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WAR DEPARTMENT

# TECHNICAL MANUAL

# CUTTING OF BEEF

1 July 1943

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TECHNICAL MANUAL
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WAR DEPARTMENT,
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# CUTTING OF BEEF


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## SECTION I

## GENERAL


| | Paragraph |
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| Purpose and scope | 1 |
| Beef in the Army mess | 2 |
| Cutting beef for Army mess | 3 |


*1. Purpose and scope.*—Paragraphs 19, 20, 21, 56, and 57 of TM 10–405 contain instructions for the cutting, cooking, and serving of beef. This manual is published as a supplement to those paragraphs, presenting more graphically the approved method of cutting beef, and offering additional suggestions for its cooking.

*2. Beef in the Army mess.*—Beef has always been a popular food in the Army mess and is served frequently. Efficient methods of cutting and serving beef, therefore, are important. It has been discovered that boneless roasts are most efficient because they require a minimum amount of stove space and can be carved quickly and uniformly. Roasts of similar size that will cook in about the same length of time, and roasts made of solid pieces of meat that hold together well during cooking and carving, are equally desirable.

*3. Cutting beef for Army mess.*—A method of cutting beef has been developed by the National Live Stock and Meat Board, which meets the above specifications. It is extremely practical because waste is reduced to a minimum, and an abundance of solid, blocky pieces of meat for attractive cross-grain servings is provided. By use of this method, little time and effort are required to cut up an entire side, and further work is unnecessary to make the cuts ready for cooking and carving.



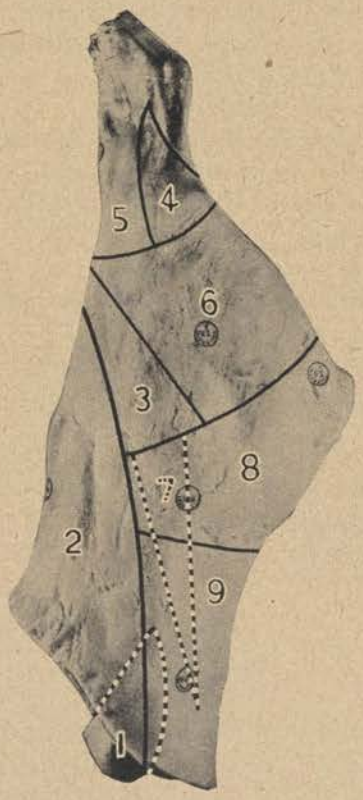
HEEL—4



INSIDE (TOP) ROUND—6



KNUCKLE (TIP)—3






OUTSIDE (BOTTOM) ROUND—6



BONELESS STEW—2, 5

NUMBERS INDICATE LOCATION OF CUTS AND SEQUENCE IN WHICH THEY ARE MADE.



SIRLOIN-RUMP BUTT—8



TENDERLOIN—7



KIDNEY KNOB—1



LOIN STRIP—9

**Figure 1.—Beef hindquarter chart (U. S. Army boneless cuts).**

SECTION II

# MAKING CUTS FROM BEEF HINDQUARTER


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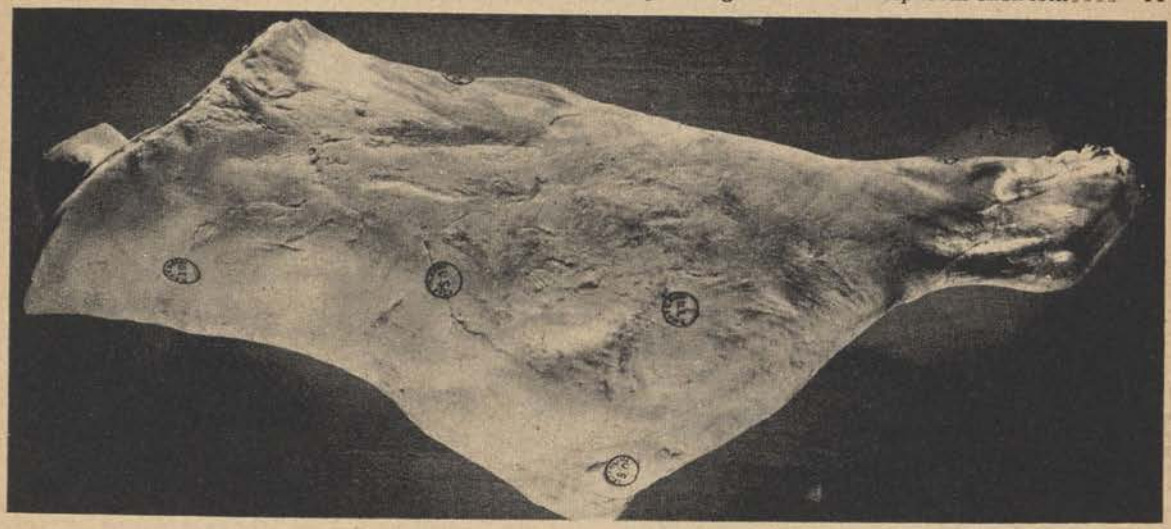



**Figure 2.—Hindquarter.**

*4. Cuts of beef available from hindquarter.*—A good many cuts of beef for roasts and steaks can be made from the hindquarter. In addition, this part of the carcass provides meat for braising, stewing, and grinding. The following table gives the names of the hindquarter cuts and the cooking method recommended for each:

*Tender cuts*

| *Cut* | *Use* |
|---|---|
| Tenderloin. | Roasts, steaks. |
| Loin strip. | Roasts, steaks. |
| Sirloin-rump butt. | Roasts, steaks. |
| Knuckle (tip). | Roasts, steaks. |
| Inside (top) round. | Roasts, steaks. |

*Less tender cuts*

| | |
|---|---|
| Outside (bottom) round. | Braise, stew, roast if necessary. |
| Heel. | Braise, stew, ground beef. |
| Flank. | Braise, stew, ground beef. |
| Shank meat. | Stew, ground beef. |
| Hanging tender. | Stew, ground beef. |
| Trimmings. | Ground beef. |
| Kidney. | Stew. |

*Fat and bones*

| | |
|---|---|
| Cod fat. | Slice and lay on lean cuts during cooking. |
| Kidney suet and other fat. | Render and use for cooking purposes. |
| Bones. | Soups and gravies. |

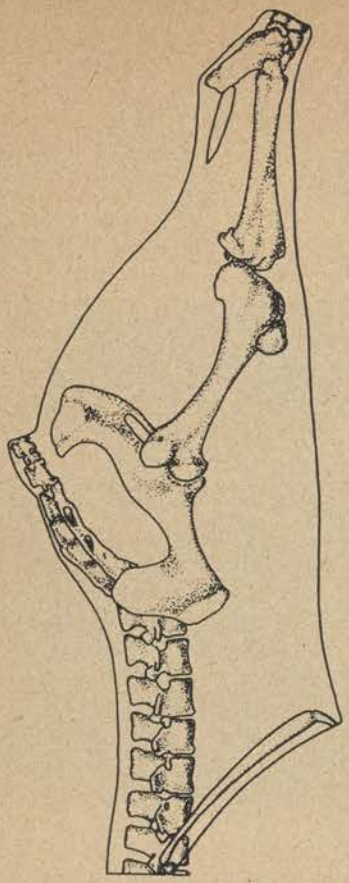


Figure 3.—Bone chart.

*5. Bone chart.* The bone chart (fig. 3) shows the shape and location of the bones encountered when cutting the hindquarter of beef.

*6. Removing hanging tender and kidney knob.*—Hindquarter (1) on the left side of the carcass is called the "open" hindquarter (fig. 4). The opposite one (2) is the "closed" hindquarter. These two sections of beef bear these terms because the kidney knob (b) in the open hindquarter does not adhere as closely to the inside of the loin as it does in the closed hindquarter. The hanging tender (a) is always attached to the open hindquarter.

Figure 4.

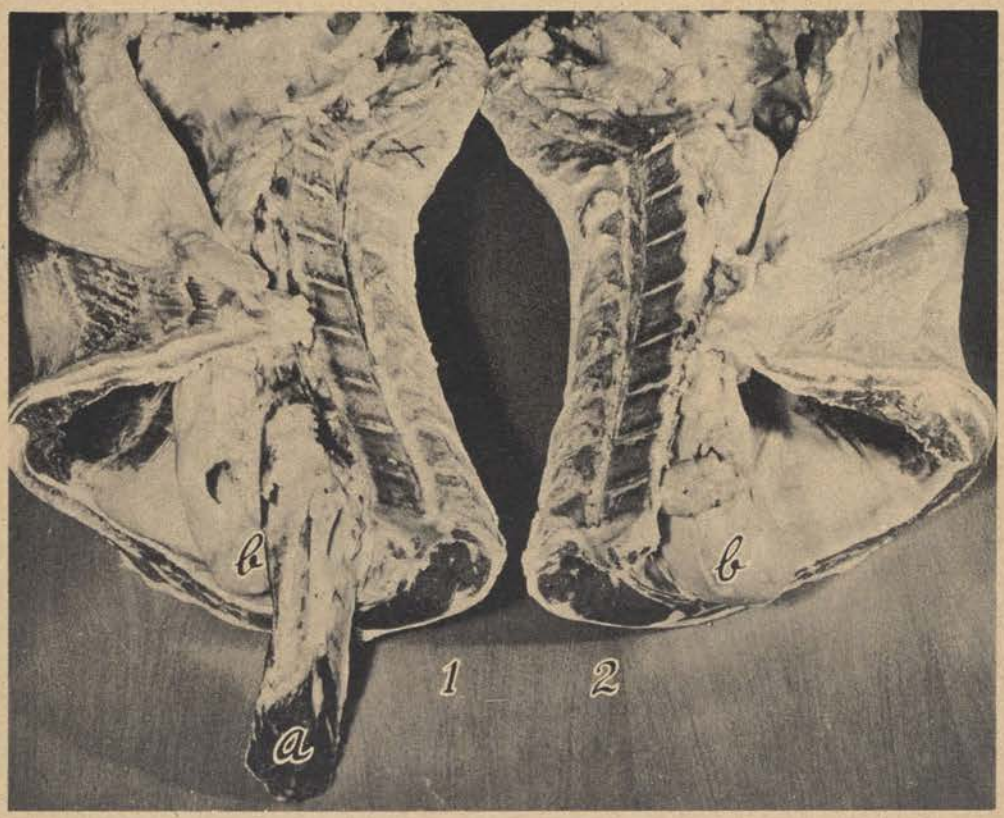





Figure 5.

*a*. Remove the kidney knob (b) (fig. 5) and the hanging tender (a).
*b*. Separate the hanging tender from the kidney knob (fig. 6).

Figure 6.



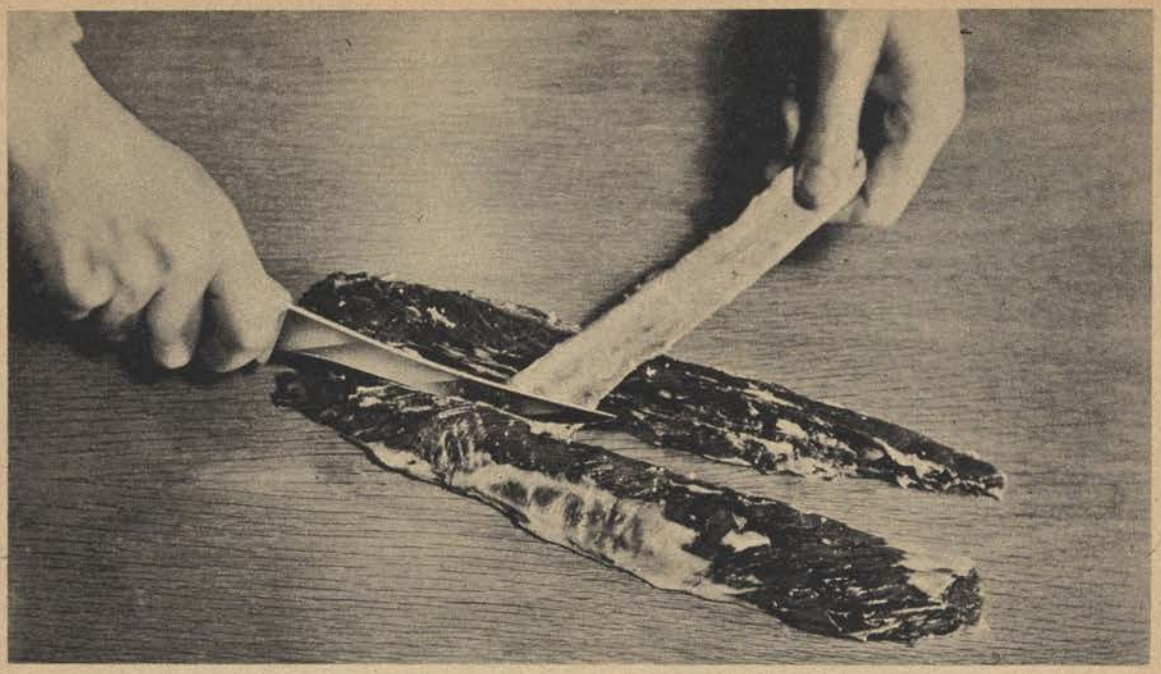


Figure 7.

c. Remove the membrane and surplus fat from the outside of the hanging tender (fig. 7). Split and take out the strip of gristle through the center. Use the boneless meat for stewing or for grinding.

*d*. Split the kidney knob open and take out the kidney (fig. 8).

Figure 8.



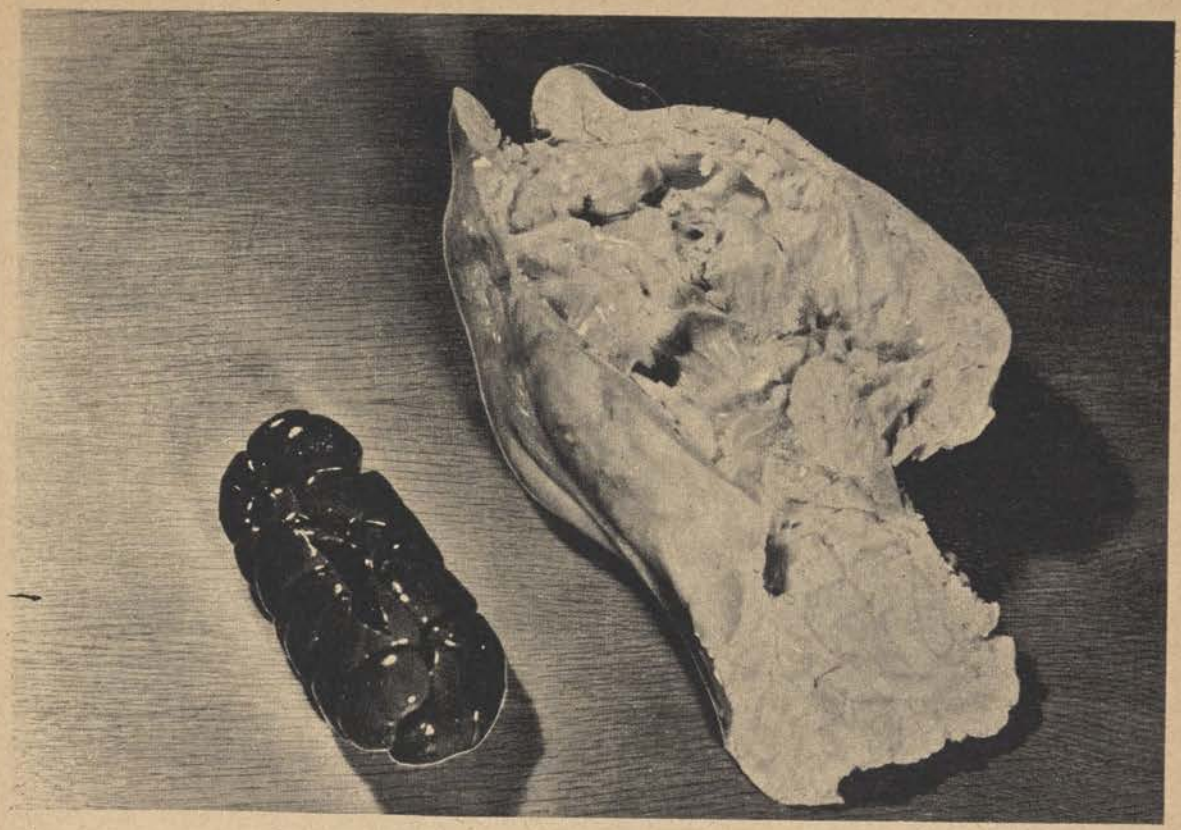


Figure 9.

*e*. The kidney and the kidney suet are now ready to be used (fig. 9).

*7. Removing flank from hindquarter.*—*a*. With hindquarter on the block, meat side down, remove the cod fat and flank by cutting from (a) (fig. 10) 1 inch from the loin muscle at (b). Saw across the thirteenth rib at (b) or separate the rib from the meat and unjoint it from the backbone.

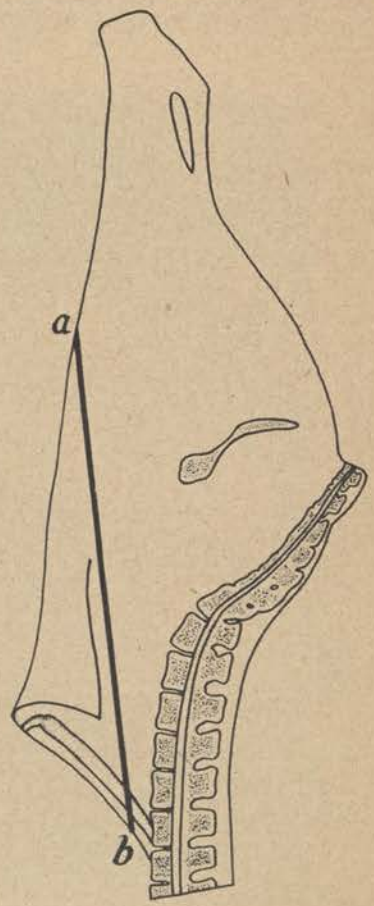



Figure 10.

