Corn, tomatoes, red peppers.
 Tomatoes, celery, green peppers, water cress.
 Beets, cucumbers, water cress.
 Dandelions, eggs, French dressing.
 Carrots, water cress, cabbage, lettuce.

Tomato cup, potato salad, ham or sausage slices.
 Shredded lettuce, plain or pickled walnuts, cooked chestnuts.
 Cauliflower, string beans, shredded pimientos.
 Lettuce, sliced artichoke bottoms.
 Water cress, diced pickled beets, minced olives.
 Pickled beets, wax beans, beets asparagus tips.
 Tomatoes, avocados, figs, endives.
 Cubed avocados, lima beans, celery, green peppers.
 Asparagus, chives, oranges, endives.
 Dandelions, water cress, chives.
 String beans, beets, lettuce.
 Celery, apples, green peppers (en casserole).
 Bamboo shoots, green peppers, parsley, onions.
 Shredded endives, red and green peppers and chopped eggs on
 lettuce.
 Celery, apples, carrots, romaine.
 Tomatoes, asparagus, pimientos, green peppers.
 Cooked sliced carrots, radishes.
 Dandelions, beets, bacon, onions.
 Marinated shreds of ripe quince, celery, chives, water cress.

APPENDIX E

QUALIFICATIONS

COOK THIRD CLASS

(A) PRACTICAL FACTORS

- (a) D-5204 (1). (Primary requirements of all petty officers.)
- (b) GALLEY RANGE.—Demonstrate ability to start, operate, and secure galley range in own ship or station.
- (c) GALLEY MAINTENANCE.—Demonstrate ability to take charge of a small galley and maintain it in proper condition as regards cleanliness and upkeep.
- (d) MECHANICAL APPARATUS.—Demonstrate ability to start, operate, and stop all mechanical apparatus used in the preparation of food in own ship or station.

- (e) **BAKING.**—Demonstrate ability to bake bread, pie, and simple pastries.
- (f) **FOOD PREPARATION.**—Demonstrate to the satisfaction of the examining board, ability to prepare, cook, and serve properly any four dishes selected by the examining board, including a vegetable, meat, and dessert.
- (g) D-5211.01 (2) (A). (Practical factors for Steward's Mate 1c.)

(B) EXAMINATION SUBJECTS

- (a) **SANITARY PRECAUTIONS.**—Know the sanitary precautions to be observed by commissary personnel in the preparation and issue of food.
- (b) **SAFETY PRECAUTIONS.**—Know the safety precautions relative to the use of fuel oil and electricity in the galley.
- (c) **EQUIPMENT ALLOWANCE.**—Know the allowance of cooking utensils and galley equipment, and the method of accounting for these articles.
- (d) D-5211.01 (2) (B). (Examination subjects for Steward's Mate 1c.)
- (e) D-5203. (Fundamental knowledge required of all men in the Navy.)

COOK SECOND CLASS

(A) PRACTICAL FACTORS

- (a) **CUTS OF MEAT.**—Demonstrate ability to cut meat properly for its various uses.
- (b) **FOOD STORAGE EQUIPMENT.**—Demonstrate ability to maintain and keep in proper sanitary condition refrigerators and vegetable lockers.
- (c) **PERFORMANCE.**—Demonstrate ability as a consistently good officer's cook.
- (d) D-5211.03 (1) (A). (Practical factors for Cook 3c.)

(B) EXAMINATION SUBJECTS

- (a) **REGULATIONS.**—Know the regulations regarding the withdrawal of provisions from the storerooms.
- (b) **ORGANIZATION.**—Know the organization of the officer's messes in own ship or station.
- (c) **CUTS OF MEAT.**—Indicate on a quarter of beef and a side of veal the names, location, and proper uses of the various cuts of meat.
- (d) D-5211.03 (1) (B). (Examination subjects for Cook 2c.)

STEWARD, THIRD CLASS

(A) PRACTICAL FACTORS

- (a) D-5204 (1). (Primary requirements of all petty officers.)
- (b) **SUPERVISION.**—Demonstrate ability to take charge of steward's mates; to require good service, discipline, and cleanliness; and to direct steward's mates in the serving at the table in an officers mess.
- (c) **CLEANING.**—Demonstrate ability to perform satisfactorily duties in connection with the cleanliness of officers' rooms and clothing.
- (d) **TABLE SERVICE.**—Demonstrate ability to perform satisfactorily duties in the officers' mess room.
- (e) **GALLEY RANGE.**—Demonstrate ability to start, operate, and secure galley range in own ship or station.
- (f) **MECHANICAL APPARATUS.**—Demonstrate ability to start, operate, and stop all mechanical apparatus used in the preparation of food in own ship or station.
- (g) **BAKING.**—Demonstrate ability to bake bread, pie, and simple pastries.
- (h) **FOOD PREPARATION.**—Demonstrate to the satisfaction of the examining board, ability to prepare, cook, and serve properly any four dishes selected by the examining board, including a vegetable, meat, and dessert.
- (i) D-5211.01 (2) (A). (Practical factors for Steward's Mate 1c.)

(B) EXAMINATION SUBJECTS

- (a) ARITHMETIC AND BOOKKEEPING.—Be proficient in arithmetic and bookkeeping to such a degree as to insure the accurate keeping of necessary records.
- (b) SEATING ARRANGEMENTS.—Understand the proper seating arrangements for officers according to rank.
- (c) MESS EQUIPMENT.—Understand the allowance of mess equipment, and the method of accounting for china, linen, and other equipment for the mess.
- (d) MENUS.—Be able to make out balanced menus for different occasions, both at sea and in port.
- (e) SANITARY PRECAUTIONS.—Know the sanitary precautions to be observed by commissary personnel in the preparation and issue of food.
- (f) SAFETY PRECAUTION.—Know the safety precautions relative to the use of fuel oil and electricity in the galley.
- (g) D-5211.01 (2) (B). (Examination subjects for Steward's Mate 1c.)
- (h) D-5203. (Fundamental knowledge required of all men in the Navy.)

STEWARD, SECOND CLASS

(A) PRACTICAL FACTORS

- (a) SUPERVISION.—Demonstrate ability to assign, direct, and supervise the steward's mates in their various duties in the officers' mess room, and officers' rooms.
- (b) RECORDS AND REPORTS.—Demonstrate ability to keep accurate records and reports of transactions connected with an officers' mess.
- (c) CUTS OF MEAT.—Demonstrate ability to cut meat properly for its various uses.
- (d) FOOD STORAGE EQUIPMENT.—Demonstrate ability to maintain and keep in proper sanitary condition refrigerators and vegetable lockers.
- (e) D-5211.02 (1) (A). (Practical factors for Steward 3c.)

(B) EXAMINATION SUBJECTS

- (a) STORAGE.—Have knowledge of the proper storage of provisions.
- (b) ORDERING.—Be able to estimate quantities and kinds of foodstuffs in preparing for cruises.
- (c) PRICES.—Know the current prices and normal range of prices of staple and fancy foodstuffs.
- (d) REGULATIONS.—Know the regulations regarding the withdrawal of provisions from the storerooms.
- (e) ORGANIZATION.—Know the organization of the officers' messes in own ship or station.
- (f) CUTS OF MEAT.—Indicate on a quarter of beef and a side of veal the names, location, and proper uses of the various cuts of meat.
- (g) FOOD STORAGE EQUIPMENT.—Know the routine to be observed for the maintenance and proper sanitary conditions of refrigerators and vegetable lockers.
- (h) D-521.02 (1) (B). (Examination subjects for Steward 3c.)

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