

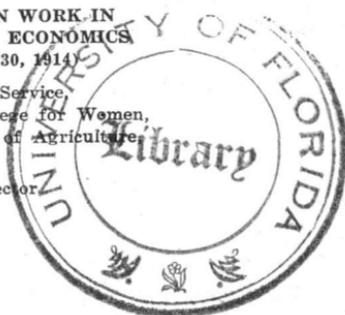
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COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
(Acts of May 8 and June 30, 1914)

Agricultural Extension Service,
University of Florida, State College for Women,
And United States Department of Agriculture,
Cooperating
Wilmon Newell, Director



MEAT CANNING

By ISABELLE S. THURSBY



Fig. 1.—Outdoor grills with convenient tables are popular places in Florida and provide cool, attractive places for home barbecues and for community activities.

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MEAT CANNING

By ISABELLE S. THURSBY

THE VALUE OF MEAT AS A FOOD

Every thrifty Florida farm family planning to provide an adequate food supply for home consumption recognizes that canning meat at home plays an important part in efficient farm management.

Meats, when purchased on the markets, tend to be expensive items in the list of dietary essentials, and for that reason often only those people with generous income can enjoy them. But the farmer who produces and conserves his own meat supply on his own farm can provide finer foods for his family and in larger quantities than his income might allow him to purchase.

Present day findings would indicate that no live-at-home program in Florida is complete without including in it some provision for canning and curing of meats. A year around garden and an orchard, the family cow, several colonies of bees and a pantry well filled with quality-canned meats, fruits and vegetables are safeguards for health and contribute to the economic wellbeing of every farm family. The pleasure which comes to the housewife and her husband when they think of the saving to their budget and the satisfaction accruing to their family from this well planned meat supply is of no small value in a happy farm life.

Meat is a palatable food, readily digested and well liked by most people. As a source of protein, it is needed for the growth and repair of body tissues. The use of more lean meat, and a decrease in the amount of fatty meat, is found to be an effective aid in the prevention and cure of pellagra. Meat contains iron which helps to build red blood corpuscles. Liver and glandular organs are especially esteemed for their iron content in the treatment and control of anemia. Meat is rich in phosphorus, which is an important constituent in bones, teeth, tissue and body fluids.

In most farm homes there are seasons of too great abundance of fresh meat. Caring for this meat by canning not only saves it for the time being, but makes it possible to have fresh meat at a moment's notice throughout the year. Canning of meat is an insurance against loss when the weather turns suddenly warm at butchering time. It makes the Florida farmer independent of weather conditions, and his meat animals can be slaughtered when they have reached the right degree of finish.

Delicious roasts, rich soups and fragrant stews, full of good

savor, nutritious and appetizing—out of a can! Hence, home canning of meat means:

Fresh meat for the farm home the whole year through at a low cost.

Variety. Variety adds interest to a good diet.

Less over-eating of meat at butchering time. It is poor economy to eat too much meat at killing time in order to save it.

Choice cuts canned. The cuts that cannot be cured—tenderloin, spareribs, and the meat specialties, liver, heart, tongue—make delicious and valuable canned supplies for the pantry shelves.

Economy. It is poor economy to hold over a flock of chickens or other animals for table use throughout the year. Save the feed bill by canning when in prime condition. "Money saved is money made."

Readiness for emergencies. A variety of canned meats in the pantry means preparedness for Sunday dinner, unexpected company, wash-day and other occasions.

ESSENTIALS FOR SUCCESSFUL MEAT CANNING

Proper selection and care of the animals to be butchered are the first essentials in successful canning of meat. Upon the selection and care depends to a large degree the wholesomeness, palatability and keeping quality of the canned meat product. Beef, pork, fowl, game and fish alike must be in perfect condition to be canned. Just as the quality of a milk-fed fowl is superior to a yard-fed bird, so the quality of beef, pork or lamb that has received some feeding is superior to that of the thin range animal.

To obtain the most nutritious and palatable meat and meat products there are a number of factors that should be given consideration in selecting an animal for slaughter. Important among these are the health condition, type and age of the animal and the care it has received.

Health: The health of the animal should receive first consideration; a sound article of food cannot be secured from an animal that is not healthy in every way. The animal should be gaining, never losing weight, and should have the general appearance of thrift. In addition to the unwholesomeness of the product, meat from diseased animals spoils quickly and may be the cause of "meat poisonings" and serious digestive disturbances. Cooking may destroy all the bacteria present in tainted meat but will not necessarily kill all the spores which might produce toxins.

Condition: The animal should be in medium condition, that is, neither too fat nor too thin. The muscles from a thin animal are usually lacking in the tenderness, flavor and juiciness which characterize a well marbled piece of meat. Over-fat animals will not produce a high quality product, as the proportion of fat to lean is excessive and this makes the meat unpalatable to many people.

Type and Quality: A high quality finished canned meat product cannot be obtained from a nondescript animal having poor conformation and lacking quality. There is no magic in the canning process which can change the meat from poor, scrubby, rangy animals into a choice, tender, flavorful, nutritious product.

Age: For best results select animals of an age somewhere between the very young with watery flesh which is lacking in nutritive properties and the old individual whose meat is apt to be lacking in tenderness and is stringy and unpalatable.

Preparation for Slaughter: Never slaughter animals when they are excited, fatigued or over-heated. Slaughtering should proceed with as little noise and worrying and driving as possible. Badly excited animals do not bleed thoroughly, and the flesh usually develops a very dark red color and is often bloodshot. Not only does the meat fail to keep well, but the unsightly, bruised places on the carcass will have to be trimmed out and thrown away, resulting in waste. Bone-taint of beef and putrefactive changes which occur in the neighborhood of the hip joint of otherwise prime carcasses are now traced to fatigue of the animal before being slaughtered. We cannot over-emphasize the value of careful handling of the animals and allowing them plenty of water but no food from 12 to 24 hours before killing.

Time to Butcher: Butchering should be done when the weather is so cold that the dressed meat will become thoroughly chilled over night. Otherwise, cold storage should be used. Authorities agree that the quality and tenderness of meat is greatly improved by holding in storage at temperature of 32° to 38° F., for two to six days before using. The meat must be canned immediately after removing from cold storage. Pork in particular gets stale rapidly so should be cooled quickly and canned as soon as possible after the animal heat is out unless held under artificial refrigeration.

“Sourbeef” is the trade description of spoilage occurring in freshly slaughtered beef which has not been properly cooled, occurring when the meat, while still warm, is stored in large pieces

and in poorly ventilated receptacles. Many defects of meat are reduced, if not completely eliminated, by prompt and adequate chilling.

Cleanliness Required: Clean handling from start to finish is most important. Meat spoilage is due to bacteria, molds, and enzymes. To control these spoilage agencies, scrupulous cleanliness and low temperature are required. In a dressed carcass, bacteria spread rapidly. The more meat is handled, the more likely it is to spoil. Contamination by soiled hands, clothing or utensils definitely lowers keeping quality. Tables on which meat is cut, as well as all utensils used, should be scrupulously clean.

(For further information see, Florida Agricultural Extension Bulletin 81, Butchering and Curing Pork on the Farm, Walter J. Sheely; and U. S. D. A. Farmers' Bulletin No. 1415, Beef on the Farm, Slaughtering, Cutting, Curing.)

PRINCIPLES OF MEAT CANNING

The principle of all canning is to kill organisms of spoilage that are in the product to be canned. Meat, along with non-acid fruits and vegetables, requires very high heat to sterilize the product so that it will keep in the container for a long or indefinite time. With the exception of acid fruits and vegetables and those products which contain other chemical substances such as curing salts and vinegars, foods intended for the can must be processed at sufficiently high temperatures and for sufficiently long periods to kill the most resistant types of spoilage organisms that may be present.

Because of its high protein content, the density of its texture and the moisture present, meat is a favorable medium for the growth of bacteria.

All the different meats, beef, veal, pork and its by-products, poultry, fish, and game are canned by the use of the steam pressure method. The hot-pack method with the use of the pressure cooker is advocated by the United States Department of Agriculture as the only satisfactory method known for canning all meats and non-acid vegetables. In addition, it is suggested that when a large quantity of meat is to be canned, the use of tin containers will greatly expedite the work. The wide mouth of the tin can facilitates packing the meat in larger pieces; tin cans are economical of time and fuel in processing; may be cooled quickly, a factor of great importance for safe canning; and are

easier to handle and store. In addition, the seal of the tins retains the valuable meat juices that are often drawn out in the glass jar and lost when processed under pressure.

While plain tin cans are satisfactory for most meats, it is also suggested that the C-enamel cans, manufactured for meat products, be used when possible. Meats contain a high percentage of sulfur-bearing proteins which sometimes cause discoloration of both container and product. This is avoided when enamel lined tin is used. The discoloration is harmless, of course. Enamel lined tins have been developed which are satisfactory for all canned meat items, and their use is now an established practice in the commercial canned meat industry. The only objection to their use lies in the slight additional cost.

Many can sealers are on the market that make practical the use of the tin can for safe, simple and economical meat canning in the home. These machines are simple and efficient when the directions for their use as furnished by the manufacturer are carefully read and followed.

Steam Pressure Cooker: The steam pressure cooker, or canner, is constructed of strong material and is provided with a tightly fitting lid which, when clamped in place, makes it possible to hold steam under pressure and so obtain the adequate sterilization temperatures needed for foods low in acidity. Most steam pressure outfits will carry up to 30 pounds of pressure with a corresponding range in temperature from 212° to 274° F. Each steam pressure outfit is equipped with a pressure gauge which registers the pressure in pounds, a safety valve, and usually a steam petcock and a lifting crate. The pressure cooker may be easily regulated so as to maintain the desired pressure and temperature. It is thus suitable for use in processing non-acid vegetables that require a temperature above boiling, all meats, fish and fowl, as well as being useful in general cookery.