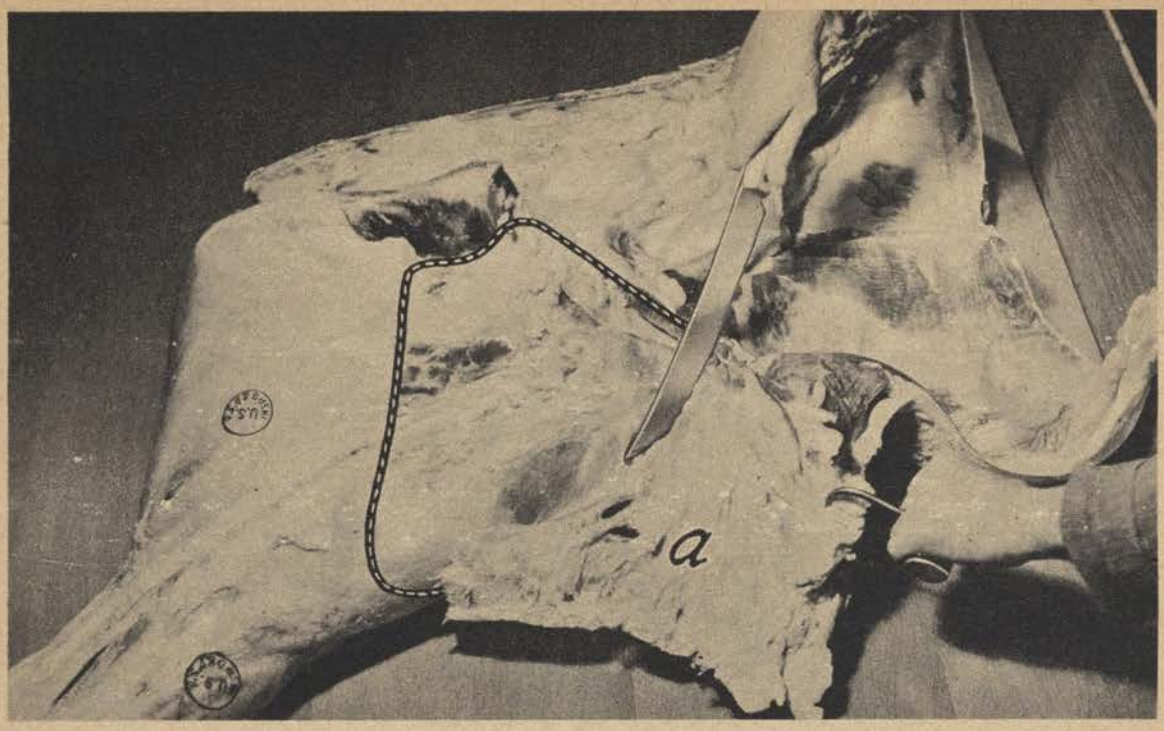
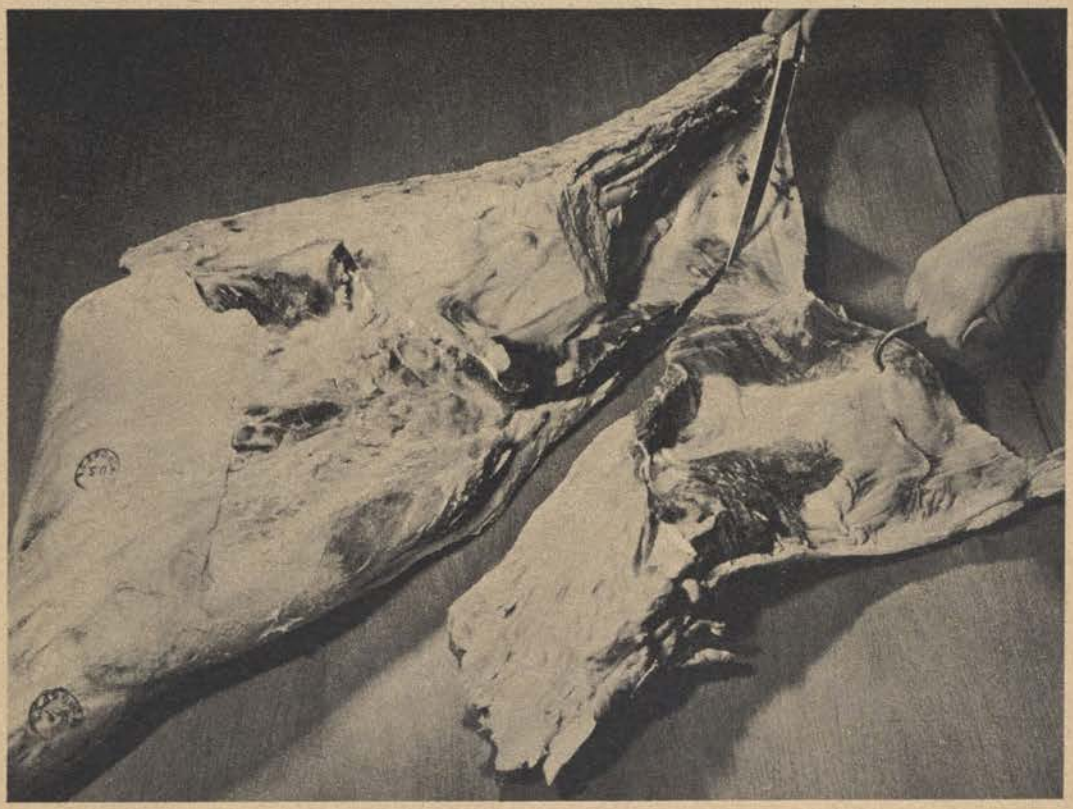



**Figure 11.**

(1) Follow the natural seam to separate the cod fat (a) from the knuckle section of the round (fig. 11).

(2) Start at the kneecap and cut along the front of the knuckle to within 1 inch of the loin muscle at the small end of the loin (fig. 12).

**Figure 12.**



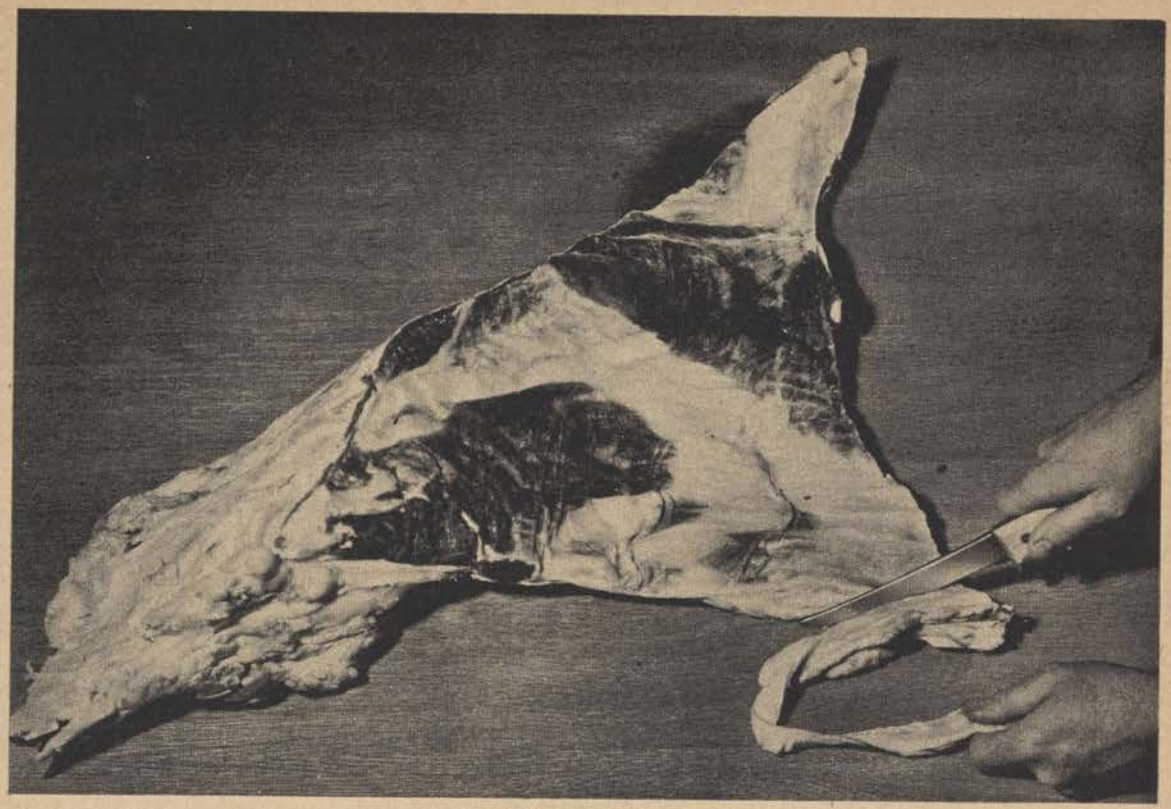
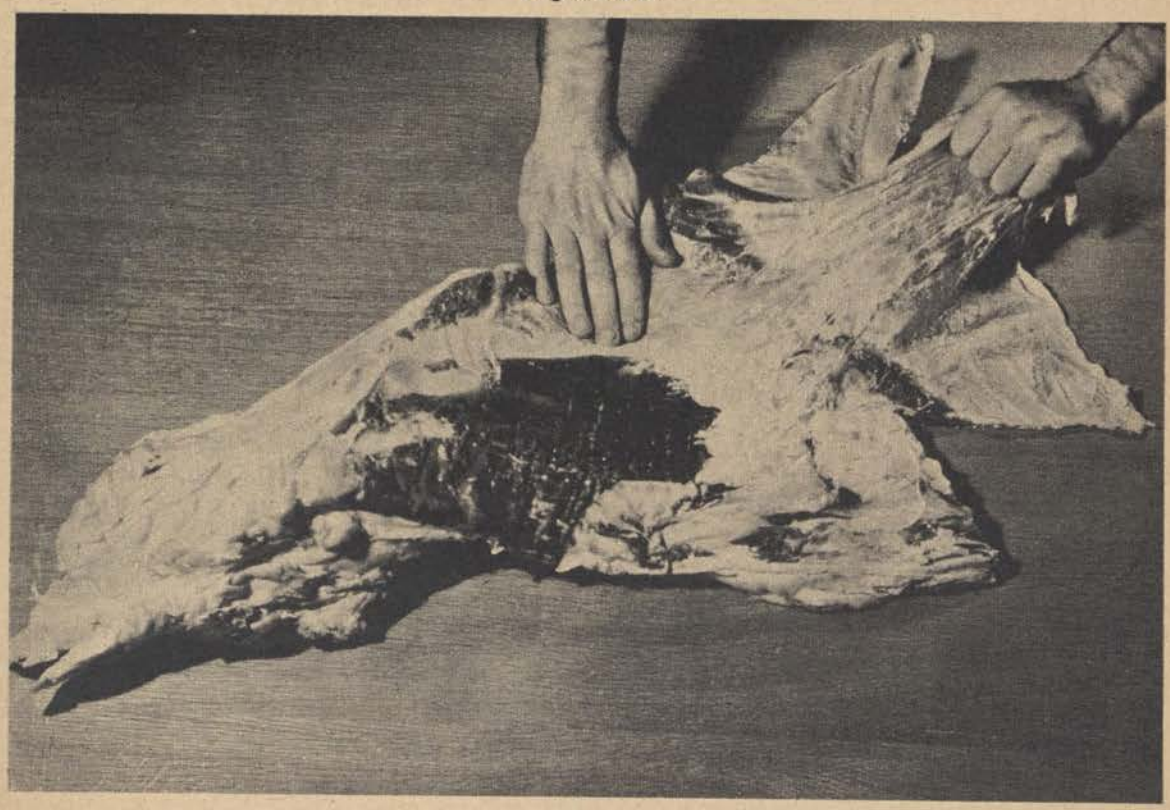


Figure 13.

*b. Preparing flank.*—(1) Cut the thin strip from the navel side of the flank (fig. 13). (2) Pull the membrane from the inside of the flank (fig. 14).

Figure 14.



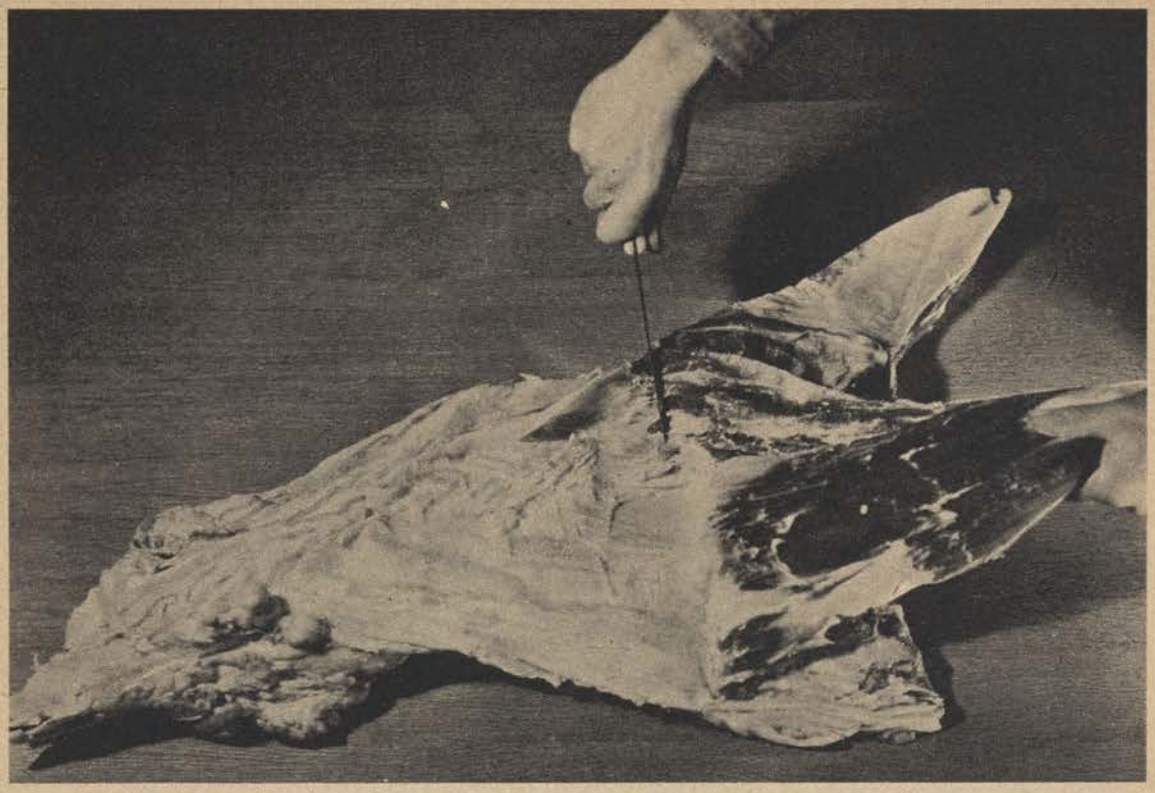
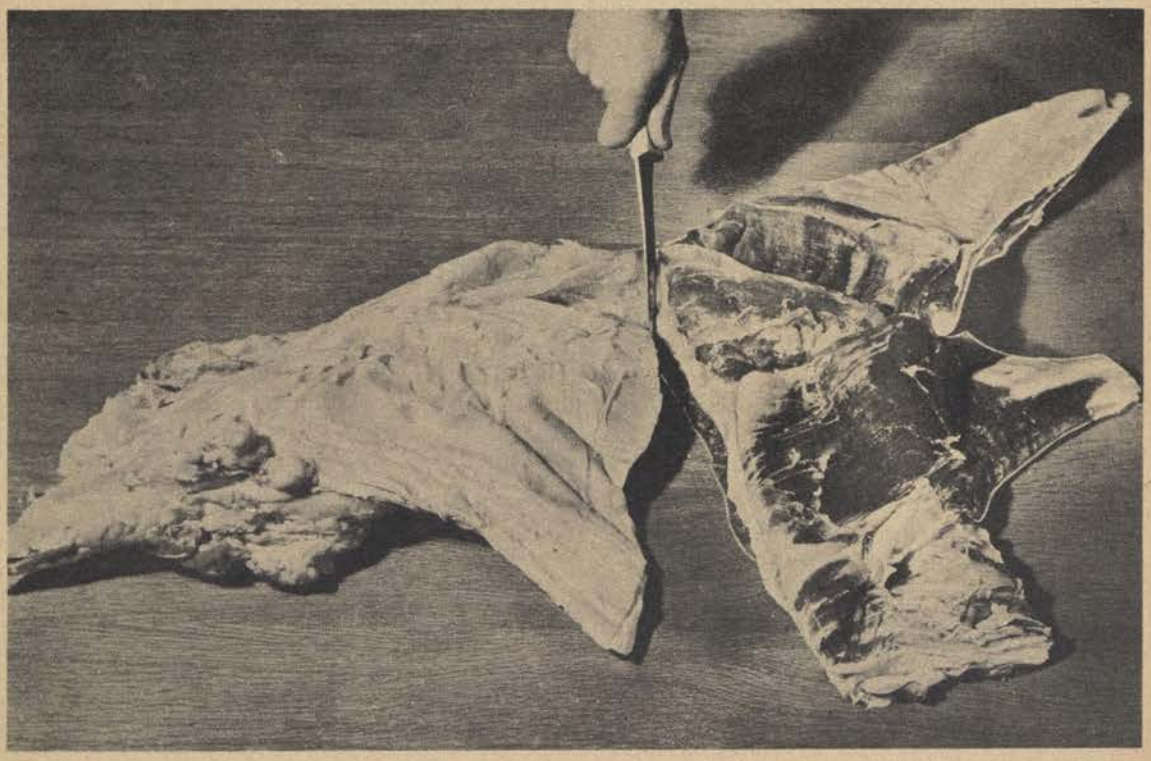


Figure 15.

(3) Pull the flank steak with meat attached as far as it will pull easily (fig. 15).
(4) Cut across the flank to separate the meat from the fat (fig. 16).

Figure 16.



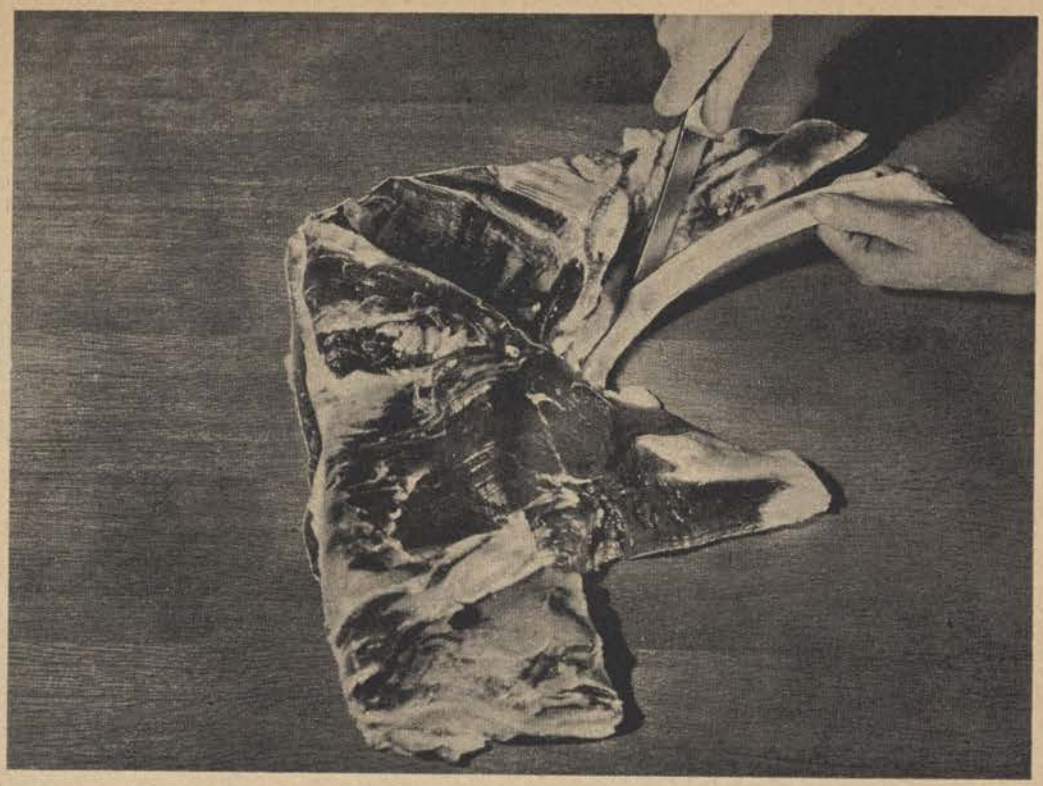
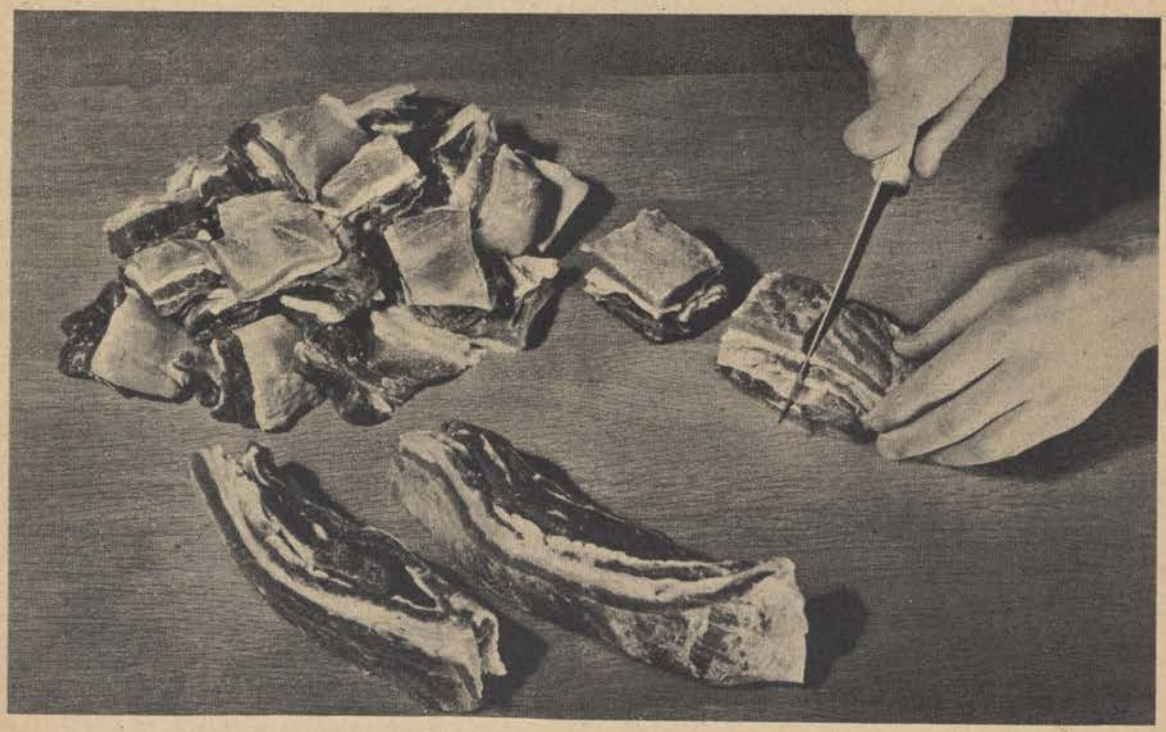


Figure 17.

(5) Remove the thirteenth rib if this was not done at the time the flank was separated from the hindquarter (fig. 17).

(6) Cut the boneless flank into small pieces for stewing or grinding (fig. 18).

Figure 18.



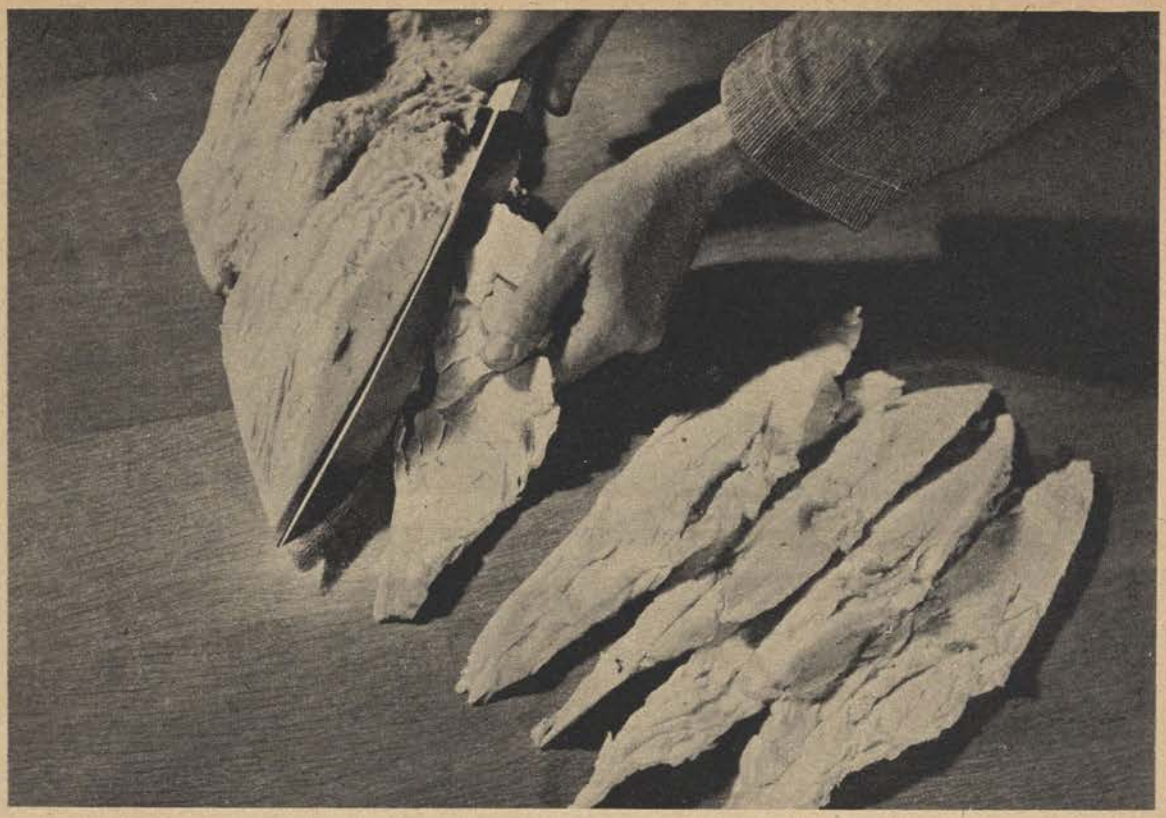


Figure 19.

c. *Preparing cod fat.* (1) Slice the cod fat (fig. 9).

(2) Lay slices of the cod fat on lean roasts for added flavor and protection during cooking (fig. 20).

Figure 20.

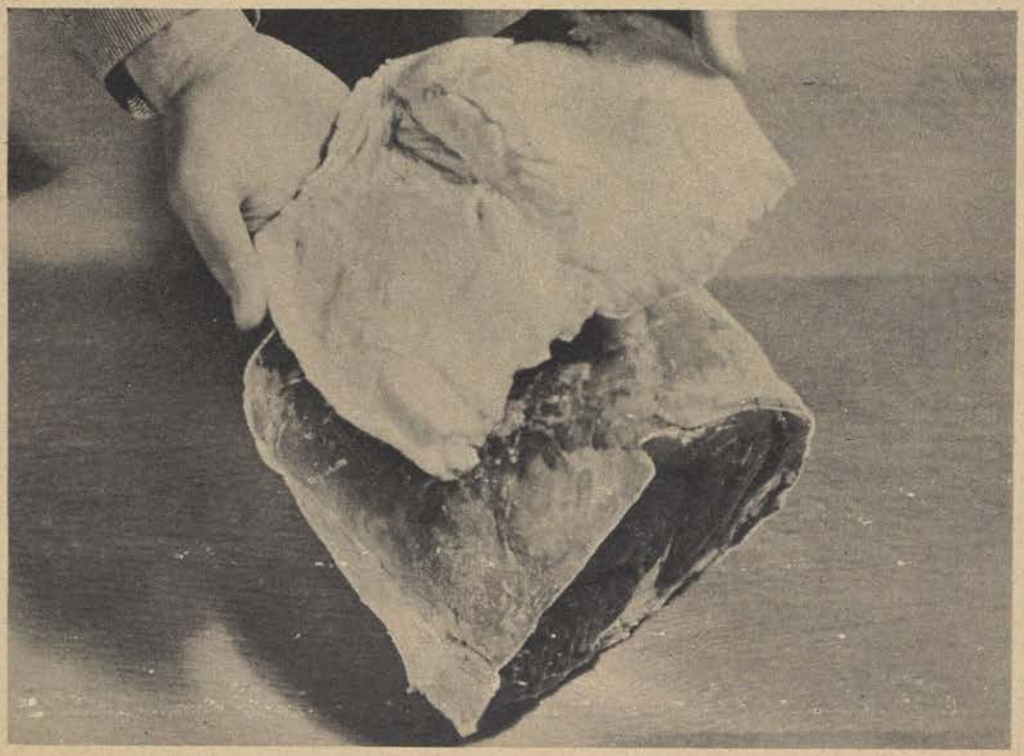
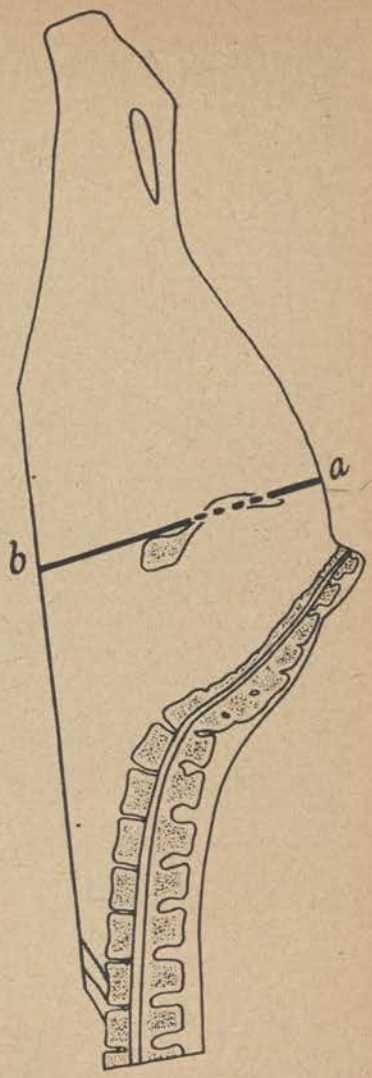


Figure 21.




*8. Separating round from loin and rump.*—With the hindquarter on the block, meat side down, separate the round from the loin and rump by cutting immediately back of the rump bone from (a) to (b) (fig. 21). This separation is made without the use of a saw.

*a.* Take out the surplus fat from the inside of the rump and the loin (fig. 22).

Figure 22.



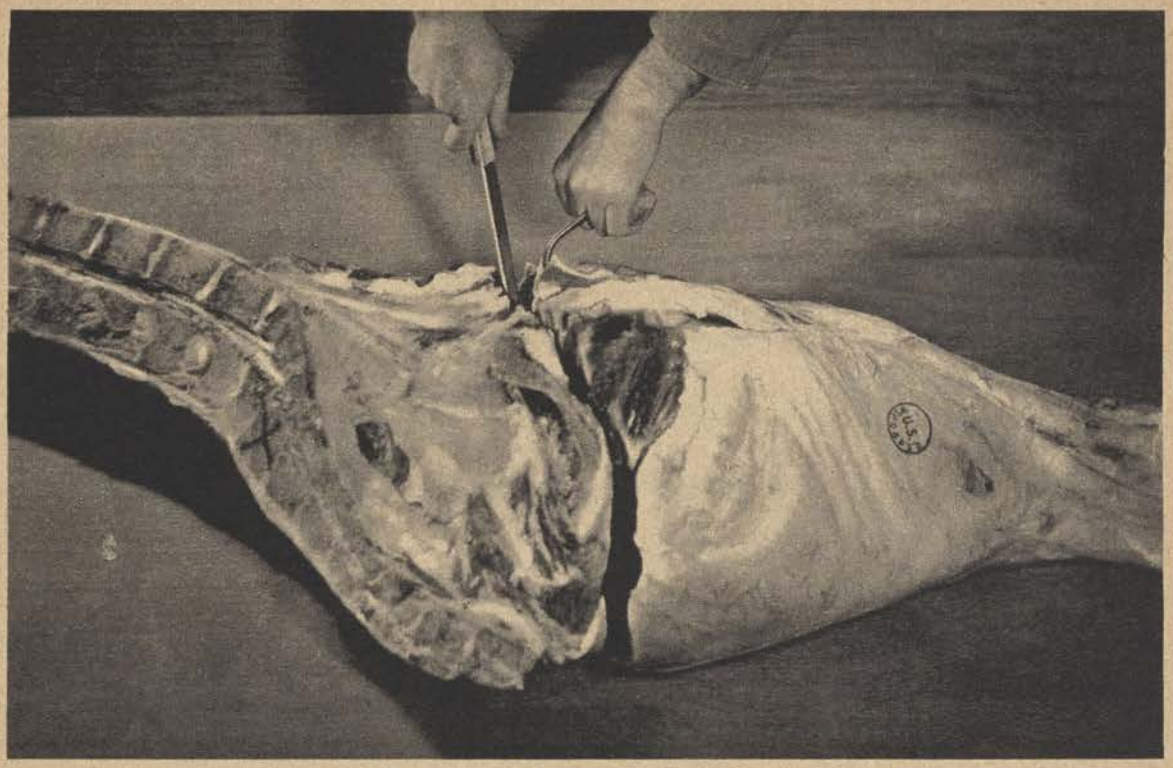
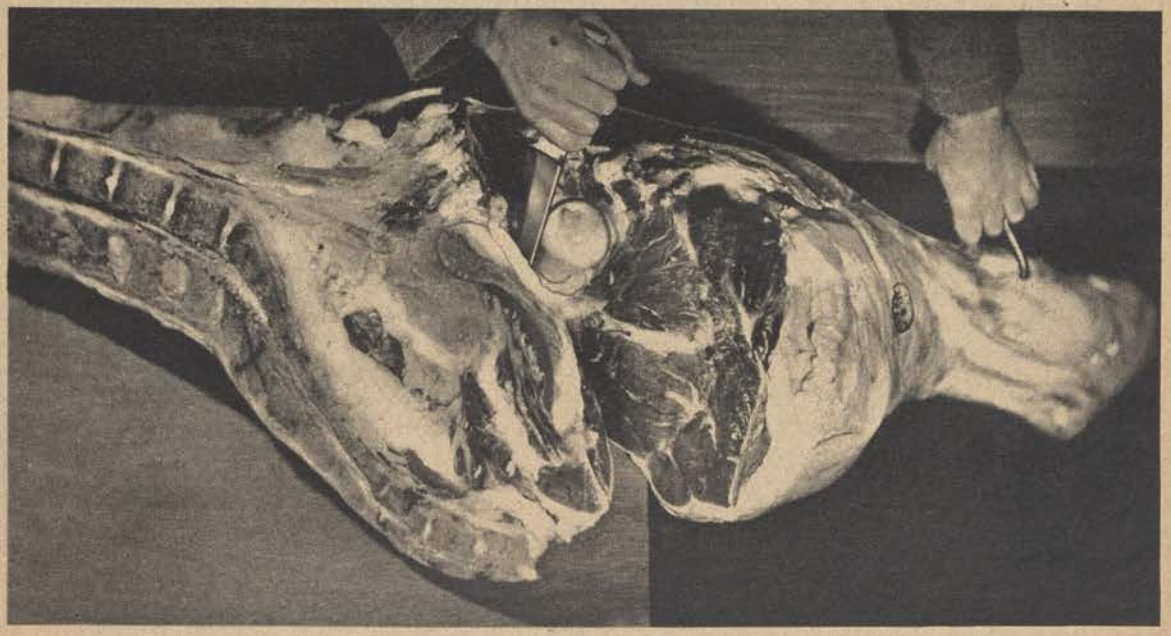


**Figure 23.**

*b.* Cut through the meat close to the rump bone. Continue in a straight line to the flank side of the hindquarter (fig. 23).

*c.* With the round hanging over the edge of the block, unjoint the round bone at the socket joint (fig. 24).