If the cooker is purchased primarily for canning, one should determine how many jars or cans each size will hold and buy the size best suited to the amount of canning to be done. Devices vary for closing the cooker. Cookers may have a single clamp or a set of several clamps, or a collar or band that screws in place. In all cookers the device should make a steam-tight closure.

The hand on the pressure gauge should move easily without sticking as the pressure rises. The safety valve, which opens to let out steam when the pressure becomes too high, is a very necessary part of the cooker and should be kept in good working order. Anyone using a steam pressure cooker should know

how to take the petcock apart for cleaning. Follow the manufacturer's instructions carefully.

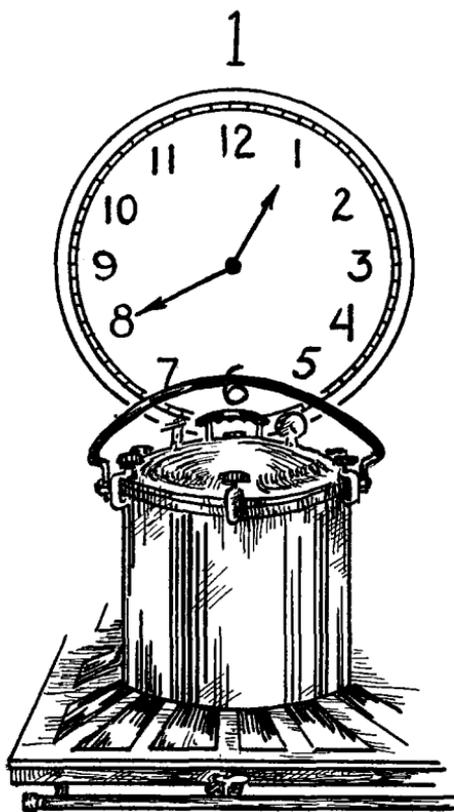


Fig. 2.—A convenient device made of cardboard with movable hands. May be placed on or near cooker when processing time is determined and the hands set for the completed cook. Being of a size easily read from across the room, the watch or clock may be compared from any point, thus saving steps.—Courtesy Kissimmee Canning Kitchen.

How to Use the Steam Pressure Cooker: Put enough water in cooker (1 to 2 cups) so there will be no danger of the cooker boiling dry. Place jars or cans on rack so that steam may circulate freely around them. Never stack one can directly over another, but place in alternate rows. The lid on the cooker should be adjusted and fastened securely so that steam escapes only at petcock. Leave petcock open for escape of any air in cooker, as otherwise the desired temperature may not be obtained. In cookers under 25 quart capacity leave petcock open until steam escapes in a steady stream for 7 minutes. For 25 quart cookers and for all larger sizes, allow steam to escape from petcock for 10 minutes before counting time.

If a large cooker is being used and there is plenty of water and, hence, little danger of boiling dry, the petcock may be left so that a very small amount of steam can escape. This helps not only to remove air but keeps the steam moving in the cooker. Use a quick "coming-up" time no longer than five minutes if possible. Begin counting processing time when the desired pressure is reached. Keep pressure or temperature as uniform as possible; fluctuation in pressure means uneven cooking temperature, may cause under or over processing, and the liquid will be drawn out of jars if glass is being used.

When processing is complete, remove cooker from heat. If glass jars are used, allow the pressure to fall slowly to zero and then slowly open petcock. If petcock is opened rapidly, loss of

liquid from the jars results. If No. 3 or larger tin cans are used, also allow pressure to fall to zero before opening, but if No. 2 or smaller cans are used, slowly open the petcock when the cooker is removed from the fire, and when at zero, release clamps and remove cover by lifting it turned away from the face in such way that the face and hands will not be burned by the remaining steam.

Before You Can a Whole Animal, Plan!—Elaborate equipment is not necessary for meat canning, but it should be adequate to handle the meat expeditiously. Best quality is obtained only when products are handled rapidly in both the preparation and the canning procedures. Holding the product during the packing procedure, due to inadequacy of equipment or insufficient labor, brings poor quality. Also, holding partially prepared products for other ingredients may affect the quality of the finished product. Delays mean that meats oxidize, color may become inferior, a loss of temperature may occur, or bacterial decomposition may start. Roasting pans, frying pans, kettles, food grinder, trays, long-handled forks, and other equipment found in a well appointed kitchen are adequate for the heating and preparation of the meat if sufficient in number and in readiness. Canning equipment containing copper and iron which may cause discoloration of the product should be avoided. Iron equipment under certain circumstances will cause discoloration. Many commercial canners of meat products have replaced iron with stainless steel equipment which prevents metallic discoloration. Those canning meat in the home might profit by the experience of commercial canners. The pressure cooker is essential, of course, for all processing.

When canning a half or a whole animal consider both equipment and a plan for doing the work.

EQUIPMENT:

1. Plenty of stove space. A four to five-burner oil stove in addition to a good kitchen range will be adequate in most instances. An outdoor stove may take care of one pressure cooker, if necessary.

2. Extra pressure cookers. At least three or four cookers of 20 to 30 can capacity are necessary for the speed required in handling the beef.

3. The sealer, set up, oiled and perfectly adjusted for an air-tight seal before actual canning starts.

4. Plenty of cans, examined for defects, washed, scalded and stacked in a warm place to drain and keep warm. Can tops should be dipped in boiling water and be placed where they will warm. Seventy-five to 85 No. 3 tins will be needed for a beef weighing around 300 pounds. More cans will be necessary if soup stock and stew are canned.

5. Extra table space adds greatly to the convenience and speed of operations. The meat cutting table should be in a cool place, preferably on a screened porch conveniently located to save steps. The sealing table, strong and steady, should be located near the stove where the tins when sealed may be immediately filled into the pressure canner for processing.

In addition, see that there are:

1. Suitable and sharp knives for cutting, carving and boning.
2. Plenty of hot and cold water.
3. Plenty of fuel.
4. Plenty of seasoning.
5. Plenty of dish towels and holders and everything needed conveniently at hand.
6. Food grinder.

PLAN OF WORK:

Divide the work. All persons assisting in canning should have a definite task assigned, the work so systematized and so carefully planned and divided that a number of people can work together without delay or interruption.

One person may be responsible for sorting and heating roasts, another may sear steaks. Another person may be responsible for packing in containers and adding seasoning.

Another should fill cooker, start processing, watch cookers, remove cans, cool, and examine the tins for leakage. (Write down the time at the beginning of the processing period and label cookers accordingly so there will be no question about processing time.)

Enough help should always be on hand to insure speed in the canning operations—preheating, filling, exhausting if necessary, sealing while boiling hot, getting tins or jars into cookers immediately and, as soon as cans are processed, cooling quickly and thoroughly and testing for leaks.

GENERAL DIRECTIONS FOR CANNING ALL MEATS

Do not attempt to prepare meat in too many ways when canning in quantity. Roasts, stews, ground meat (for meat loaf and hamburger), steaks, soup stock, and meat specialties are favorite and sufficient methods of preparation for one day's canning. If mince meat, scrapple, and similar products are made it is generally better to do this the day after the major part of the animal has been canned.

Meat for canning may be used as soon as the animal heat is gone or as soon as completely chilled out. Wipe with a damp cloth. Never soak meat in water. Soaking dissolves meat juices and makes meat "stringy."

Cut meat into suitable pieces for cooking. (See Figs. 3 and 4.) Prepare as for ordinary serving as roasting, broiling, or stewing. Cut into pieces of a size that will conveniently fill into the tins. Remove all bones and leave only enough fat to give flavor, as excess fat retards penetration of heat. Utilize all bones in making soup stock. Steaks should never be cut less than one inch thick and always across the grain. Save the tougher, "scrappy" parts of the carcass for stew, hash and hamburger.

Meat should be browned first in hot fat, or seared and roasted in the oven until heated through. This pre-heating develops flavor and shrinks the meat so it can be packed in cans or jars economically. It is desirable that a meat product that is to be sliced be cut and packed in a way that it can be removed from the can in a solid piece or congealed mass.

Flour is a poor conductor of heat. Meat should not be coated with flour or crumbs, as this renders heat penetration more difficult. If desired, add meat juices for searing and roasting but *extra water should not be added* as this has a tendency to make the meat stringy and flavorless. The liquid in a tin of canned meats usually forms a jelly when cold.

Pack the meat in the tins steaming hot to within one-half inch of top, season with salt and pepper mixture, and seal at once while the space between the meat and the top of the can is filled with steam, preferably at a temperature of 170°F. at center of can. If this precaution of keeping a head space is not observed, a loss of quality may result from oxidation of the product caused by air being present in the closed can. Over-filling or under-filling of tins should be avoided. Pack tins so that meat does not extend over the top, allowing 5/16 inch headspace for No. 2 cans. Small pieces of meat or fat left on groove into which top fits may char

and bring about a defective sealing surface and so cause spoilage. All meat and fat should be removed from the sealing surface by wiping with a damp, clean cloth.

Mark all filled cans plainly with the name of the product for identification. Marks made with an ordinary lead pencil will remain on the can until processing is complete.

Filled cans should be processed as soon as possible after sealing. Holding of cans prior to processing may cause loss of temperature or permit incipient bacterial growth. (If filled cans are not processed as soon as sealed, cover cans with hot water and keep temperature just below boiling until placed in cooker.)

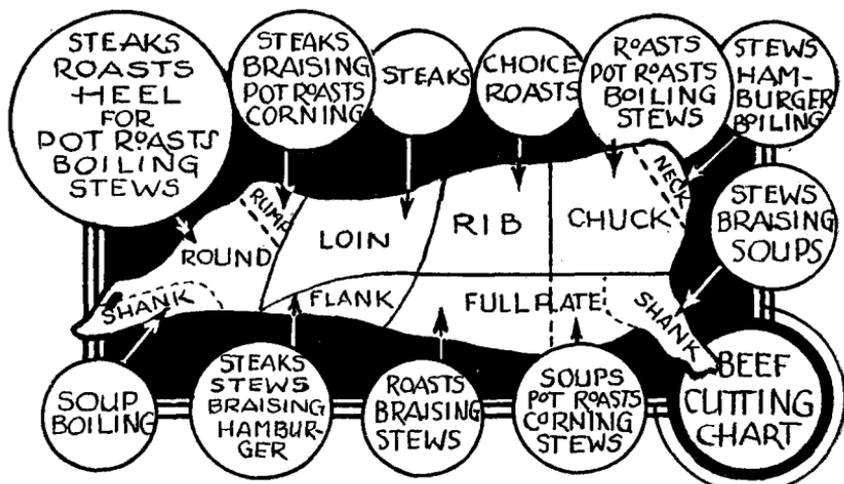


Fig. 3.—Chart showing cuts of beef, any and all of which may be canned at home.

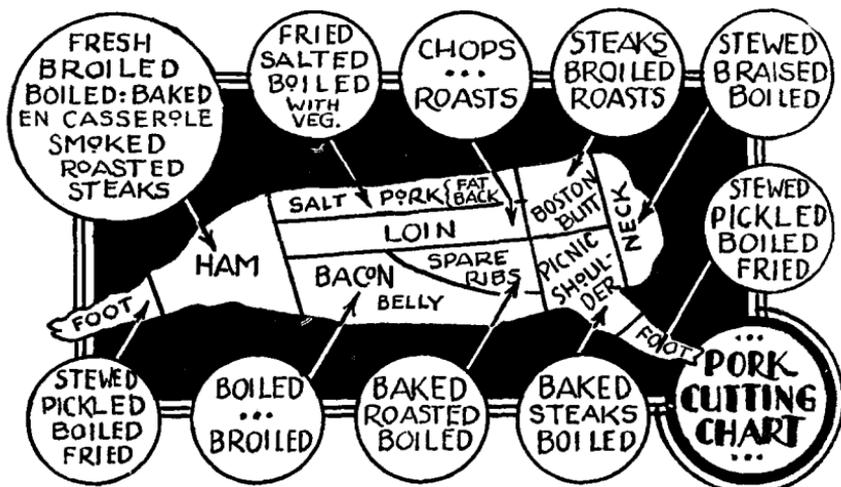


Fig. 4.—Chart showing how to cut pork for canning at home.

Process the exact time as advocated in this bulletin. Start counting time when desired pressure is reached. Constant pressure should be maintained throughout the processing period. When the cans are processed the specified time, remove cooker from heat, open petcock and if canning in tin, release steam very slowly, as too rapid release may weaken the seal and seam of the cans.

When canning in glass jars, open cooker only after pressure gauge registers zero. Complete the seal and place the hot jars where there is free circulation of air, but protect them from drafts until cool. Test the cans for leaky seals and cool as rapidly as possible in running water or in water frequently changed. It is important that cans be cooled rapidly and completely not only for best quality, but to prevent thermophilic spoilage.

Wipe cans and jars clean and dry. Label and store in cool, dry place. A food-smearred can will always rust.

SPECIFIC DIRECTIONS AND RECIPES

ROAST MEATS

(Beef, Veal, Pork, Mutton)

The large pieces cut from the shoulder, loin, chuck, rib, and rump make good roast pieces. Cut the pieces to fit the can with the grain of the meat running lengthwise of the can so that when it is opened for serving it may be sliced across the grain. Sear in deep, hot fat or roast in the oven until one-third done. The essentials of quality canned meat are to brown or sear the roast, steaks, or chops for development of flavor and to heat them thoroughly to the center without cooking completely. Pack into the cans hot, allowing 5/16 inch headspace. Add two tablespoons of the fat or pan gravy and one teaspoon salt and pepper mixture to each No. 2 can. Salt and pepper mixture is made by mixing in proportions of one-fourth pepper and three-fourths salt. If there are small children in the family, it is well to season with salt only. Seal hot and process under 15 pounds pressure; No. 2 cans, 55 minutes.

Some people prefer to salt, pepper and flour before pre-heating, but the salt draws out a portion of the meat juices which are usually lost by cooking and sticking to the bottom of the pan in which it is seared. The flour which does not cook off forms a starchy coating over the surface, making heat penetration more difficult.

SWISS STEAK No. 1

Beef round
Salt

Pepper
Tomato Sauce

Cut the round into steaks 1 to 1½ inches thick. Then divide into pieces of a size when rolled up that will just about fill a No. 3 tin or a wide-mouth quart jar. Sear steaks to a golden brown. With two forks or a fork and spoon roll up the hot steak and drop into the can. Fill spaces in can with boiling hot tomato sauce.

Tomato Sauce for Swiss Steak

2 cups onions, chopped
2 bay leaves
½ cup butter
Celery leaves

24 cloves, tied in cheesecloth bag
1 gallon canned tomatoes
Salt to taste
1 bunch parsley

Brown onions until yellow and soft in the butter. Add other ingredients and simmer until the quantity has been reduced almost half. Remove cloves. Rub mixture through sieve. Pour this tomato puree while boiling hot over the seared meat. Seal and process under 15 pounds pressure; No. 2 cans, 50 minutes; No. 3 cans, 60 minutes.

Plain steak may be prepared and canned in the same way, except that fat and liquid left from searing is poured over the steak instead of the tomato sauce.

SWISS STEAK No. 2

Cut round steaks at least one inch thick and sear. Cut in pieces which will fit into the cans, using for cutter a can which has been cut and not reflanged. Pack into cans. Sprinkle each piece with chopped onion and celery. Mix 2 tablespoons bacon drippings, 1 tablespoon browned flour with ½ cup of hot tomato juice and add to each can. Finish by covering with hot tomato juice. Seal and process under 15 pounds pressure; No. 2 cans, 50 minutes.

MEAT STEWS

Stews are almost unlimited in number, from the Irish stew of the British Isles to the Hungarian goulash, the mulligan of the Pacific Coast or the delectable Brunswick stews of the South. Make stews by any favorite recipe. Meat stews, well prepared and canned, not only cannot be told from the same article freshly prepared, but seem rather to gain in flavor from the long association of the ingredients in the tin or jar.

Generally the thin muscled pieces of meat are used for stew. Cut into cubes 1 or 1½ inches thick. Cook meat until bones will slip from meat. Add onions, if liked, and salt. If tomatoes,

celery, carrots, parsnips or turnips are used, they may be prepared and added in the proportion of $\frac{1}{2}$ cup to each pound of meat used. Vegetables should not be added until just before the meat is ready to go into the cans. Heat to boiling. (Potatoes may also be added, but since they can be preserved in their natural state or can be secured at all times they have been omitted from recipe below.)

MEAT STEW No. 1

12 pounds stew meat	3 cups finely chopped onion
4 teaspoons celery seed	6 tablespoons salt

Fill cans, seal and process under 15 pounds pressure; No. 2 cans, 50 minutes.

MEAT STEW No. 2

A much richer and better flavored product is always obtained when the meat, cut in suitable pieces, is browned lightly in hot fat. Add boiling water or boiling broth to the browned meat and simmer until thoroughly heated. Add salt and pepper mixture. Pack in cans, cover to $\frac{1}{4}$ to $\frac{1}{2}$ inch of top with boiling hot gravy or stock. Seal immediately and process No. 2 cans 50 minutes. Vegetables—carrots, onions, celery, and tomatoes—may be added when the meat is opened.

MULTNOMAH COUNTY STEW

6 pounds beef (no surplus fat)	1 $\frac{2}{3}$ pounds cracked whole wheat
1 $\frac{3}{4}$ pounds potatoes	3 $\frac{1}{2}$ pounds carrots
1 $\frac{1}{2}$ pounds celery	5 $\frac{1}{2}$ pounds onions, cut fine
5 quarts water	4 tablespoons salt
$\frac{3}{4}$ teaspoon black pepper	

Soak the wheat over night in part of the five quarts of water. Cut the meat into one and one-half inch cubes and brown with the onions. Cook $\frac{1}{2}$ hour. Cut the other vegetables into small pieces and add to the meat about 10 minutes before cooking time is finished. Cook the wheat until tender, about 1 $\frac{1}{2}$ hours, or if a steam pressure cooker is used, cook for 30 minutes at 15 pounds pressure, allowing the pressure to return to zero before opening the cooker. Add wheat to the vegetables and meat mixture at boiling temperature just before sealing in the cans. Pour the hot stew into cans and seal at once. Process 60 minutes at 15 pounds pressure.

MEAT LOAF No. 1

5 pounds meat	1 teaspoon sage
5 tablespoons bread crumbs	1 teaspoon celery seed
2 tablespoons salt	2 tablespoons finely chopped onion
2 eggs beaten together	
1 teaspoon pepper	

Use meat scraps, boil and let cool. Grind and mix thoroughly with the crumbs and seasonings. One or two cups of broth (or tomato juice) may be added, according to the dryness of the meat. Fill cans while hot. Seal and process under 15 pounds pressure, No. 2 cans 55 minutes.

MEAT LOAF No. 2

15 pounds fresh ground beef	5 tablespoons salt
7 pounds ground veal or lean pork	20 eggs
1 pound suet	Celery salt to taste
3 loaves stale bread broken into small pieces	2 cups tomato paste or catsup

Run both meat and suet through sausage grinder. Combine meat, bread crumbs soaked in cold water and squeezed dry, salt, well beaten eggs, seasonings and tomato. Mix well and form into smooth even-sized loaves, shaping as nearly like the cylindrical can as possible and a trifle larger. Do not put any flour on the surface of the loaf. Insert three or four skewers in the loaves. Place in a moderate oven (375°) on a flat pan. Sear on all sides to a light brown, turning over with a pancake turner. This requires 20 to 25 minutes. Remove skewers and slip the loaves into the cans, add four or five tablespoons of liquid from searing pan, seal at once and process for 60 minutes. Yield: 11 loaves.