**Figure 24.**



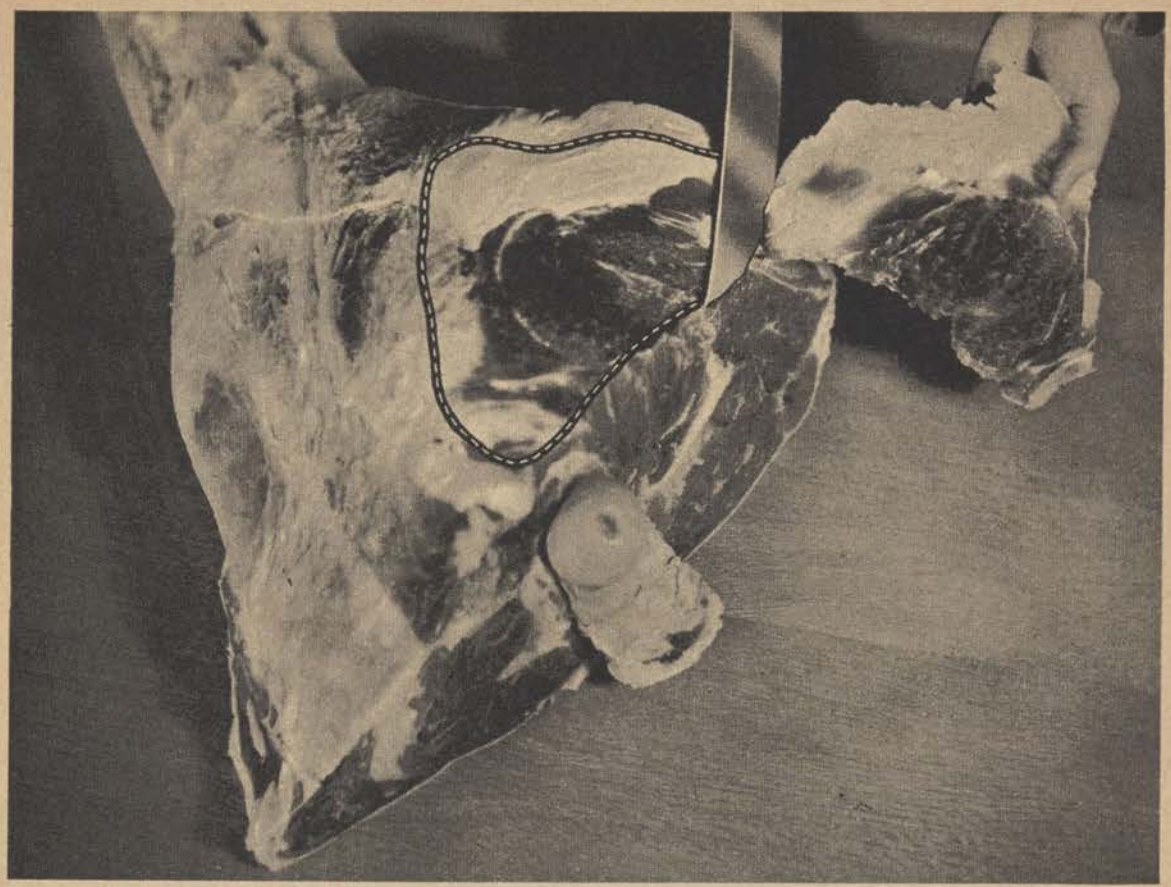


Figure 25.

*d*. Trim surplus fat and membrane from the top of the round (fig. 25).

*9. Cutting round of beef. a*. Remove the knuckle (1) by cutting from (a) to (b) on both sides of the round. Separate the heel and shank (4) and (5) from inside and outside round (2) and (3) by cutting through the stifle joint (a) to (f) and through the meat (f) to (c). Separate the heel from the shank by cutting from (e) to (d) and (e) to (f). (All references are to fig. 26.)

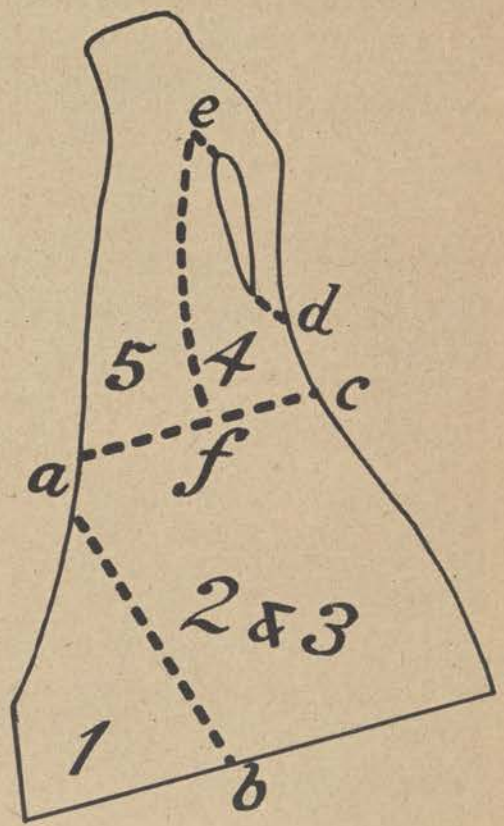



Figure 26.

1. Knuckle (tip).
2. Inside (top) round.
3a and 3b. Outside (bottom) round.

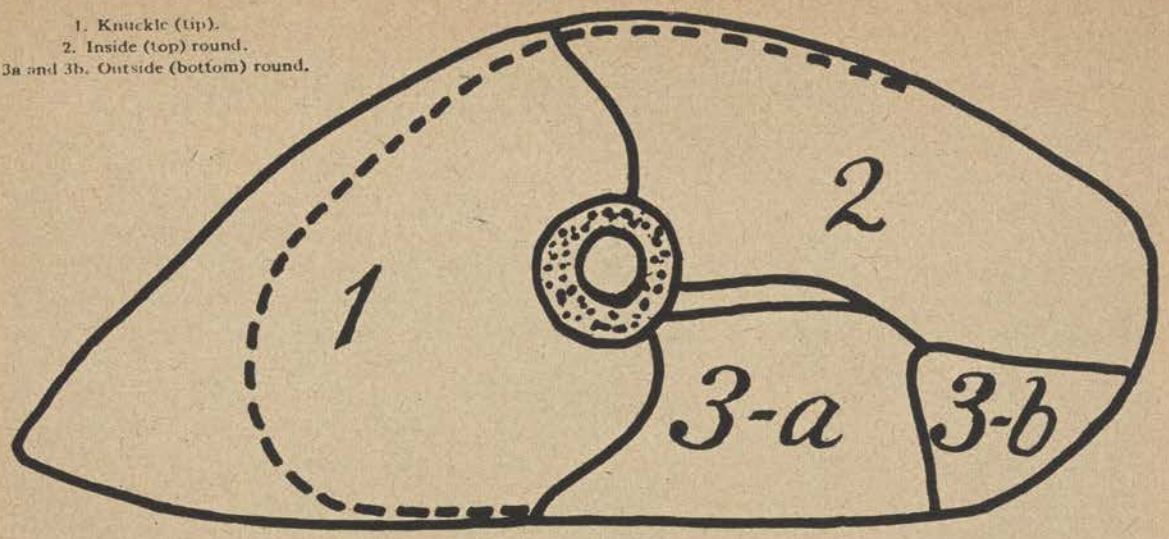
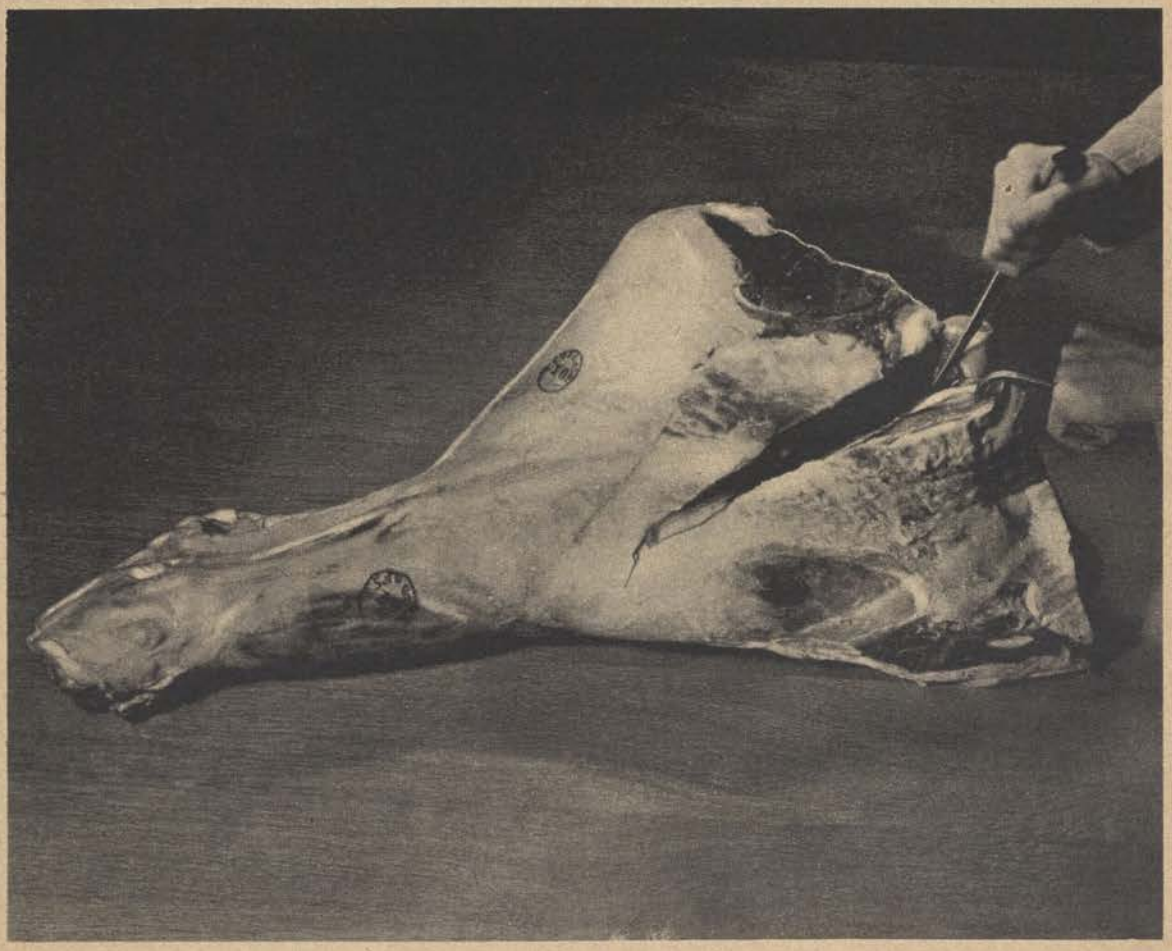



**Figure 27.—Face of the beef round.**

*b. Cutting knuckle (tip).*—(1) Cut through the meat down to the round bone from the kneecap to the face of the round (fig. 28).

**Figure 28.**



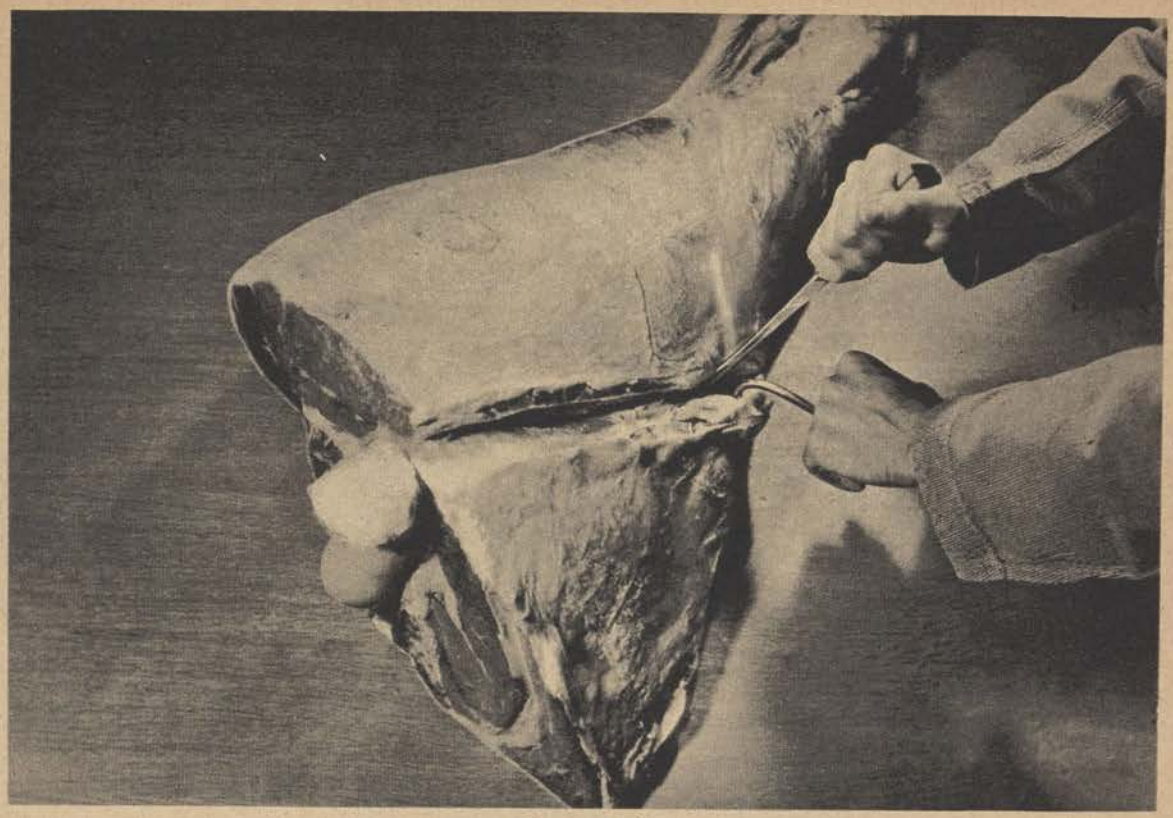
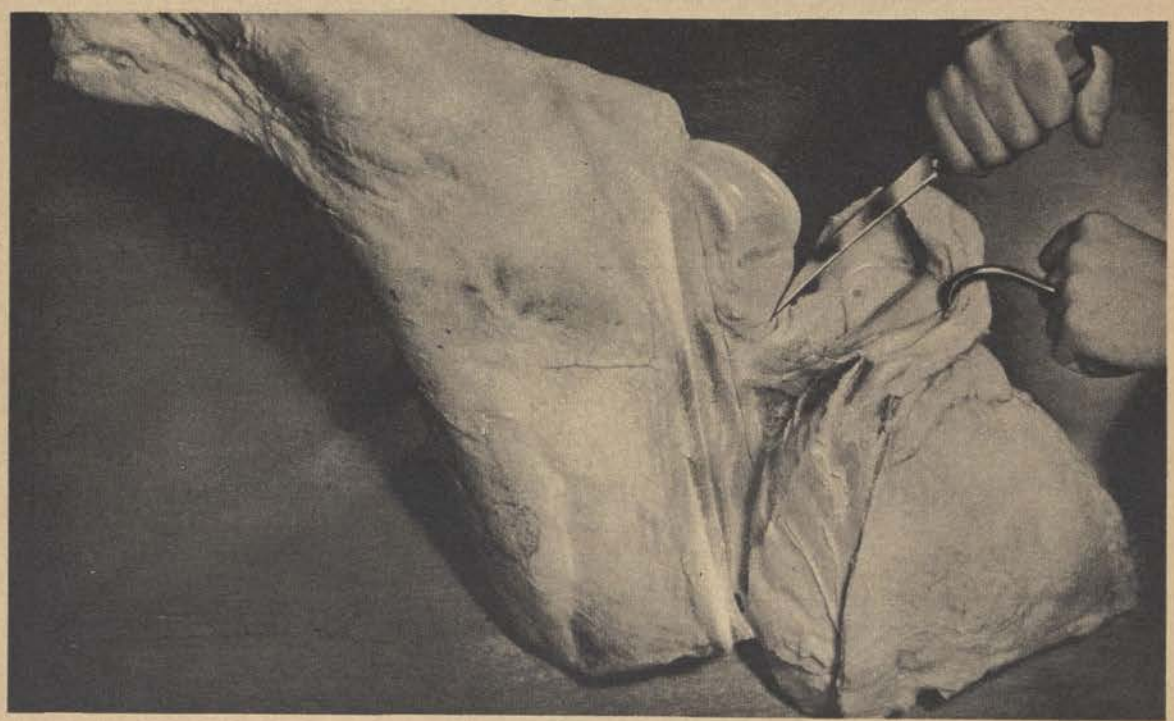


Figure 29.

(2) Turn the round so that the outside is on the top. Follow the natural seam to the round bone from the face of the round to the kneecap (fig. 29).

(3) Unjoint the kneecap and cut the periosteum (membrane or connective tissue which covers the bones) free from the round bone (fig. 30).

Figure 30.



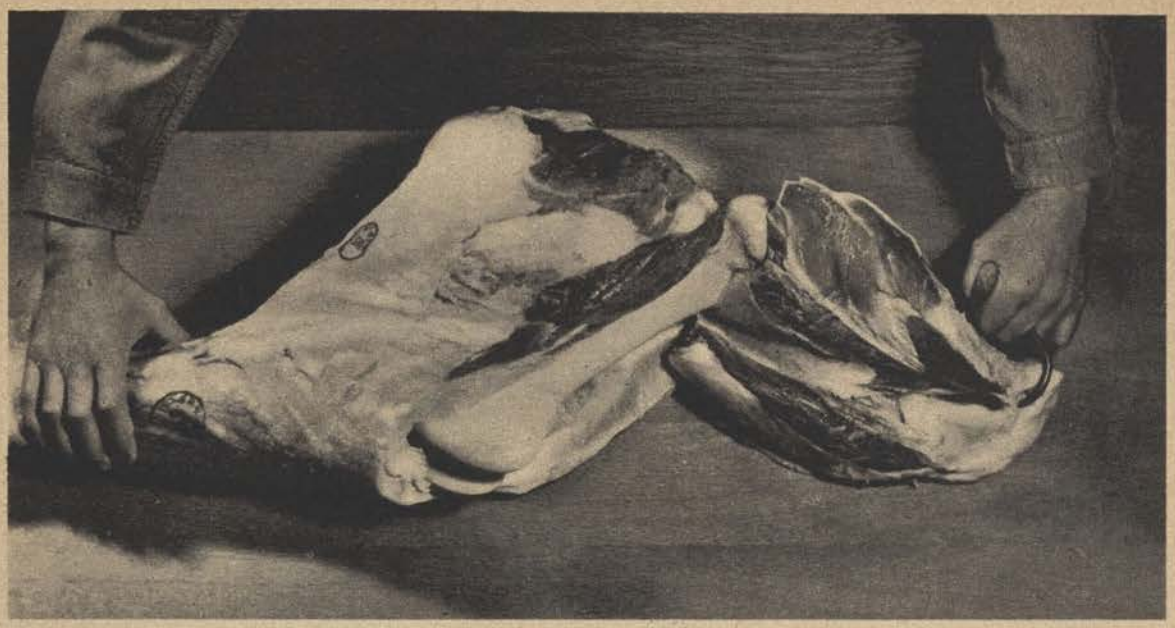


**Figure 31.**

(4) Pull the knuckle from the round (fig. 31).

(5) Take the layer of flank meat and fat from the outside of the knuckle (fig. 32). Cut from (a) to (b) to separate the kneecap from the knuckle.

**Figure 32.**





Figure 33.

(6) Use knuckle (tip) (fig. 33) for roasts or steaks.

c. *Cutting hind shank and heel.*—(1) Cut through the stifle joint to separate the shank and heel from the inside and outside round (fig. 34).

Figure 34.