HAMBURGER

15 pounds medium ground beef	3 onions chopped
$\frac{5}{8}$ cup salt	1 large red pepper, chopped

Combine all the ingredients, mix thoroughly. Shape into smooth cakes one inch thick and a little larger in diameter than the cans. Lay cakes on a slightly greased flat pan and place in an oven to sear until slightly browned on both sides. Use a pancake lifter for turning. When seared, the cakes should just fit into the cans snugly. Add three or four tablespoons of the searing liquid from the pan. Seal and process at 15 pounds pressure for 50 to 55 minutes.

CHILI CON CARNE

15 pounds beef from shoulder cut into small cubes or ground coarsely	3 $\frac{3}{4}$ quarts kidney beans
2 $\frac{1}{4}$ teaspoons paprika	2 quarts tomato puree
20 dried peppers	3 quarts water
	1 $\frac{1}{4}$ cups lard or suet
	Salt to taste

Brown the meat lightly in the hot fat. Add the paprika, peppers, tomato puree and water and cook 15 minutes. Soak the beans in cold water over night and cook for 30 minutes. Combine the meat mixture and the drained beans, add the salt and pack boiling hot into the cans; seal in No. 2 cans and process 50 minutes at 15 pounds pressure.

SOUP STOCK

Cover bits of meat and all bones (split) with cold water. Bring to a boil and simmer, do not boil, for six hours. Seasonings such as parsley, celery leaves and onions may be added if desired. Remove from fire, strain and set aside to cool. If boiled down sufficiently the stock should congeal when cold. Remove all fat. Reheat, bringing to a full boil. Can and process under 15 pounds pressure; No. 2 cans 45 minutes.

The cooked meat from the soup bones may be ground and used in meat loaf or in potted meat or may be added to the soup stock. This concentrated beef broth may also be used to fill up spaces between such meat specialties as brains, tongue, sausage and other products.

VEGETABLE SOUP STOCK

Use the vegetables which suit the family taste. An excellent mixture is made from tomatoes, corn, okra, butter beans, onions, and carrots. Prepare vegetables, add all ingredients to the soup stock, season by adding 2 teaspoons salt to each quart, boil for 5 minutes, pack immediately in hot tins to within $\frac{1}{4}$ inch of top, seal and process immediately; No. 2 tins 50 minutes.

PEPPERPOT SOUP

$\frac{1}{2}$ cup sliced onions	$2\frac{1}{2}$ quarts soup stock (chicken or lamb broth preferably)
$\frac{1}{2}$ cup chopped celery	1 gallon honeycomb tripe
$\frac{1}{2}$ cup chopped green peppers	Dash of cayenne pepper
3 cups potatoes, cubed or diced	1 tablespoon salt
$\frac{1}{4}$ pound butter	1 cup cream
$\frac{1}{2}$ cup flour	

Simmer the tripe in the soup stock for one hour. Cook the vegetables in three-fourths of the butter for 15 minutes and then add the flour and mix well. Add to the tripe and soup stock. Add cream and remaining butter, cook for a few minutes to incorporate and pour hot into cans. Seal and process No. 1 cans for 30 minutes at 250° F.

HASH MEAT

Place bones in cooker with 2 quarts of water. Steam until the meat will slip. Remove the meat from the bones, pack into cans and cover with the strained broth. Season. Process under 15 pounds pressure; No. 2 cans 50 minutes.

SPARERIBS

Wipe clean with a damp cloth. Roast as for table use until the bones will slip. With a sharp knife cut down inside of each rib and remove bones. Salt and cut meat in pieces suitable for

serving or make in a roll that will go into the can. Pack. Pour in only enough of the hot brown drippings to make gravy. Seal and process 60 to 70 minutes.

PORK SAUSAGE

25 pounds pork (4 parts lean, 1 part fat)	2 tablespoons red pepper
1 cup fine salt	1 cup brown sugar
$\frac{3}{4}$ cup ground sage	3 tablespoons black pepper

Cut meat for grinding. Measure and mix all seasonings, then mix well with the meat. Grind, using a fine knife. Mold into medium sized cakes. Drop into deep hot fat and sear until brown. Pack into cans. Addition of fat is not necessary. Seal while hot and process under 15 pounds pressure; No. 1 cans 45 minutes, No. 2 cans 60 minutes, No. 3 cans 70 minutes.

The seasoned ground meat may be stuffed into casings, smoked and cured. Before they become too dry and hard, cut into lengths $\frac{1}{2}$ inch less than the length of can. Pack in cans, place in oven or cooker and heat. Seal hot. Process 55 to 60 minutes at 15 pounds pressure.

HEAD CHEESE

Clean head thoroughly by washing and scraping at the time of scraping the whole carcass. Remove eyes, burr of ears and bones which contain cavities. Trim off excess fat from jowls. Soak in salty cold water over night. Next morning rinse and place in the pressure cooker with 2 cups of water. Steam for 30 to 40 minutes at 15 pounds pressure, depending upon the age of the animal. Cut pieces of uniform size. Season to taste with salt and pepper. Pack into suitable containers for molding. Weight and press. Use while fresh or pack in cans boiling hot and process under 15 pounds pressure; No. 2 cans 55 minutes.

SCRAPPLE

The head, heart, tongue and bones may be used. Place in steam pressure cooker, add about 1 quart of water and steam 30 to 40 minutes under 15 pounds pressure. Remove the meat from the bones and grind. Strain the stock and let it set until the fat rises to the top. Skim off excess fat. Heat to boiling and add to cereal mixture, made by mixing equal parts of corn meal, whole wheat or shorts. Add only enough stock to make a very stiff mixture. Add the ground meat which has been reheated. Equal proportions of meat and cereal mixture make a very tasty product. While hot fill cans and process under 15 pounds pressure; No. 2 cans 65 minutes.

PICKLED PIGS' FEET

Scrape and clean pigs' feet carefully. Place in pressure cooker. Add water and process under 10 pounds pressure for from 45 minutes up to within 3 to 4 hours, depending on size and age. Remove from cooker, drain, split lengthwise and pack in jars. Cover with spiced vinegar made as follows:

½ gallon good cider vinegar	1 onion cut fine
1½ tablespoons celery seed	1 tablespoon whole pepper
1 bay leaf	corns
1 cup grated horseradish	1½ tablespoons mustard seed
½ lemon sliced	1 tablespoon allspice
1 tablespoon of salt	

Mix all dry ingredients, tie in a bag, add to vinegar and bring to the boiling point. Cover and let spice infuse for one to two hours. Remove the bag of spices, heat and pour the vinegar over the feet, or they may be packed hot in glass jars or in enamel cans covered with the spiced liquid and processed under 15 pounds pressure 25 minutes for pint size or No. 2 cans. Cured pigs' feet make an attractive product when kept light in color. Spices like cloves tend to darken the color.

MINCE MEAT

3 pints cooked beef	1 tablespoon each allspice,
1 quart brown sugar	cloves, cinnamon
1½ pints suet	½ cup cider vinegar
1 teaspoon mace	6 oranges, ground
6 lemons, ground	2½ cups raisins
	2½ cups currants

Grind together the beef, suet, and oranges and lemons from which the central core with seeds has been removed. Add enough broth to moisten the mixture and boil all together for about 15 minutes. Pack hot into glass jars. Seal and process; pint jars 50 minutes at 15 pounds pressure.

DELICIOUS PLUM PUDDING

1 pound beef suet, ground	1 cup grape, plum or other
1 pound sugar	fruit juice
1 pound flour	9 eggs
1 pound seeded raisins, chopped	2 teaspoons salt
1 pound candied kumquats or	4 teaspoons baking powder
orange peel	6 teaspoons cinnamon
¾ pound citron, cut fine	4 teaspoons cloves
1 cup black walnut meats, cut	4 teaspoons nutmeg
fine	2 teaspoons allspice
	4 teaspoons mace

Mix the ground suet with the sugar. Mix the fruit and nuts with half of the flour. Beat the egg yolks and whites separately. Add the yolks to the suet and sugar, then add fruit and nuts. Sift together twice the salt, baking powder, spices, and remain-

ing flour. Add these ingredients to the first mixture, alternately with the fruit juice. Fold in the egg whites and mix gently. Grease eight No. 2 tins well and fill half full with the pudding mixture. Tie oiled paper over top of can; put in cooker, leaving petcock slightly open and steam for 60 minutes at 8 to 10 pounds pressure. Allow pressure to return to zero, remove cans, seal. Return to cooker immediately and further process for one hour. Cool cans thoroughly and quickly. When ready to serve, set the can of pudding in boiling water for about an hour to heat through, loosen with a knife and turn out on a platter.

Hard sauce made of butter and sugar creamed together is good with this pudding. If a hard sauce that is a little different is desired, flavor with the grated rind of an orange. Any one of the liquid or foamy sauces is also suitable with plum pudding. When canned these puddings keep indefinitely.

Fig puddings, citrus fruit puddings and similar delicacies may be made in quantity in the same way as above.

CORNERED BEEF

The cheaper, fatter cuts, such as chuck, rump, navel, brisket, and flank, make good corned beef. Of course, the better the meat used the better will be the finished result. Choose meat that is tender and well marbled with fat. Too often only beef that is too tough for any other use is corned, whereas, this delicious product deserves the best.

The meat must be thoroughly chilled and perfectly fresh. Cut it into 5 or 6 inch squares and of uniform thickness so they may be packed in even layers in a clean barrel or crock.

Weigh the meat and allow 8 pounds of salt for each 100 pounds of meat. Sprinkle a layer of this salt in the bottom of a barrel or crock that has been thoroughly scoured and scalded. Alternate layers of salt and layers of meat until all the meat is packed. Then cover the top layer with the remaining salt and allow the salted meat to stand over night.