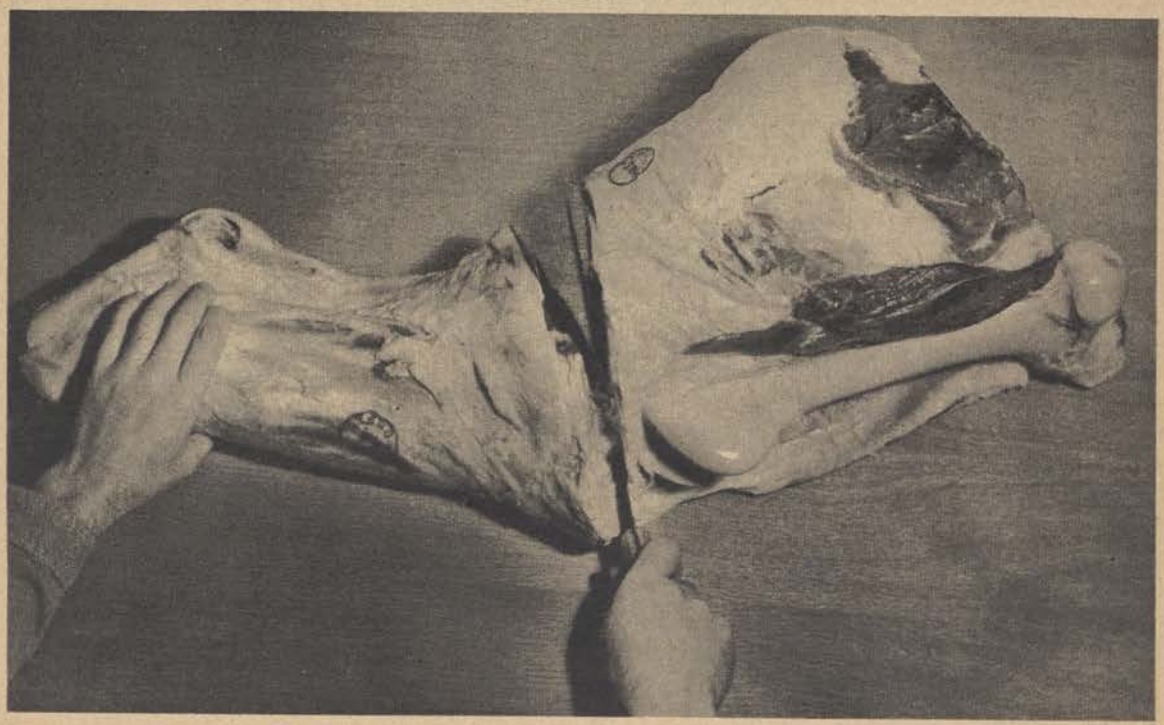




Figure 35.

(2) Stand the shank on end. Cut the heel from the bone (fig. 35).
(3) Use heel (fig. 36) for braising, stewing, or grinding.

Figure 36.



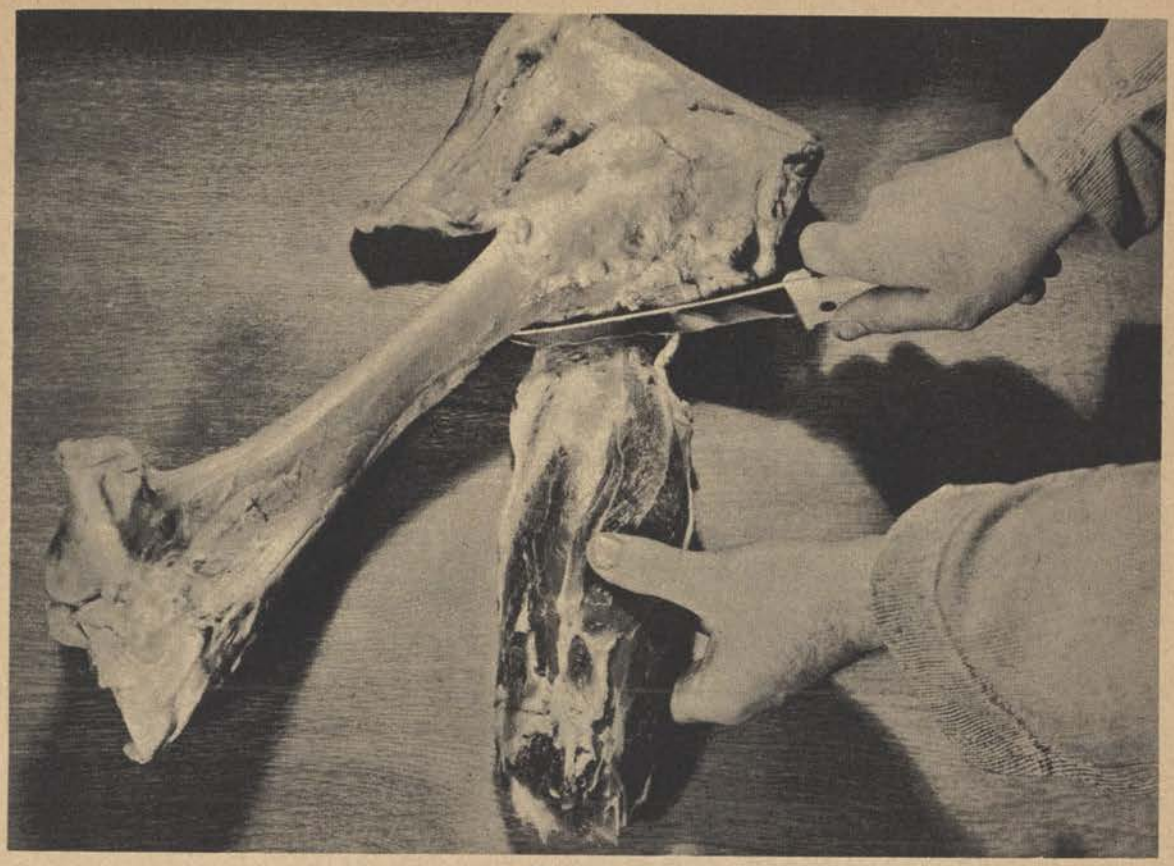


**Figure 37.**

(4) Trim meat from the shank bone (fig. 37). Meat may be used for stewing or grinding.

*d. Cutting inside and outside round.*—(1) Cut along the round bone and through the natural seam to separate the inside from the outside round (fig. 38).

**Figure 38.**





Figure 39.

(2) Use inside (top) round (fig. 39) for roasts or steaks.
(3) Separate the leg (round) bone from the outside round (fig. 40).

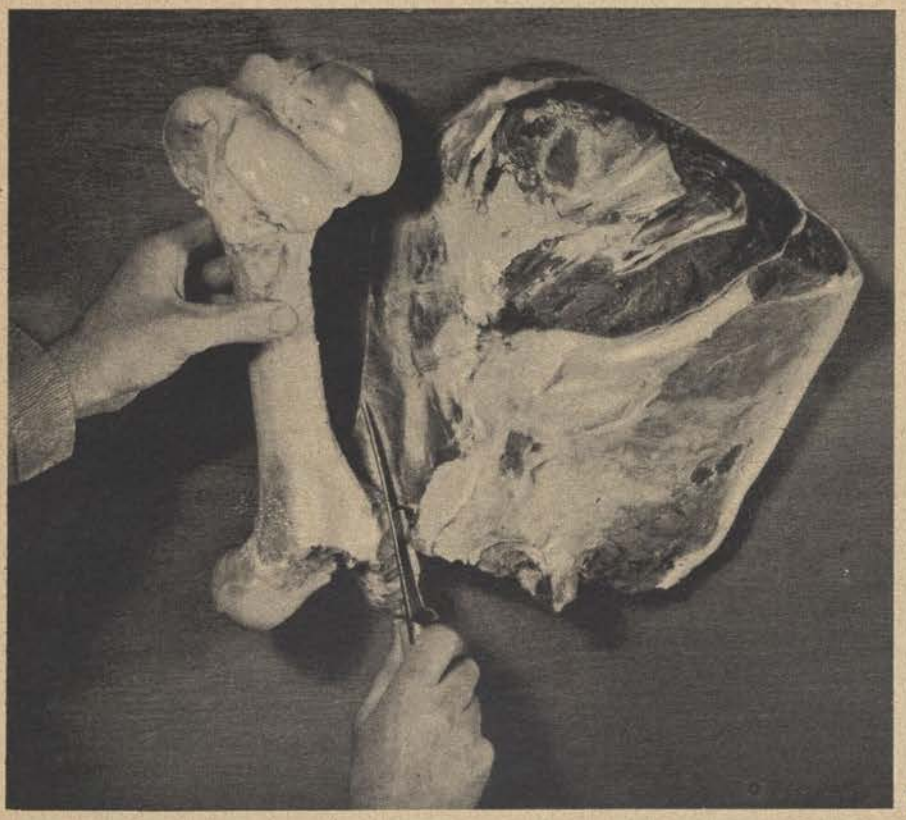


Figure 40.



Figure 41.

(4) Use outside (bottom) round (fig. 41) for braising, stewing, or grinding, and for roasts or steaks when necessary.

*10. Removing tenderloin.*—The tenderloin (1) (fig. 42) is the long, tapering muscle that lies along the backbone inside of the loin. It should be removed before the short loin is separated from the sirloin and the rump.

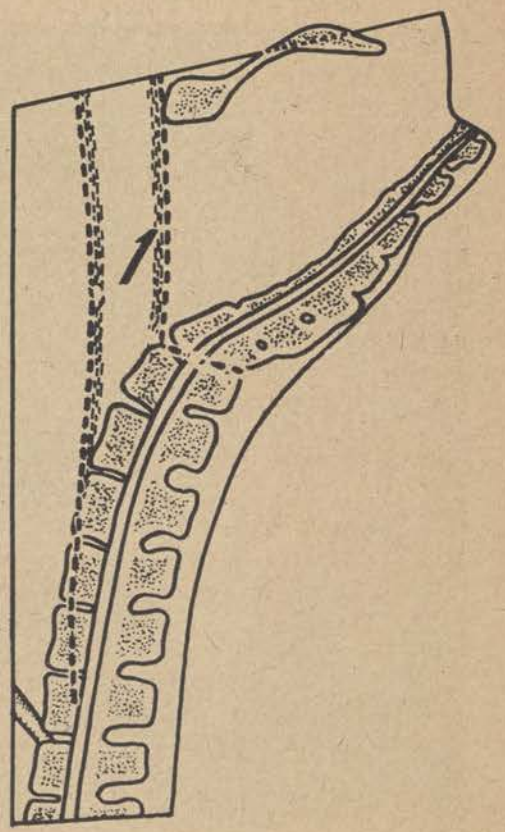



Figure 42.

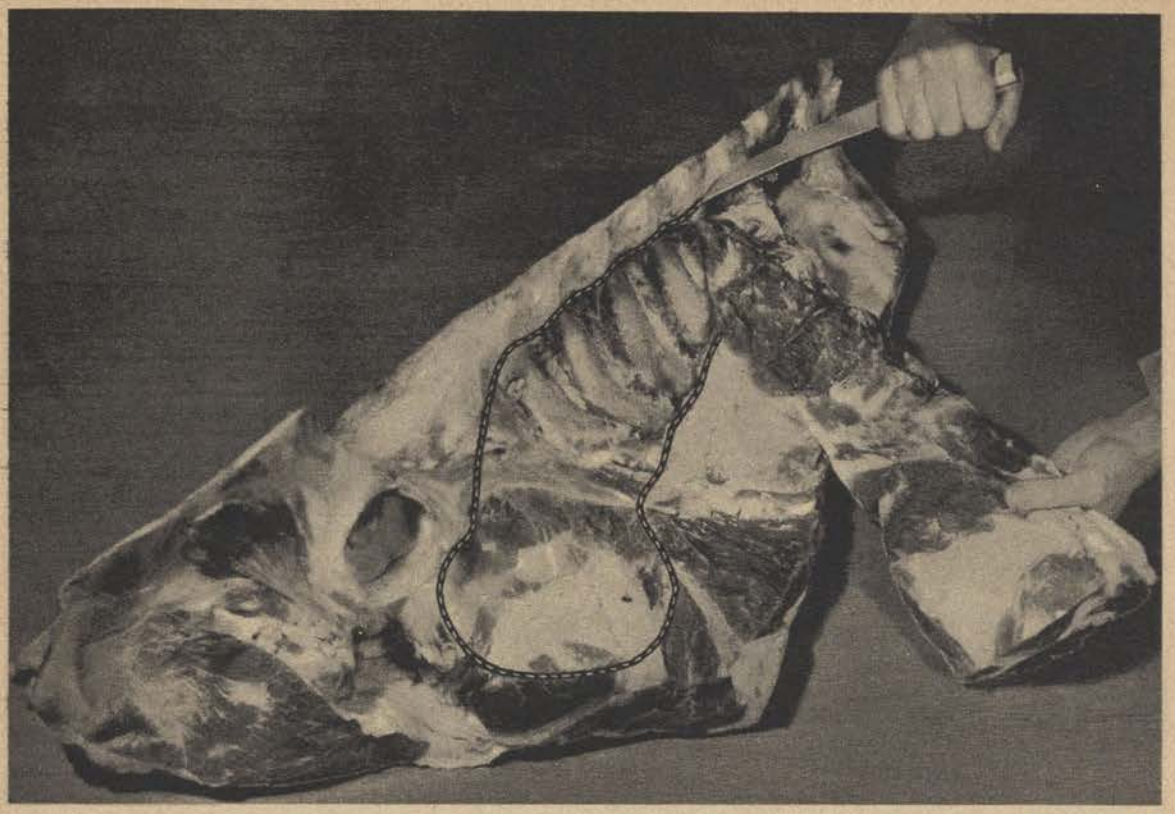


Figure 43.

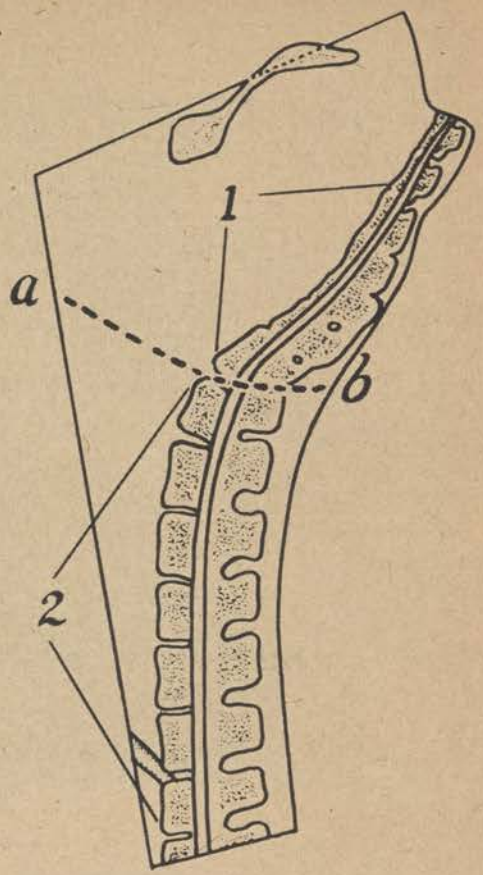
*a*. Remove tenderloin from the inside of the loin (fig. 43).
*b*. Use tenderloin (fig. 44) for roasts or steaks.

Figure 44.



1. Sacral vertebrae.
2. Lumbar vertebrae.

Figure 45.




*11. Separating sirloin and rump from shell loin.*—*a.* Separate the sirloin and rump from the shell loin (short loin with the tenderloin removed). Cut from (a) to (b) (fig. 45) between the sacral and lumbar vertebrae of the backbone and immediately in front of the hip bone.

(1) Separate the featherbones from the meat along the full length of the loin and the rump (fig. 46).

Figure 46.

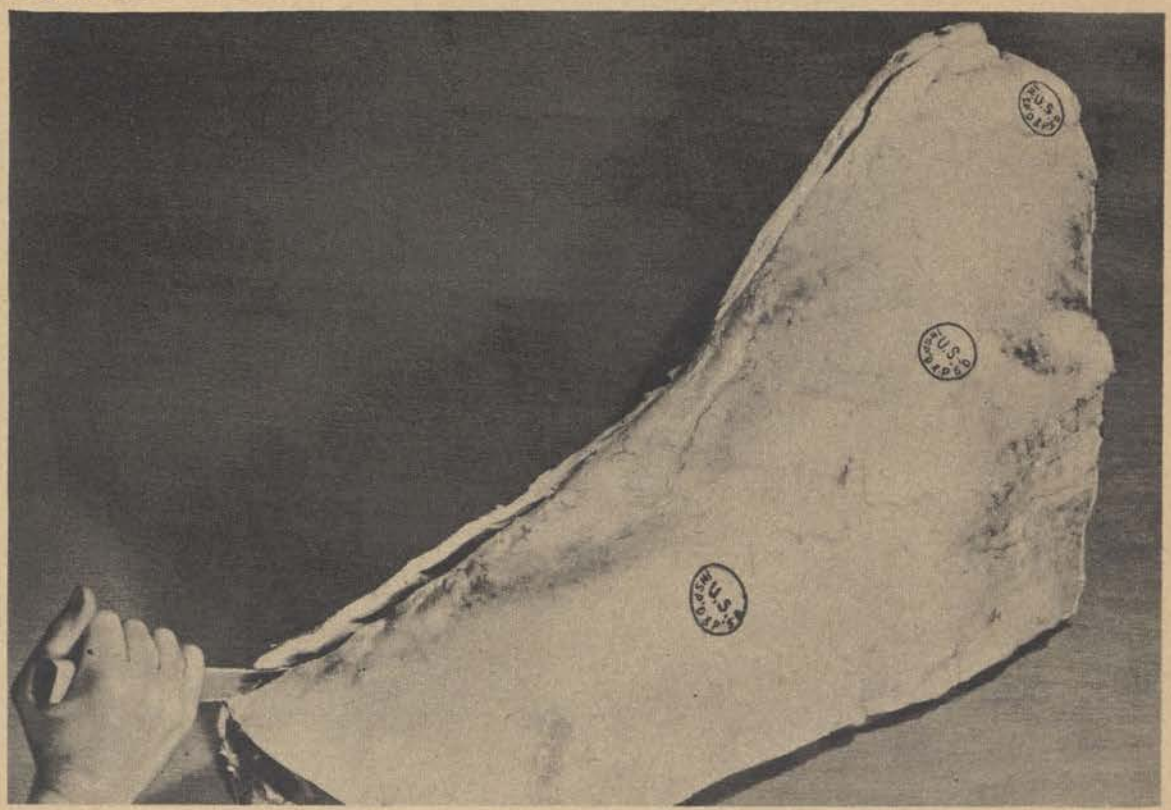


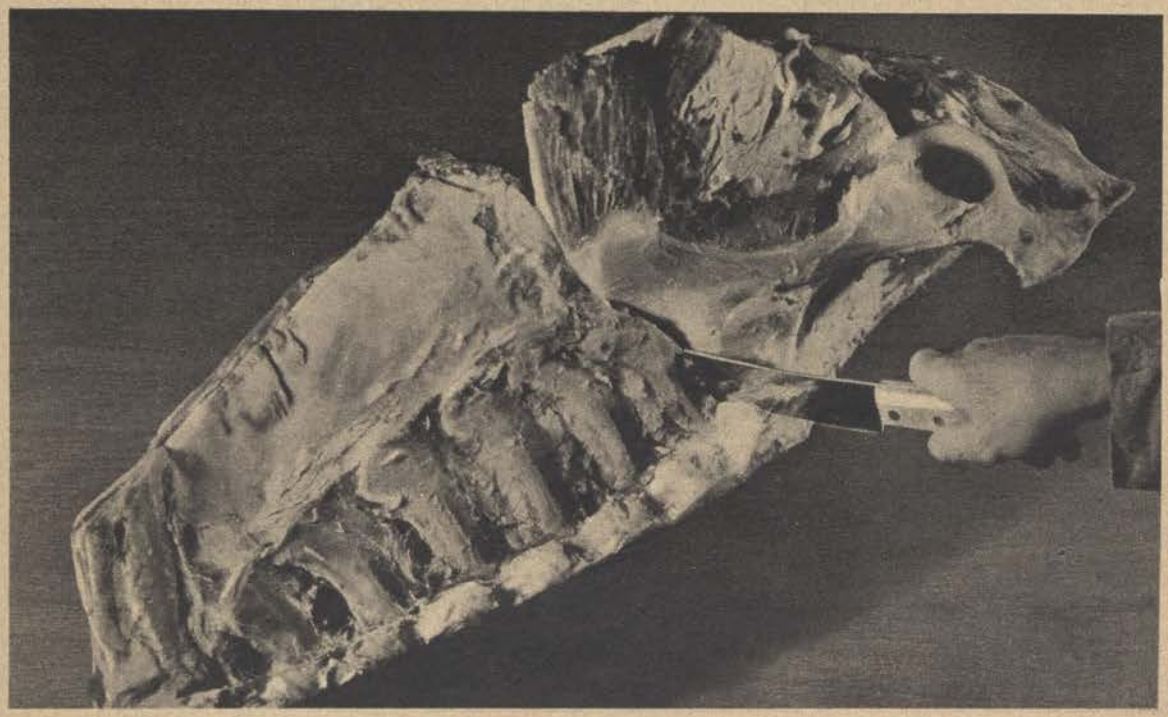


**Figure 47.**

(2) Cut between the sacral and lumbar vertebrae (fig. 47).