For each 100 pounds of meat, make a solution of the following:

5 pounds sugar	3 ounces saltpeter
2½ ounces baking soda	4 gallons boiling water

Allow this solution to cool over night and next day pour it over the meat, keeping the latter entirely under the brine with a weighted cover. The corned beef will be ready to use in about 10 days or 2 weeks, according to size of pieces. It can be used direct from brine as needed, but if left in the cure longer than 30

days, parboiling will probably be necessary. On this account it is usually best to can corned beef when cured. It may also be removed from the brine after 28 to 40 days, allowed to drain thoroughly and then be smoked like cured pork. In case any meat should not be covered with brine, it may spoil and cause the brine to deteriorate.

While the meat is in the brine solution the temperature should be kept below 40° F. Thus corning should be done in cold storage or in cold weather.

CANNED CORN BEEF

After beef has been corned, remove from the brine. Soak two hours in clear water, changing once. Place in kettle, cover with cold water. Bring slowly to boil and simmer three-fourths to one hour. Remove meat and cut in pieces to fit the can, cutting out any gristle, bone, or excess fat. Heat liquid in which meat was boiled and season with bay leaf, cloves and nutmeg to taste. Softened gelatine may be added to the liquid. Pack hot meat in hot cans, cover with the boiling broth. Seal and process No. 2 cans 55-65 minutes at 15 pounds pressure.

RENDERING LARD

Only clean fat should be used for choice lard. Leaf fat is the best. Leaf lard is that which is made from the leaf fat which lies around the kidneys. The next best in quality is that from the back, and the poorest quality is that from around the intestines. The back strip of the side also makes nice lard as does the fat from the ham, shoulder and neck trimmings. Fat from around the intestines should never be mixed with the leaf and back fat. It makes a strong smelling lard and should be kept separate. Some of the offensive odor may be eliminated by thoroughly washing and allowing the intestinal fat to stand covered with fresh, cold water for several hours.

The skins should be removed. They contain gelatin not needed in lard and may be used with discarded pieces of fat meat for soap making.

All scraps of lean meat should be cut from the fat before trying out as they are very likely to scorch and stick to the kettle, causing discoloration and giving an unpleasant flavor to the lard. When preparing the fat for trying, cut the stock into half inch cubes. The pieces should be nearly equal in size so that they will dry out in about the same length of time. The skinned stock

may be ground through the sausage mill if a coarse plate is available. This hastens the rendering process.

Fill clean kettle about three-fourths full with meat pieces containing fat. Some people put in a quart of water or if convenient a quart of hot lard to prevent the fat from burning before the heat is sufficient to bring out the grease. However, this is not absolutely essential, and water tends to break down lard and make it become rancid sooner. Keep the kettle over a moderate fire. At first, the temperature should be greatly below simmering and should be gradually raised to 230° F. When cracklings are a golden brown and light enough to float, lower the temperature to below boiling or about 200° F. Cracklings removed on a paddle at this point will fry themselves dry. Continuous stirring is necessary to prevent burning. Lard should not be allowed to smoke. When done, remove from the stove and allow to cool slightly. Press the lard from the cracklings and then strain through a muslin cloth into a large hot jar. Stir often until cool enough to begin to solidify. If pails or smaller jars are to be filled, the lard should be dipped out while just warm enough to be liquid. Stirring while the lard is cooling tends to whiten it and makes it smoother.

Lard which is to be kept for considerable time should be packed in air-tight containers and stored in a dry, cool, dark, well-ventilated place to keep from becoming rancid. Light, moisture and high temperatures affect its quality unfavorably. Fruit jars are especially good containers for lard because they can be made air-tight. Care should be taken to sterilize containers, and have them boiling hot when filling them.

When removing lard, take it off evenly. Do not dig down in the lard and take out a scoopful as that will leave a thin coating around the sides of the jar which will become rancid very quickly through the action of air.

MEAT SPECIALTIES

Called by the trade "Meat Specialties," gland and muscle tidbits are delicacies to food connoisseurs the world over. The best known gland meats are liver, kidneys and sweetbreads. Non-gland specialties are heart, brains, tripe and tongue. All meat specialties deteriorate rapidly and must be handled in the most sanitary manner, with every precaution taken to avoid spoilage. They call for delicate treatment on the part of those who prepare them for the table.

Liver is famous for its use in the treatment of certain types of anemia. It contains a rich supply of iron and copper which are necessary for the formation of good red blood. It is an excellent source of Vitamin A which helps to insure against certain infections, make children grow, and keep up the vitality of both children and grown people; C, the "tooth nutrition" vitamin for which doctors notably prescribe orange juice; and of Vitamin G which has made the front page in the fight against pellagra. Liver is a good source of Vitamin B, particularly desirable in the diet of mothers who are nursing young babies or are pregnant.

Kidney, next to liver in food value, is also rich in Vitamins A, B, C and G and in iron and copper. Kidneys should be a bright brownish-red color with lamb kidney tending towards purple and calf kidney slightly lighter than beef.

Brains are an excellent source of Vitamin C and a good source of Vitamin B.

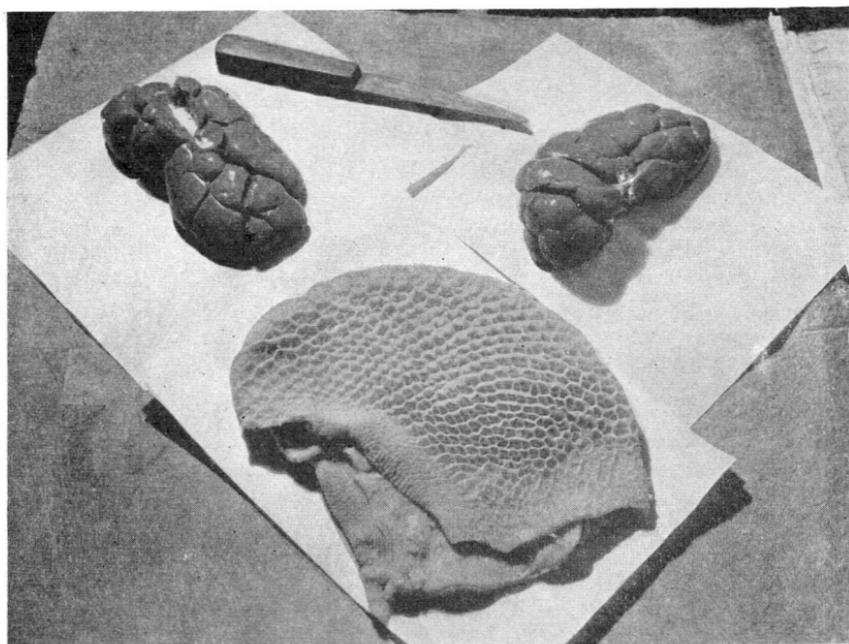


Fig. 5.—Honeycomb tripe, basis of the famous Philadelphia Pepperpot Soup, is becoming more popular every year. Much of the tripe sold in the markets has already been precooked. Kidneys come next to liver in food value.—(Courtesy Consumers' Guide.)

The taste for tripe, the muscular portion of the first and second of the four stomachs of cattle, is yearly becoming more generally developed. From one stomach comes plain tripe and from the

other honeycomb tripe, the basis for the famous Philadelphia Pepperpot Soup.

Heart, a muscle meat, has the food value of that class of foods. All hearts should be full and firm and the more fat the better.

WAYS OF CANNING MEAT SPECIALTIES

BRAINS No. 1

Brains are perhaps the most delicate of all meats and need special care in preparation. Soak the brains in cold, slightly salty water, changing the water every half hour to remove all blood. Cook gently for 15 to 20 minutes or until firm and white in water containing one tablespoonful of vinegar for each quart of water. Cool slightly, then remove the outside skin-like membrane. Pack while still hot in No. 2 cans, add salt, and fill with boiling beef broth. Seal and process at 15 pounds pressure for 55 minutes.



Fig. 6.—Meat specialties are both delicious and nourishing. Calves' brains and hearts are shown at the left and top, sweetbreads in center, beef kidneys at bottom, and beef liver at extreme right. Lamb kidneys are higher in price than beef, veal or hog kidneys, but all contain Vitamins A, B, C, and G, along with a rich supply of iron and copper. —(Courtesy Consumers' Guide.)

BRAINS No. 2

Prepare as in above recipe. Drain thoroughly. Lightly brown in hot fat. Sprinkle with salt and pepper. Pack into No. 2 cans.

Add two tablespoons of fat, seal and process at 15 pounds pressure for 55 minutes.

SWEETBREADS No. 1

Sweetbreads spoil quickly and should be handled expeditiously.

Clean sweetbreads, remove loose membranous tissue and soak in cold water for 2 hours, changing the water several times. Let stand for 5 minutes in salty, boiling water, to which has been added vinegar or lemon juice. Remove and drain thoroughly. Fill into the can to within $\frac{1}{2}$ inch of the top. Add boiling water and salt (1 teaspoon per quart of water). Seal and process No. 2 cans 55 minutes at 15 pounds pressure.

SWEETBREADS No. 2

Put one ounce of lard and two teaspoonfuls of butter into a saucepan and heat. As soon as hot, add 1 sliced carrot (medium size), 2 slices of onion (medium size), 1 branch of finely chopped celery, 1 branch of chopped parsley, 2 ripe tomatoes (cut fine), $\frac{1}{2}$ teaspoon thyme, 2 cloves, pinch of allspice, and one bay leaf broken in small pieces. Brown lightly, add the blanched sweetbreads prepared as above. Sprinkle with salt very lightly. Bring to a boil. Pack hot in cans with the gravy. Seal and process.