(3) Cut through the meat immediately in front of the hip bone and back of the last finger bone (fig. 48).

**Figure 48.**



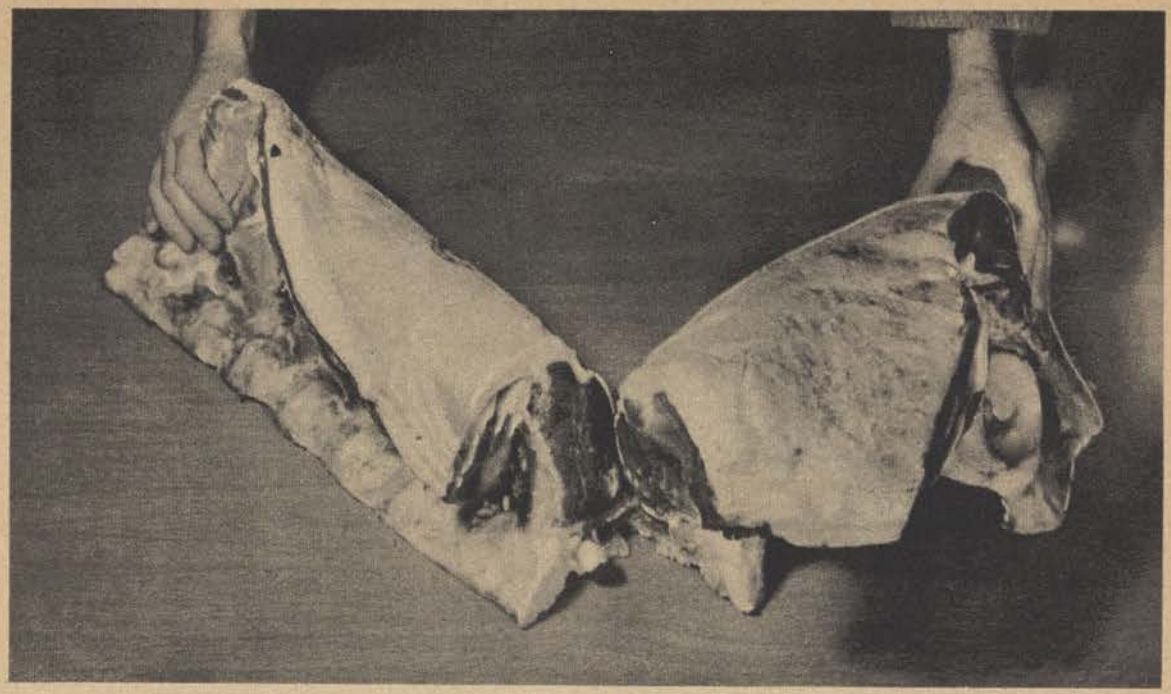
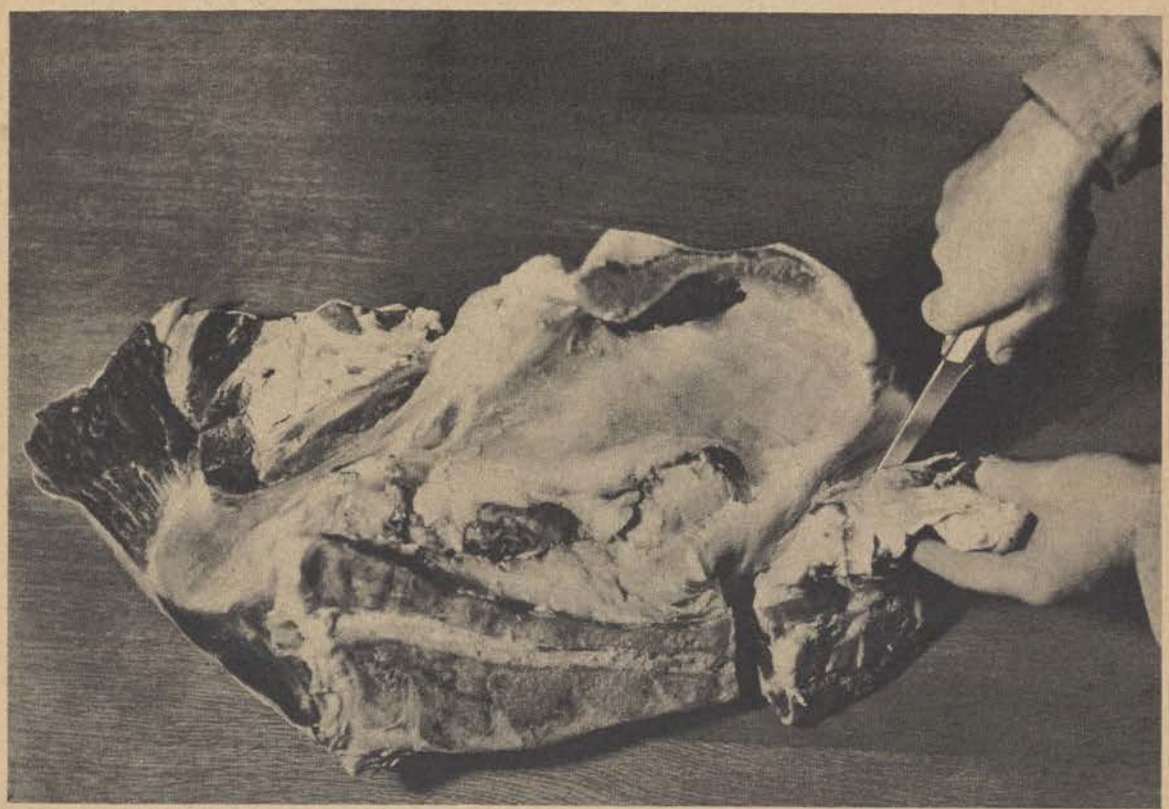


Figure 49.

(4) Break the backbone to separate the shell loin from the sirloin and rump (fig. 49).

*b. Preparing sirloin-rump butt.*—(1) Unjoint the tail bone from the backbone Remove this bone and surplus fat from the rump (fig. 50).

Figure 50.



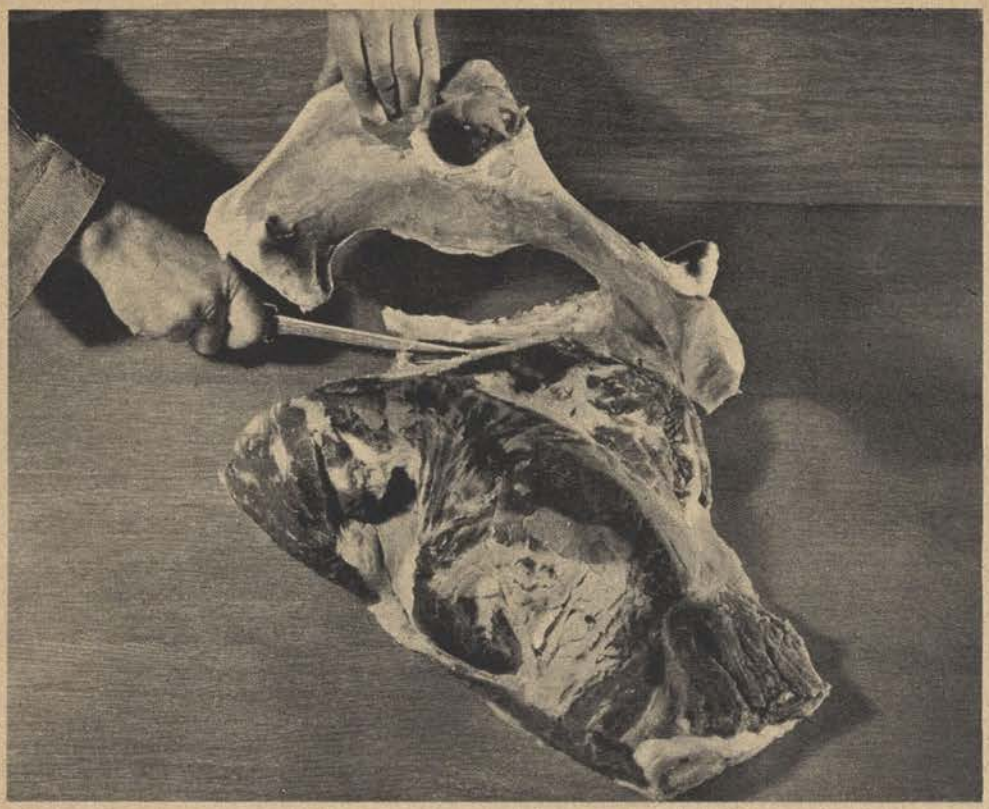


Figure 51.

(2) Remove pelvic (rump and hip) bone (fig. 51).

(3) Use sirloin rump butt (fig. 52) for braising, stewing, roasts, or steaks.

Figure 52.



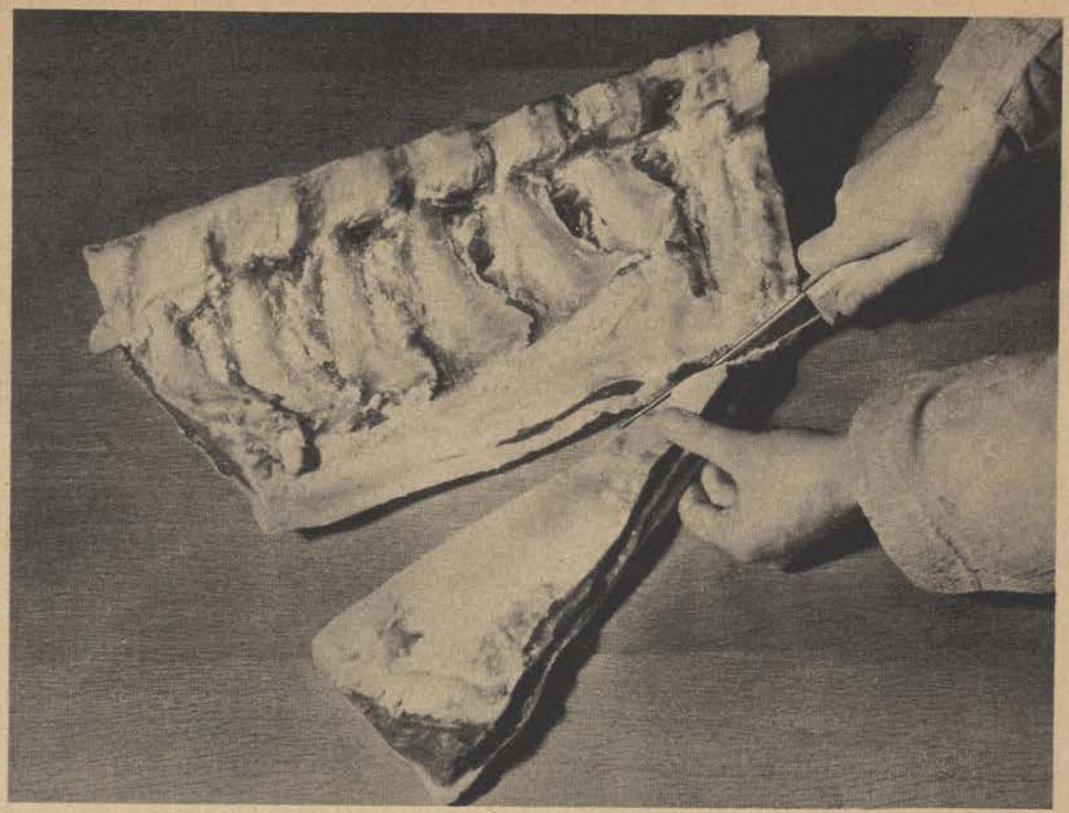


Figure 53.

*c. Preparing loin strip.* (1) Cut the flank meat from the loin muscle (fig. 53). (2) Separate the loin strip from the backbone (fig. 54).

Figure 54.

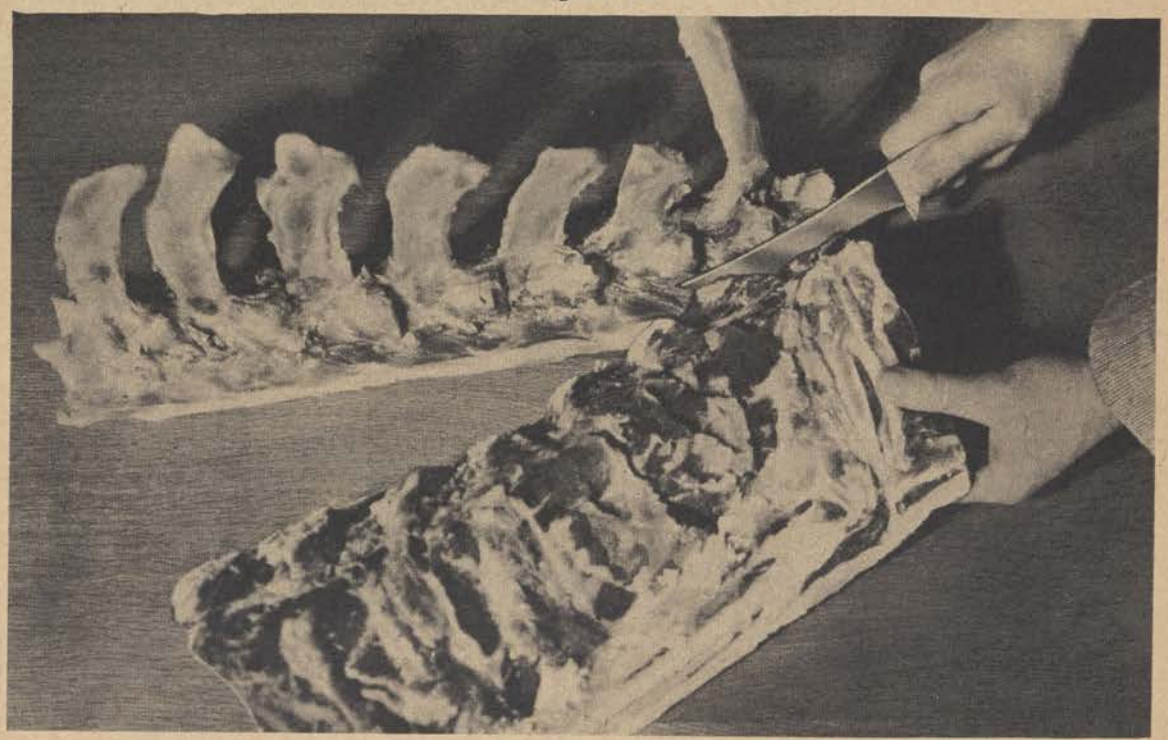




Figure 55.

(3) Use loin strip (fig. 55) for roasts or steaks.

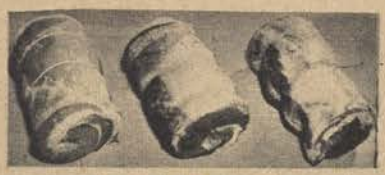
CUTTING OF BEEF



PLATE ROLL—1



BONELESS RIB—2



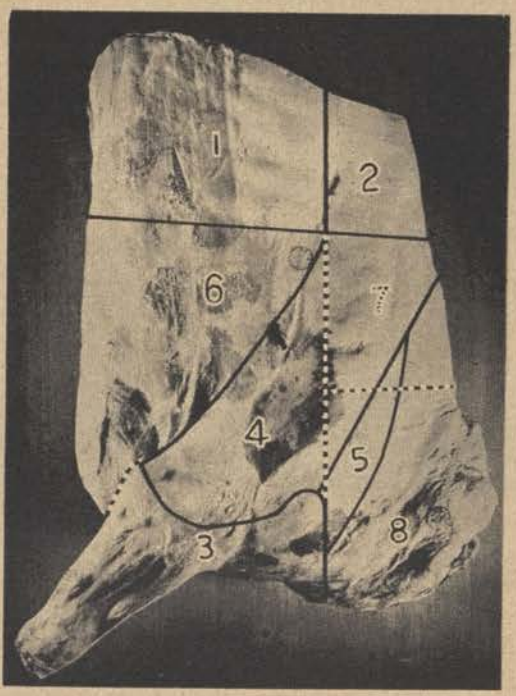
BRISKET ROLLS—6



INSIDE CHUCK—7



GROUND BEEF—3
(Also skirt, rib fingers and trimmings)






CHUCK TENDER—5



BONELESS STEW—1, 6, 3

Numbers indicate location of cuts and sequence in which they are made



SHOULDER CLOD—4



BONELESS NECK—8

See pages 32 to 64 for instructions on making these cuts

**Figure 56.—Beef forequarter chart (United States Army boneless cuts).**

SECTION III

# MAKING CUTS FROM BEEF FOREQUARTER

Paragraph

Cuts of beef available from beef forequarter ..... 12
Bone chart ..... 13
Trimming beef forequarter ..... 14
Separating wing from cross-cut chuck ..... 15
Cutting wing ..... 16
Cutting cross-cut chuck (outside) ..... 17
Cutting cross-cut chuck (inside) ..... 18

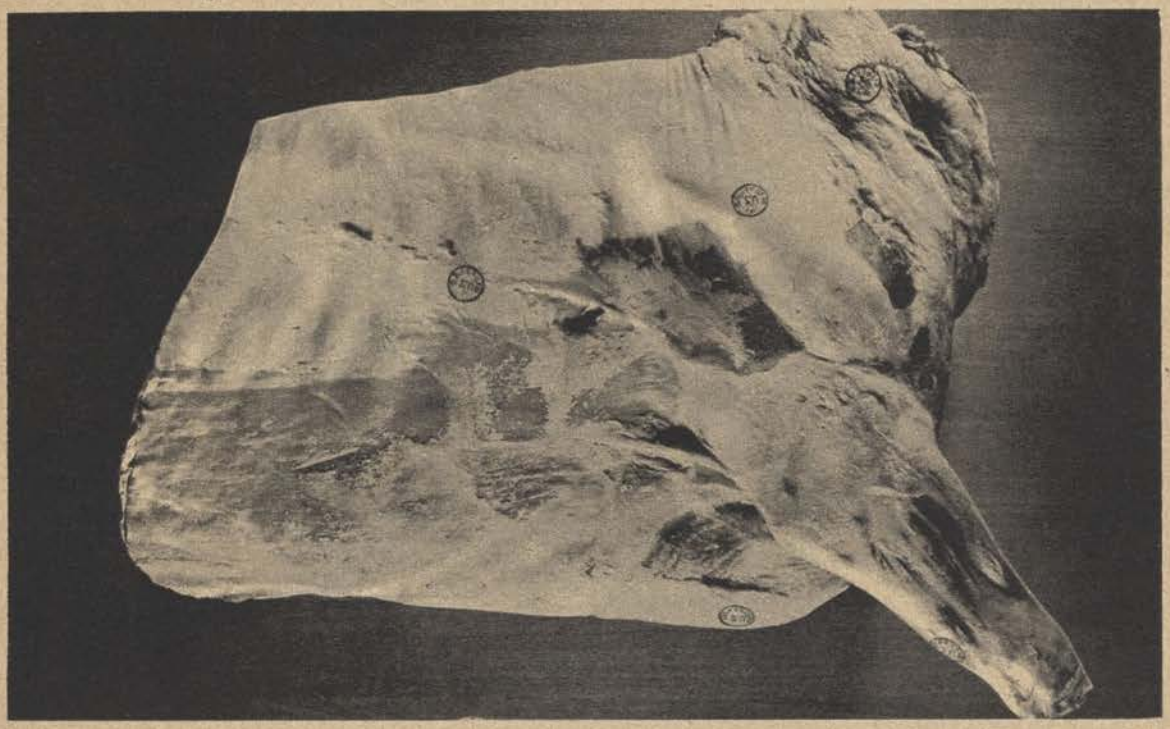


**Figure 57.—The beef forequarter.**

*12. Cuts of beef available from beef forequarter.*—A number of blocky, solid pieces of meat will be found in the forequarter when it is cut according to the method described on the following pages. The following table gives a complete list of forequarter cuts and the method of cooking recommended for each.

*Tender cut*

| *Cut* | *Use* |
|---|---|
| Boneless rib. | Roasts, steaks. |
| Inside chuck. | Roasts, steaks. |

*Less tender cuts*

| *Cut* | *Use* |
|---|---|
| Shoulder clod. | Braise, stew, roast if necessary. |
| Boneless neck. | Braise, stew, roast if necessary. |
| Chuck tender. | Braise, stew, roast if necessary. |
| Boneless plate. | Braise, stew, ground meat. |
| Boneless brisket. | Braise, stew, ground meat. |
| Skirt, rib fingers, shank, neck and forearm meat, trimmings. | Stew, ground meat. |

*Fats and bones*

| | |
|---|---|
| Surplus fat. | Render and use for cooking purposes. |
| Bones. | Soups and gravies. |

*13. Bone chart.*—The bone chart (fig. 58) shows the location and shape of the bones in the forequarter.

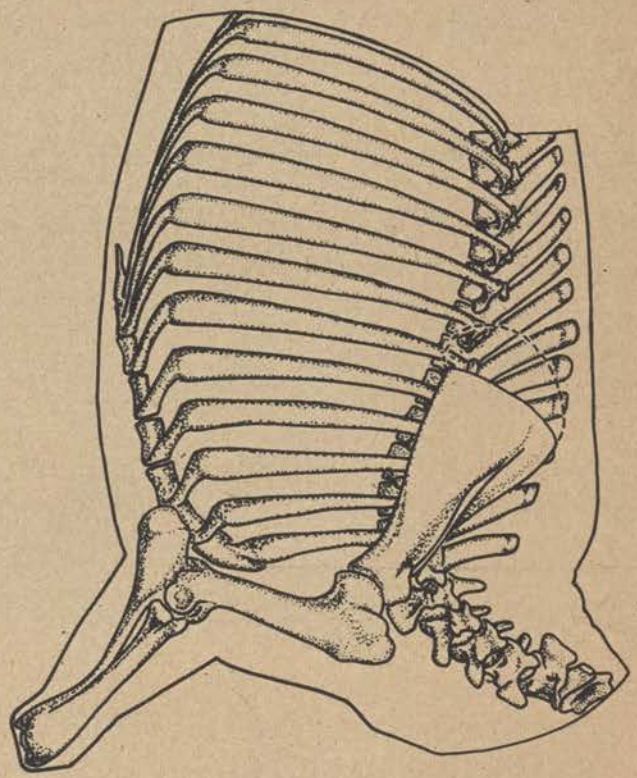
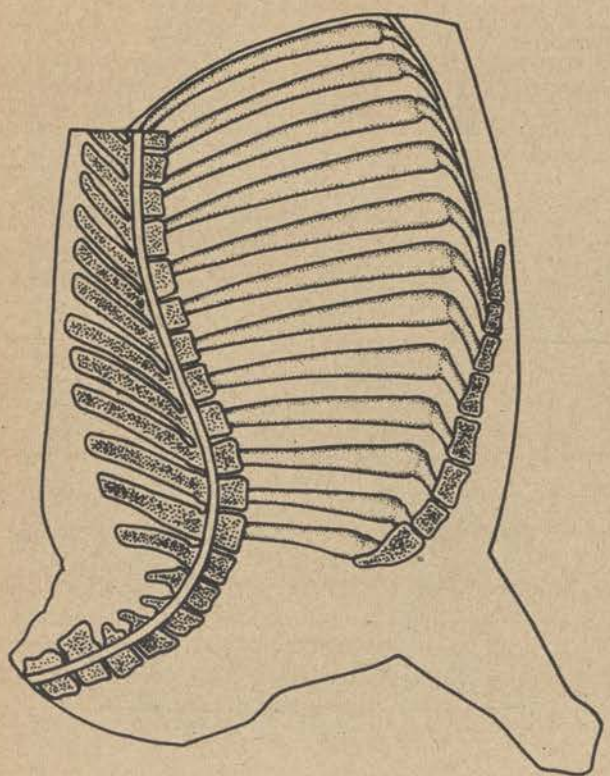


**Figure 58.**

**Figure 59.**



*14. Trimming beef forequarter.*—*a* Put the forequarter on the block, meat side down (fig. 59). In this position, the bones are in clear view and will be easy to cut around. Before any forequarter cuts are made, some trimming around the neck, back, brisket, and plate is necessary.

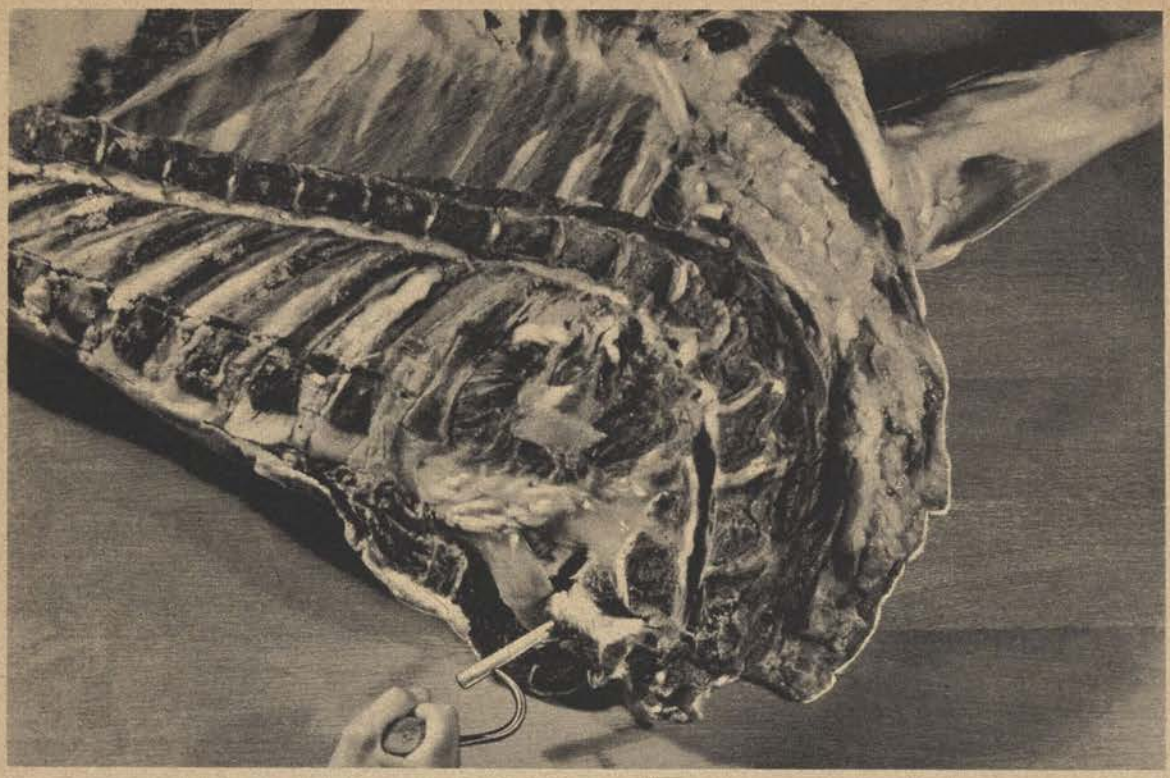
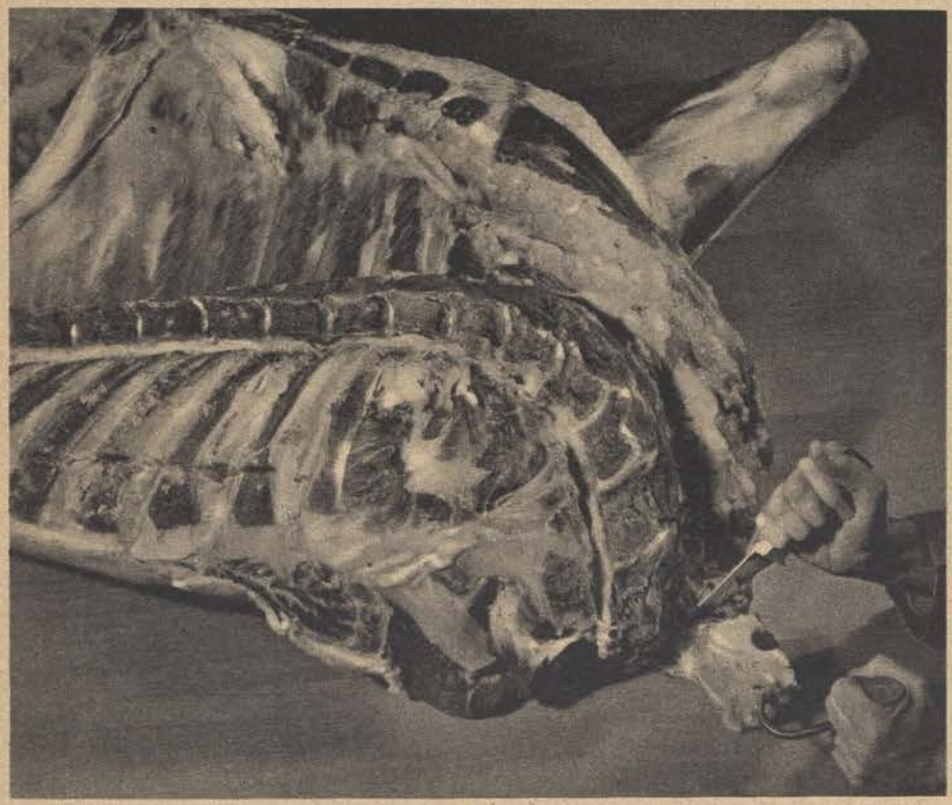


Figure 60.

*b. Trimming neck.*—(1) Pull the pin from the neck (fig. 60).

(2) Remove the atlas. Cut between the first and second neck vertebrae (fig. 61).

Figure 61.



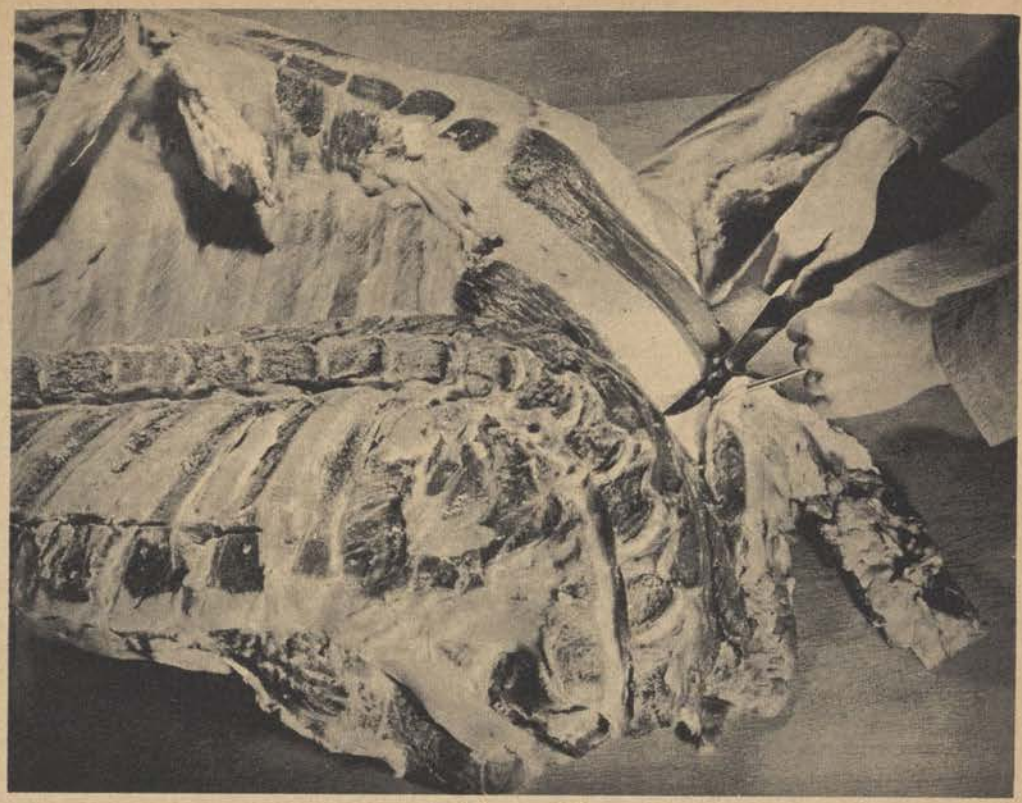
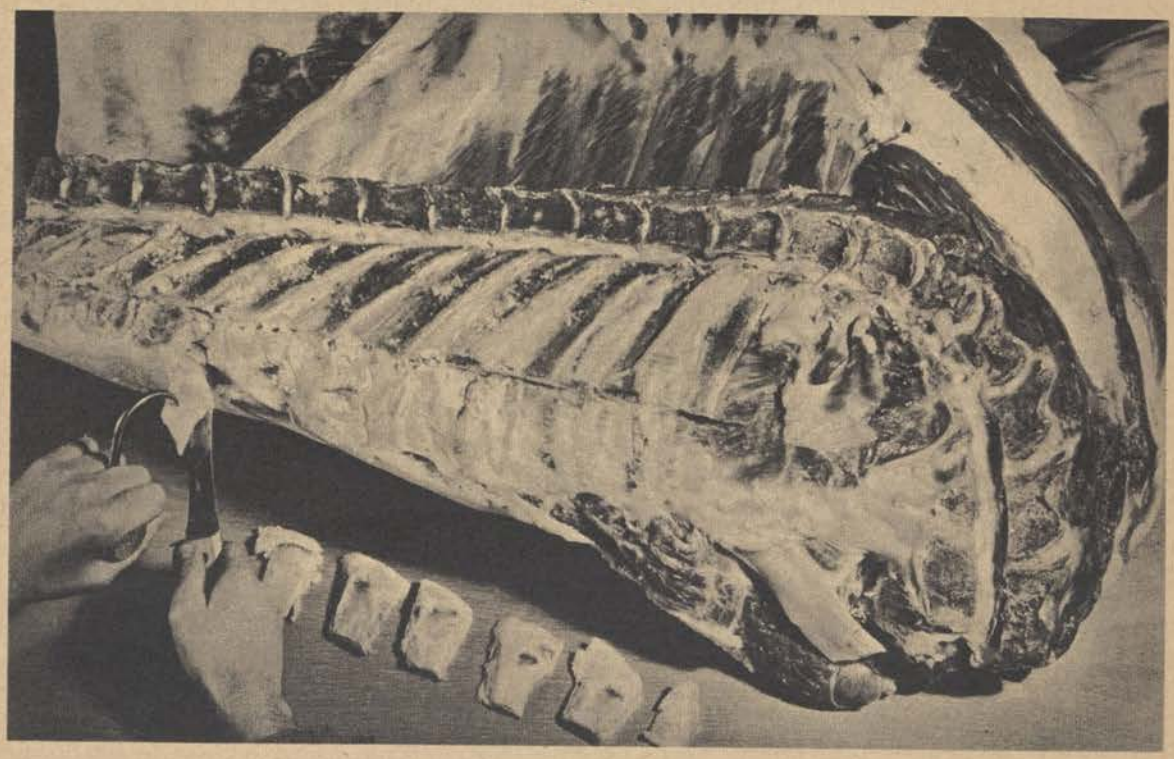


**Figure 62.**

(3) Trim bloody meat from the throat side of the neck (fig. 62).

c. *Trimming the back.*—(1) Remove the ends of the featherbones. Break them and cut under them at the point where they were scribed with a saw in the packing house (fig. 63).