LIVER PASTE

3 pounds liver	3 eggs
1½ pounds fresh pork (1-5 fat, 4-5 lean)	1 teaspoon black pepper
1 cup toasted bread or cracker crumbs	1 teaspoon cloves
	2 tablespoons salt

Turn the liver and seasoning through meat chopper. Beat eggs, and mix all together. Pack into cans, place in moderate oven or cooker and heat thoroughly. Seal and process at 15 pounds pressure; No. 1 cans 45 minutes, No. 2 cans 60 minutes.

PICKLING TRIPE

After the tripe has been thoroughly cleaned and rinsed in cold water, it should be scalded in hot water (a little below the boiling point). When sufficiently scalded, the inside lining of the stomachs may be removed by scraping, which will leave a clean, white surface. Tripe should be boiled until tender (usually about 3 hours) and then placed in cold water so that the fat may be scraped from the outside. When this has been done, peel off the membrane from the outside of the stomach and the clean, white tripe is ready for pickling.

Place the tripe in a clean earthenware jar and keep submerged

in a strong brine for three or four days. Rinse well with cold water and cover with pure cider vinegar, or, preferably, a spiced pickling liquid as given in recipe for Pickled Pigs' Feet (See p. 21). Place a weight on the tripe to keep it from floating on the surface of the liquid.

If not used immediately, pack tripe in jars or enameled tins, cover with the boiling hot, spiced liquid. Seal and process pints at 15 pounds pressure for 25 minutes. Tripe may also be canned as other meat.

TONGUE

Wash well and trim the fat and glandular tissue at root of tongue of beef, veal, pork, or lamb and cook in the pressure cooker at 15 pounds for 30 minutes. Remove tongue from cooker, peel off the skin and take out the root. Cut the tongue into pieces that will fit compactly into the cans. Add 4 tablespoonsful of beef broth or tomato juice, seal and process at 15 pounds for 50 minutes. The tongue may be cleaned, salted, and lightly smoked, then boiled, skin removed, and packed in cans with the addition of a little soup stock or meat jelly. Tongues may also be cleaned thoroughly, rubbed heavily with salt and left standing with salt sprinkled over them for 8 to 10 hours. Then boil until done, remove skin, pack in cans with a little of the liquid in which they were boiled, thinning with some boiling water in order not to be too salty. Seal and process 60 minutes at 15 pounds pressure.

CANNING CHICKEN

Canning the surplus birds from the home poultry flock is an economical practice. Certainly it is poor economy to feed and care for a flock of birds being held for table use during the year. Chicken, like other meats, should be canned when it reaches prime condition, thus stopping the feed bill and saving both time and labor for the busy housekeeper.

A jar of delicious canned chicken ready to serve makes a most appropriate and appetizing dish for emergency occasions—unexpected guests, Sunday night suppers, or a meal that must be prepared hurriedly. A supply of home-canned chicken ready for immediate serving is a great asset to the busy housewife and makes most attractive and appetizing dishes when served in combination mixture such as creamed chicken, chicken pie, croquettes, chicken-a-la-king, salads, sandwiches and stewed chicken with dumplings, noodles or rice.

Either young or old birds may be canned. However, the older

birds are used in this way to better advantage than the young ones. Plump, well-fed hens, two years and older and no longer at their best for egg production, have better texture and more characteristic flavor than young birds. Furthermore, practically the same canning processes are needed for sterilization no matter what the age of the bird, and the meat from the young birds is likely to become over-cooked.

Only chickens of prime quality should be selected for canning and the right procedure in every step of the process must be followed if delicious flavor and best texture is desired. Chickens should be absolutely healthy and in good condition. Chickens that are too lean are not so juicy or of such good flavor as those whose flesh is well marbled with fat. Chickens should be penned and fattened 8 to 10 days before they are killed. They should be well bled, well dressed, and thoroughly cooled before canning.

All the large pieces of fat should be trimmed off, as fat interferes with the heat penetration. The very bony pieces, such as the neck, back and feet, after they have been skinned, should be used for adding flavor and gelatine content to the broth needed to fill up the containers. The liver, gizzard, and heart should be canned separately when there are enough to fill a can. Never can the liver with the larger pieces of the chicken because its flavor will permeate every piece in the container.

There are many methods used in canning chicken. Chicken may be fried or broiled until nicely browned, but not done, and then packed in the jars or tins. Searing the chicken in its own fat emphasizes the chicken flavor. Older birds may be stewed or roasted until the meat can be removed from the bones. White and dark meat may be packed separately, if desired. All of a 3½ pound chicken should go into a No. 3 can or quart jar, except gizzard, liver and rib piece. When precooked and bones removed, the same amount of chicken fills the pint size container.

The aim in all methods of precooking is to heat the meat thoroughly, but not to cook it. If cooked to doneness, the subsequent canning process will overcook it. It is most important, if best texture and flavor of poultry meat is to be retained when canning, that great care be taken that the raw meat is not subjected to too high a temperature when the preheating or precooking is first begun. It is very easy to overcook chicken, destroying both the texture and the flavor in the finished product. The flavor of canned chicken is better when as little liquid as possible is used in the canning process.

Some housewives prefer, when canning a number of chickens,

to sort the meat and pack the choice pieces in separate cans. Many have found good markets for all of this special pack they can prepare. The breast, thighs, and drumsticks are packed in one lot and the meat from the more bony pieces is packed for salads or sandwiches. A separate pack is made of the giblets.

METHODS OF PREPARING CANNED CHICKEN

ROAST FOWL

Clean the fowl, wash, and wipe dry. If turkey, goose, or guinea fowl, lard the breast or cover it with thin slices of fat pork. For chicken and duck tie a small piece of larding pork over breast. Put two tablespoons lard and butter mixed in a roasting pan. Place in oven and when hot lay the turkey or fowl in the hot grease and turn until seared on all sides. Season turkey or goose with one tablespoon of salt sprinkled all over, and three-quarter teaspoon of pepper (for smaller fowls use less salt and pepper). Pour into roasting pan half a cup of boiling water. Place in oven to roast, and baste frequently with the liquid in the pan, turning the fowl occasionally to get it nicely browned. Cook until about one-third done or not entirely tender. Remove from oven, place on platter, and cut meat from bones. Cut in pieces that can pass through can openings. Pack dry into hot cans or skim excess of fat from the gravy and pour over meat in cans until half an inch from top. Seal and process: No. 2 cans, 55 minutes at 15 pounds of steam pressure.

Game birds may be treated as above, but should be stuffed with some parsley. Duck, goose, turkey, squab, and guinea may all be canned in the same way as chicken.

SOUP

The bones of turkey, chicken, goose, or duck, should be cracked and with what little meat still clings to them they should be placed in a kettle with the scalded and skinned feet, covered with cold water, and allowed to simmer for several hours with seasoning until the bones are exhausted for soup stock. Do not boil. Cook the stock down until concentrated. Strain and fill boiling hot into cans to within half an inch of the top of can. Seal and process: No. 2 cans, 45 minutes at 15 pounds of steam pressure.

POTTED MEAT

What meat was left on the bones may now be removed, ground finely in a meat grinder, and mixed with salt and spices to taste,

with a little soup stock or gelatine (dissolved in cold water) added. (Use to one pound of meat, one teaspoon salt, one-half teaspoon pepper, and other spices to suit taste.) Fill hot in No. 1 cans, seal and process: No. 1 flat cans, 35 minutes at 15 pounds of steam pressure.

RABBIT

Domestic rabbit may be canned following the same directions as for chicken. Rabbit makes delicious canned meat and may be well used in the place of chicken, having the added advantage of being all white meat. Wild rabbit has dark meat with a rather gamey flavor.

BARBECUE MEAT

BEEF, PORK, MUTTON

Properly barbecued meat is a rare treat as all will attest who have enjoyed its delicious flavor. In fact, meat cooked by the barbecue method is far superior in taste and texture to meat cooked by the various "indoor" methods. Slow cooking with low heat and the judicious basting with delectable sauces leaves the meat in a marvelously tender and savory condition.

There are many types of outdoor stoves or grills to be made from cement, brick or stone that are very convenient and satisfactory. (Fig. 7.)

A most excellent barbecue grill is shown at the bottom of Fig. 7. In addition to the exposed cooking surface for a sheet iron plate or bars as preferred, this type provides a good sized oven around which heat from the fire circulates sufficiently to provide facilities for roasting or baking. There is also a warming oven. Any handy man with the drawings provided¹, can build this stove which may be used for many purposes. Interesting devices for lowering or raising the grate or grill may be made at home or be purchased from the local hotel supply company.

Meat is also commonly barbecued over a pit on a rack made of heavy wire.

The trench for barbecuing may be about 40 inches deep and about three feet wide, depending upon the quantity of meat to be barbecued. To barbecue 100 pounds of meat the trench should be approximately five feet long. After the fire has been started and the wood has burned rapidly down to red coals, it is advisable to cover the pit with heavy chicken wire or hog fencing securely

¹Blueprints with exact directions for building this are available to those interested. These were furnished the State Home Demonstration Office by Mr. Hugh Roberts of the Portland Cement Association.

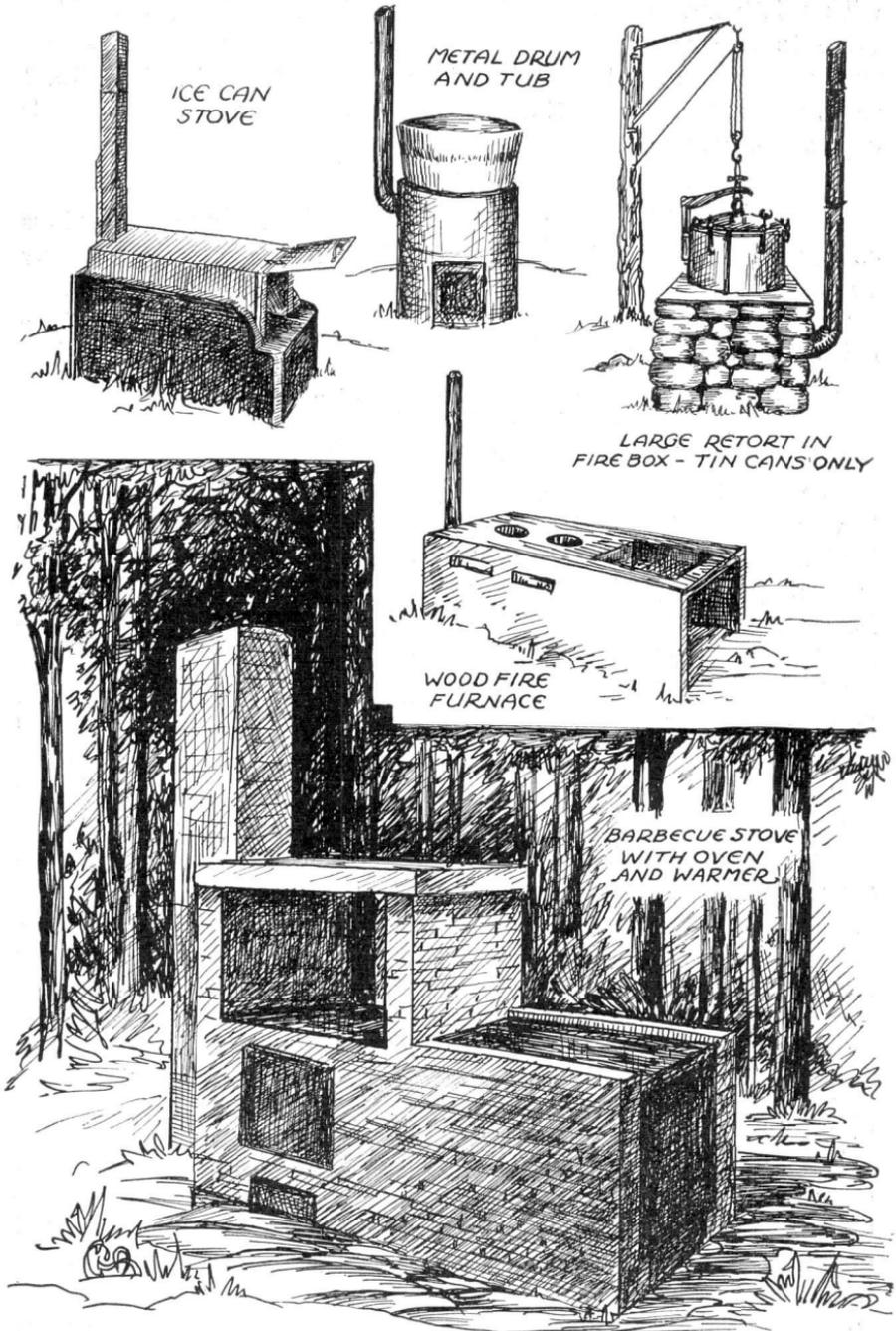


Fig. 7.—Different types of stoves and outdoor furnaces suitable for use in canning meats, cooking barbecue, and related activities.

staked. The fire is built at the bottom of the trench and pieces of wood are added gradually until there is a live bed of coals about 15 inches thick in the pit. Hard, dry wood (preferably oak or hickory) should be used. The pieces should not be too large. After the wood is burned to live coals, spread evenly in the bottom of the pit. It usually takes about 3 to 3½ hours to burn sufficient wood for the amount of live coals necessary. The meat absorbs the savory smoke from the drippings that fall upon the live coals. The fire should burn down where it is distinctly beyond the point where there are any active flames. It is astonishing how little heat is necessary or desirable in cooking meat in this manner.

Prepare barbecue sauce as follows:

1 pint of vinegar	1 pint of salad oil
½ pound butter	1 bottle worcestershire sauce
½ cup tomato catsup	8 ounces prepared mustard
Red pepper; black pepper	Salt to taste

Mix ingredients thoroughly, keep hot, and swab on the meat when needed. Make a mop or swab by tying onto a stick several short pieces of white cloth about two inches long. Dip mop into barbecue sauce frequently and slap the roasting meat with it so that whole surface of the roast is basted in this way. Do this at intervals of 10 minutes during the entire process of cooking. Above recipe will make enough for about 50 pounds of meat. This recipe can be modified by adding more vinegar and salad oil. Normally speaking, 100 pounds of beef will serve approximately 300 people, depending on the generosity of the serving.

If barbecue is to be canned, when meat is partially done, lightly browned and hot through, cut in convenient pieces, pack in enameled tins, add boiling hot barbecue sauce to within ½ inch of top. Seal at once and process No. 2 tins 55 minutes at 15 pounds pressure.

BARBECUE CHICKEN, TURKEY, GUINEA, RABBIT, SQUIRREL

Kill and dress fowl or game in the usual way, cutting frying size chicken down back in halves. Cut rabbit or squirrel into convenient pieces and soak in salt water for a few minutes. Place underside down on a rack over a bed of live coals. Do not cook too fast. Let sear until white, then baste the fowl or game with barbecue sauce made as follows:

2 cups catsup	1½ cup butter or chicken fat
¾ cup of 5% vinegar	1 tablespoon tabasco sauce
2 tablespoons chopped onions	¾ cup worcestershire sauce
1 teaspoon red pepper	1 teaspoon salt

Mix ingredients and bring to a boil. Baste and turn the meat until it is lightly brown and thoroughly heated through. If it is to be canned, separate the legs from the thighs. Remove the wish-bone. If very large birds, remove the breast bone or perhaps remove all meat from the bones before packing, in which case cook on rack until meat will slip from the bone. Keep the meat in as large pieces as possible. Add sauce, preheat if necessary and seal boiling hot in enameled tins. Process as in recipe above.

BARBECUED CHICKEN

(Quick Method)

Select chickens weighing $1\frac{3}{4}$ to 2 pounds each. Kill and dress in the usual way. The breast bone may be removed and the bird halved if preferred, as removal of this bone facilitates more rapid cooking. Without salting, place in refrigerator for chilling at least 12 hours. Ordinary domestic refrigerator may be used. Remove from refrigerator and sprinkle with salt.

Before cooking, dip each half into a barbecue sauce, the recipe for which (enough for 12 chickens) follows:

2 14 ounce bottles tomato catsup (equivalent to 3 cups)	2 tablespoons salt
1 cup cider vinegar	4 tablespoons prepared mustard
5 tablespoons worcestershire sauce	$\frac{1}{4}$ pound butter
1 tablespoon tabasco sauce	Juice of one medium size onion
	Juice of 2 lemons
	Red and black pepper to taste

Heat vinegar and melt butter. Mix these and bring the mixture to a boil, adding other ingredients.

Have the steam pressure cooker ready. Dip chicken into this sauce and place, skin down, on elevated rack in cooker. Skin at bottom retains juices and causes them to permeate meat. Bring cooker to 10 pounds pressure and cook 10 minutes. Let heat and pressure recede slowly.

This cooks the meat after which the barbecue is finished by either of two ways: (1) in an oven under heating unit, or (2) over barbecue pit with slow heating. Heating too fast dries and burns the meat.

As it is being barbecued, either in oven or over pit, the chicken is basted frequently with the same sauce into which the raw meat was dipped, until lightly browned. Serve hot. It is good in any season of the year.

OTHER BARBECUE SAUCES

No. 1

½ pound butter	¼ teaspoon red pepper
2½ cups water	½ tablespoon worcestershire sauce
¼ cup vinegar	½ teaspoon tabasco sauce
1 teaspoon mustard	¼ onion, chopped fine
1 tablespoon sugar	½ teaspoon black pepper
2½ teaspoons salt	¼ garlic chopped fine
2 teaspoons chili powder	

Put ingredients in saucepan, mix thoroughly and simmer 10 minutes. Use to baste roast and also to season barbecue sandwich.

No. 2

¼ pound butter	Juice of ¼ lemon
1 cup vinegar	1 tablespoon chili sauce
½ teaspoon dry mustard	2 lemon slices
1 tablespoon chopped onion	1 teaspoon brown sugar
2 tablespoons worcestershire sauce	½ pod of red pepper (ground)

Mix all ingredients together; put over a low fire until the butter melts, then set where it will keep warm. Make a mop or swab as directed previously and baste the entire surface of the roasting meat at 10 minute intervals.

No. 3

¾ cup mild vinegar	1 teaspoon chili powder or paprika
1 tablespoon sugar	Dash cayenne pepper
½ teaspoon salt	
1 teaspoon dry mustard	

Boil together about 3 minutes and pour over roasting meat, basting meat often. This is excellent sauce for reheating cold slices of beef or pork.

No. 4

1 pound butter or 2 cups bacon fryings	1 heaping tablespoon salt
1 bottle catsup or 1 cup chili sauce	Black pepper to taste
	½ cup vinegar or lemon juice
	½ cup steak sauce

Swab the meat with this sauce every time you turn it. A brown, soft crust will gradually form over the first searing and the flavor of the sauce will go through the meat.

CANNED MEATS PREPARED IN APPETIZING WAYS FOR THE TABLE

CANNED SAUSAGE BALLS WITH SCALLOPED POTATOES

Butter a casserole and put in a layer of finely sliced raw potatoes and then a layer of canned sausage balls. Alternate layers of potatoes and sausage until the casserole is filled within 1½ inches of the top. Cover with milk and season with salt and pepper. Bake for about ¾ hour in slow oven, 300° F. Serve hot in casserole.

CANNED PORK SALAD

2 cups diced, canned pork	2 hard cooked eggs
1 medium sized onion chopped fine	1 cup chopped celery Mayonnaise
1 cup canned peas	

Heat canned pork thoroughly in the can in the oven or in boiling water. Cool, remove bone if any and cut into neat half-inch dice. Combine the ingredients and moisten thoroughly with mayonnaise. Served as the meat course with fresh fried potatoes, this is a satisfying dish. Chopped head lettuce, cabbage, chayote or radishes and celery seed may be used in place of the chopped celery.

PORK CHOP SUEY

1½ to 2 cups shredded canned, lean pork	1 green pepper
2 cups shredded onion	4 tablespoons soy sauce
2 cups shredded celery	2 tablespoons fat
2 cups sliced raw Jerusalem artichokes or radishes	1 tablespoon cold water
1 teaspoon cornstarch	2 cups meat broth or thin gravy
	Salt to taste

Brown the meat lightly in half of the fat and remove from the skillet. Cook the pepper and onion in the rest of the fat for a few minutes. Add the celery, meat, salt, broth or gravy, cover and simmer for 5 minutes. Mix the cornstarch and water until smooth. Stir into the mixture and cook for a few minutes longer. Add the artichoke or radishes. The large Japanese type radish is to be preferred. Do not overcook—vegetables should retain their characteristic crispness.

Add soy sauce in sufficient quantity to give the desired flavor and then salt to taste. Serve with hot, flaky rice.

SHEPHERD PIE

1 pint canned meat cut in small cubes	1 tablespoon butter
1 small onion	1 tablespoon flour
Mashed potatoes	1 cup milk

VEAL PIE

1 quart canned veal or beef ground	2 tablespoons sugar
1 teaspoon chili powder	Salt and pepper to taste
1 large onion, chopped	1 can tomatoes
	Corn meal mush

Brown the onion in a little bacon grease in a large skillet. Add the meat. After it is slightly browned with the onion, add the chili powder, salt and pepper, and the tomatoes, sweetened with sugar. Cover the mixture with a generous layer of cornmeal mush. Dot the top with butter and bake until the mush is a golden brown. For variety, green peppers may be sliced and placed over the tomatoes or split okra. This pie may be made also with ground fresh beefsteak.

TONGUE A LA MARYLAND

1 canned calf or beef tongue	1 cup of liquid drained from canned tongue
$\frac{1}{4}$ cup butter	$\frac{3}{4}$ cup of brown sugar
1 tablespoon of whole cloves	1 cup raisins
$\frac{1}{2}$ teaspoon salt	$\frac{1}{2}$ lemon, sliced
$\frac{1}{2}$ bay leaf	

Place tongue in a covered pan and add butter, salt, cloves, bay leaf, brown sugar, raisins, liquid, and sliced lemon. Let simmer, covered, on the back of the stove one-half hour. Remove tongue and cook the liquor until it thickens, then pour over the tongue.

CHICKEN A LA KING

1 can of chicken	$1\frac{1}{4}$ cups liquid, (liquor from canned chicken, canned mushrooms and milk)
1 green pepper	2 tablespoons chopped pimiento
1 small can of mushrooms	$\frac{1}{4}$ cup butter or chicken fat
2 tablespoons flour	
Seasonings	

Make a white sauce of the butter, flour and liquid. Add mushrooms, pimiento, and the green pepper, which has been chopped and sauted in a little fat. Cut the chicken in large sized cubes and simmer in the sauce for 10 minutes. The dish will lose its delicacy if cooked rapidly. A tiny bit of onion will improve the flavor. Serve at once on hot toast, pastry shells or with baking powder biscuits. Pastry shells may be made by baking pie crust on the bottom of muffin pans and cutting the shells carefully apart. Prick the dough before baking so the crust will not blister.

CHICKEN OR TURKEY WITH DRESSING

Open a can of boned chicken or turkey, empty it into a covered dish, set inside the oven and heat thoroughly. Arrange on a dish with the following dressing or any other favorite dressing recipe.

DRESSING No. 1

2 cups cornbread	Pepper
2 cups soft bread crumbs or biscuit	Poultry seasoning
½ cup butter	2 cups scalded milk or broth
Salt	2 eggs
	¼ cup onion chopped fine

Mix bread crumbs, butter, onions and seasonings with milk or broth to moisten well. Add boiled egg cut in small pieces. Bake and serve hot with canned boned chicken or turkey as suggested above.

DRESSING No. 2

FROM HOME-CANNED CORN

Drain a can of corn (whole kernel). Season with cream, melted butter or chicken fat, salt and pepper. Crumble in cornflakes, cornbread, biscuit or a slice or two of day-old bread or a mixture of biscuit and cornbread. Minced onion cooked in the fat, a minced green pepper, celery or parsley are all good additions to home-canned corn stuffing.

CREAMED CHICKEN OR TURKEY

¼ teaspoon salt	1 cup milk
Dash of pepper	2 tablespoons flour
1 No. 1 can boned chicken or turkey	2 tablespoons fat

Use double boiler. Melt fat, add flour and seasoning. Add cold milk and cook 5 minutes. Mix with this sauce a No. 1 can of chicken or turkey. Leave in double boiler until the meat is thoroughly heated. Serve in any of the following ways: (a) on squares or rounds of toast; (b) with hot biscuit; (c) in ramekins with buttered bread crumbs or mashed potatoes on top; (d) in pastry shells.

CORN AND CHICKEN CASSEROLE

1 small onion, chopped	1 No. 2 can or 2½ cups whole grain corn
1 tablespoon chopped green pepper	1 teaspoon salt
1 tablespoon chopped pimiento	2 tablespoons flour
3 tablespoons fat	Buttered crumbs
2 cups canned chicken, cut in cubes	

Cook the onion, green pepper, and pimiento in the fat until the vegetables are tender. Add corn, salt, and flour mixed to a smooth paste with a little cold water. Cook slowly, stirring constantly, until thick. Put the corn mixture and chicken in a greased casserole, in alternate layers. Cover with buttered crumbs. Bake in a moderate oven (375°) until well browned. If desired, 1½ cups canned okra may be added to the corn mix-

ture before it is baked. Serves 8. This dish may be prepared in advance, then baked just before serving.

CREAMED SWEETBREADS

Prepare 2 cups of medium cream sauce. Add the sweetbreads from a No. 2 tin which have been cut in small cubes. Add one cup cooked peas or 1 of asparagus tips. Season delicately with salt and pepper. Serve on toast rounds.

TRIPLE OYSTERS

No. 1 can tripe	2 tablespoons cold water
Fine bread or cracker crumbs	Salt
1 egg, beaten	Pepper

Sprinkle tripe with salt and pepper if needed and cut it into oblongs the size of an oyster. Dip in fine crumbs, then in beaten egg to which the water has been added, then in crumbs again. Fry in hot fat until brown. Serve with a border of cole slaw or slices of points of lemon with finely chipped parsley sprinkled over them. Fresh tripe may be used by first simmering for 1 hour in water to cover. Then proceed as with the canned.

TRIPLE ROLL

Tripe roll is a delicious luncheon dish. Tripe should be canned in one piece. Boil, mash and season four medium sized potatoes. Add one tablespoon of chopped onion, two cups of soft bread crumbs, one-half green pepper chopped fine, one pimiento chopped fine, one teaspoon salt, one-eighth teaspoon pepper and a little paprika and three tablespoons bacon fat. Lay tripe on board and spread with the mixture. Roll tightly and tie with string. Roll in flour, then in drippings, and again in flour. Lay six strips of bacon over top. Bake for about 45 minutes at a temperature of 350° F. until well browned. Cut roll into slices for serving and cover with hot tomato sauce highly seasoned. For additional flavor, saute the onion and pepper in fat, toss in bread crumbs, then add to remaining ingredients and spread on tripe.

TRIPLE A LA CREOLE

1 No. 2 can tripe	1 tablespoon worcestershire
2 cups tomatoes	sauce
3 tablespoons bacon drippings	2 tablespoons flour
2 tablespoons chopped green	2 teaspoons salt
pepper	½ teaspoon paprika
3 tablespoons chopped onion	

Melt drippings in frying pan; add onion and cook until brown, add tomatoes and cook 10 minutes. Mash through strainer and add flour which has been mixed with cold water; boil 5 minutes,

season. Cut tripe into small pieces, sprinkle with flour, brown on both sides in hot drippings, add green pepper and then add to sauce. Garnish with boiled rice and parsley. Serves 4.

SCRAMBLED BRAINS WITH EGGS

No. 1 can brains	2 tablespoons minced parsley
3 eggs	1 tablespoon grated onion
2 tablespoons butter	Salt
4 slices of toast	Pepper

Cut or chop brains into small pieces; put into frying pan in which butter and onion have been heated, and stir until brains are lightly cooked. Add eggs, beaten with two tablespoons of cold water; cook over moderate fire and stir until set. Season and serve on toast garnished with parsley. When fresh brains are used, soak for 30 minutes in cold water, skin and remove all fibre. Then prepare as above. Serves 6.

**TIME TABLE FOR PROCESSING MEATS—COOKED AND
PREHEATED**

Meat according to preparation Sealed hot—170°-180° F.	No. 2 tins or pint jars processed Minutes	No. 3 tins or quart jars processed Minutes	Pounds of Pressure
Roasts:			
Beef	55	65	15
Mutton	55	65	15
Veal	55	65	15
Steaks	50	60	15
Stews	50	60	15
Soups	50	55	15
Meat Loaf—Hamburger	55	60	15
Spare Ribs—pork sausage	60	70	15
Head Cheese—scrapple	65	75	15
Mince Meat	50	60	15
Plum Pudding	2 hrs.		10
Corned Beef	55	65	15
Brains	55	65	15
Sweetbreads	55	65	15
Liver Paste	60	70	15
Tongue	60	70	15
Chicken—roast	55	65	15
Chicken—soup	45	55	15
Barbecue Beef, Pork, Mutton	55	65	15
Barbecue Chicken, Rabbit	55	65	15

In processing pork, 5 minutes should always be added to the processing time given for beef.