**Figure 63.**



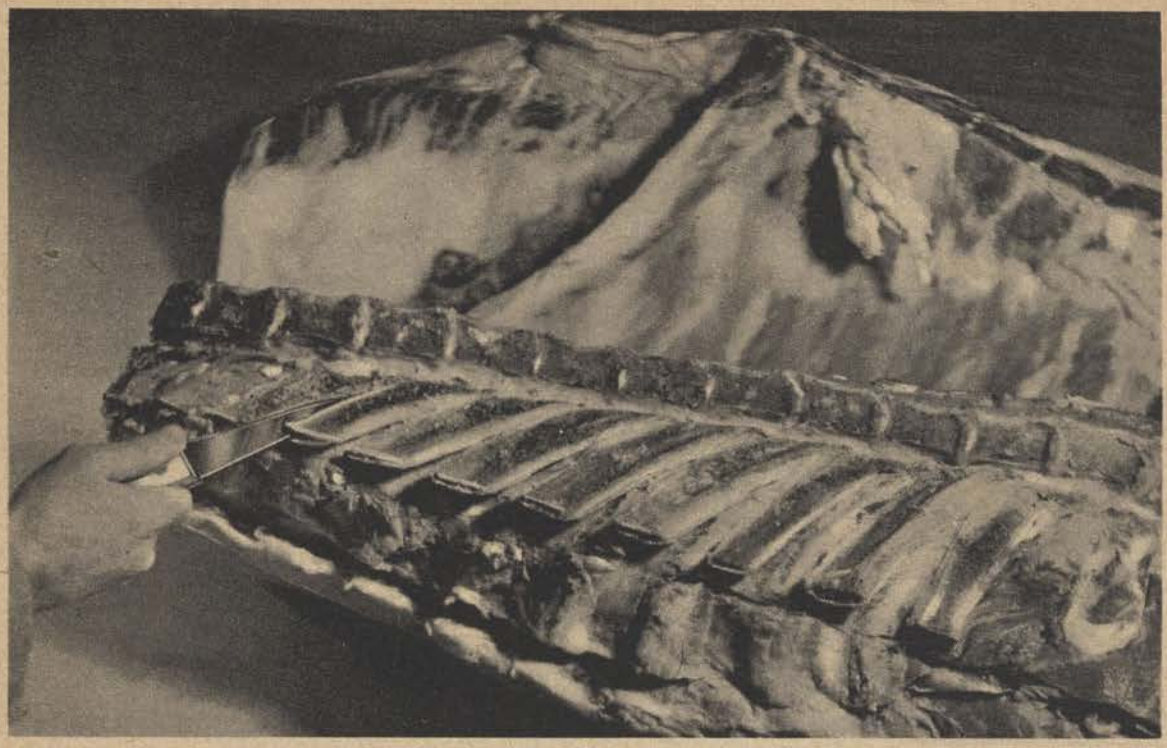


**Figure 64.**

(2) Cut back under the remaining sections of the featherbones to loosen these bones from the meat (fig. 64).

(3) Pull the backstrap from the full length of the forequarter (fig. 65).

**Figure 65.**

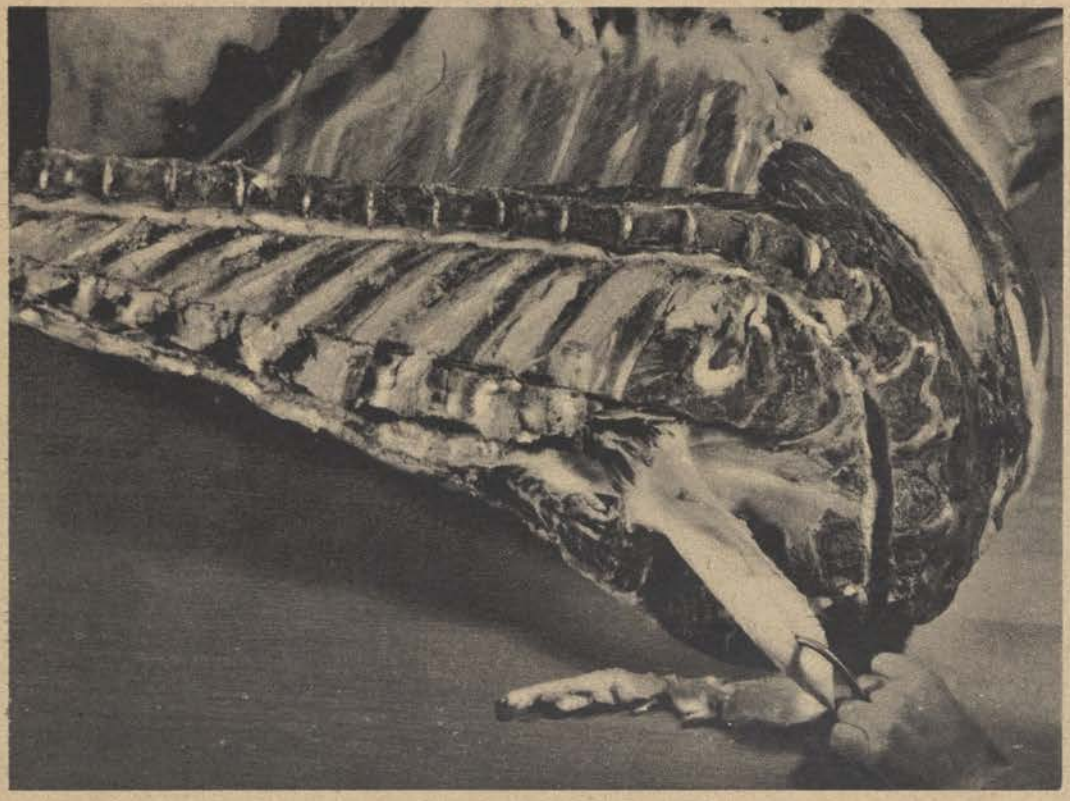




**Figure 66.**

*d. Removing neck bone.*—(1) Unjoint the neck bone from the backbone. Cut through the joint immediately in front of the first rib vertebrae (fig. 66).

(2) Remove the strip of meat from the throat side of the neck bone (fig. 67).

**Figure 67.**

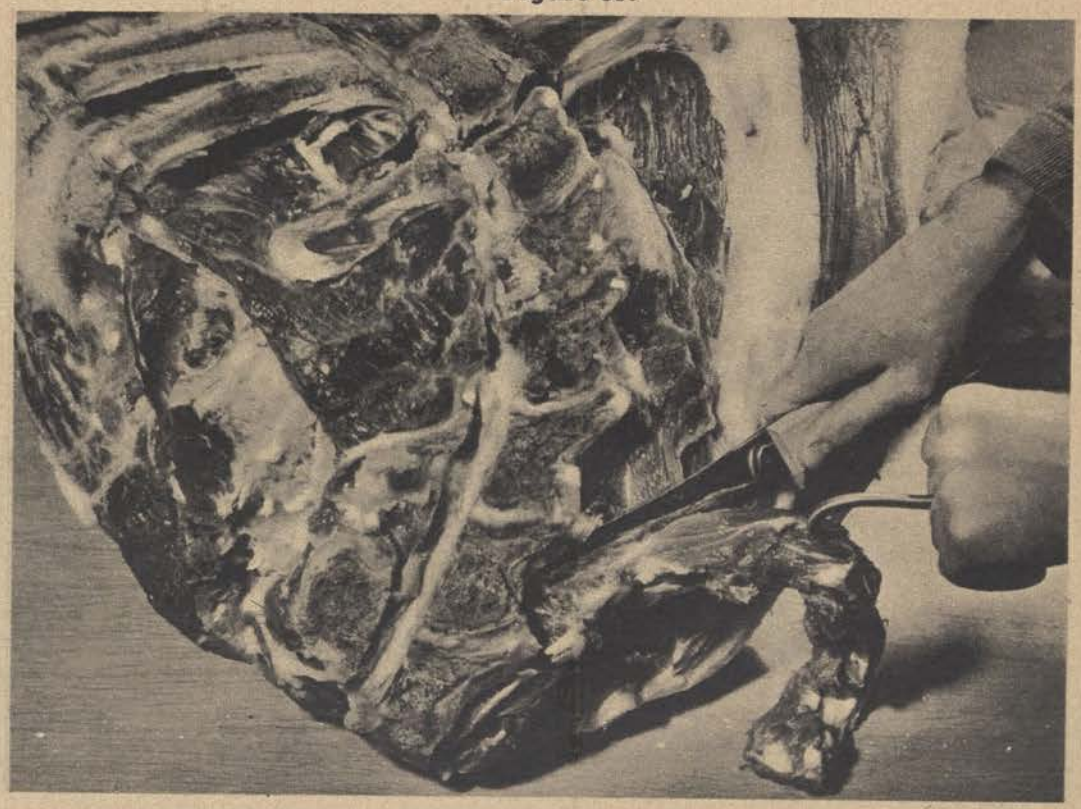


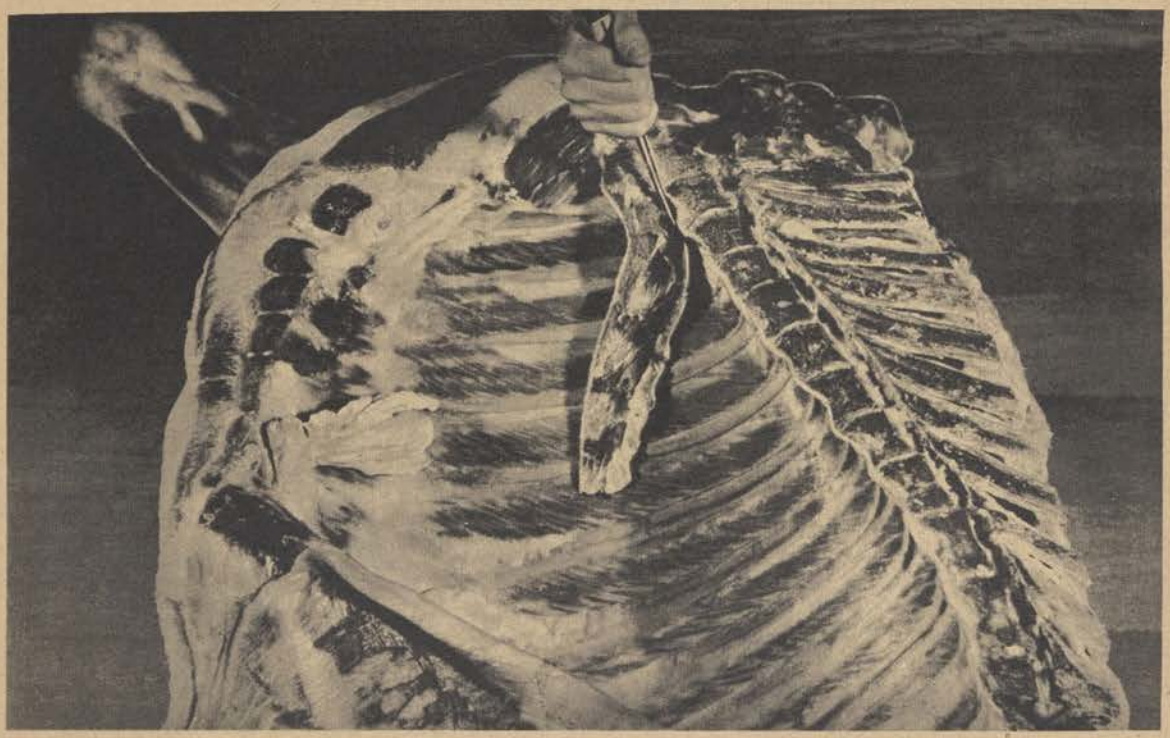


**Figure 68.**

(3) Cut underneath the neck bone and lift it from the neck meat (fig. 68).

e. *Trimming chine bone.*—Cut the thin strip of meat from along the chine bone (fig. 69).

**Figure 69.**



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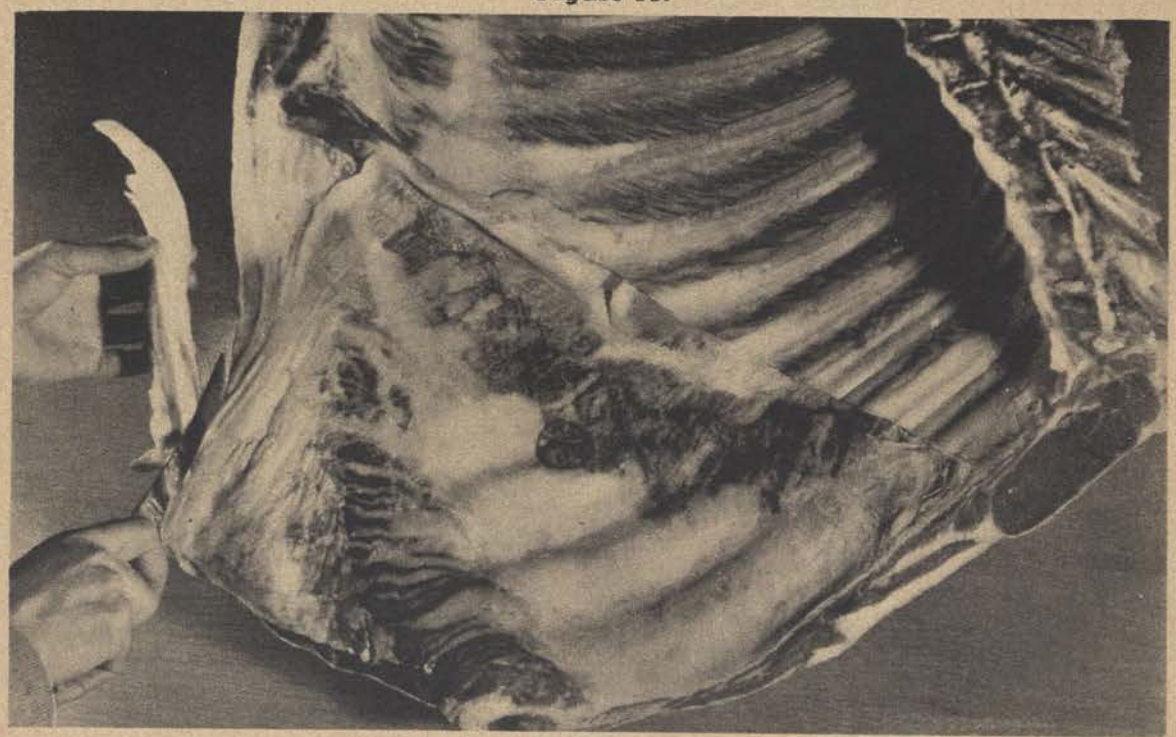


**Figure 70.**

*f. Removing heart fat.*—Remove the loose piece of heart fat from near the breastbone (fig. 70).

*g. Pulling membrane from skirt and plate.*—(1) Cut the thin strip from the navel side of the plate (fig. 71).

**Figure 71.**



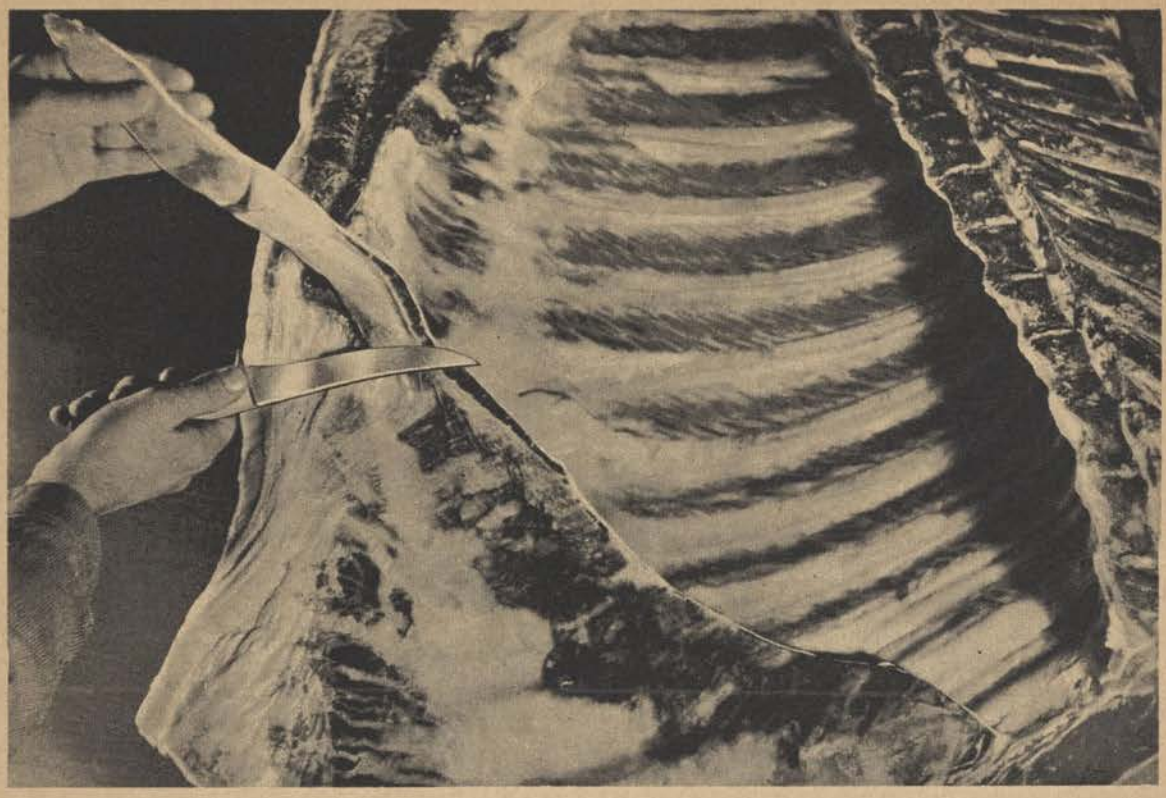


**Figure 72.**

(2) Cut the narrow strip from the thin edge of the skirt meat (fig. 72).
(3) Pull the membrane from the inside of the skirt meat (fig. 73).

**Figure 73.**





**Figure 74.**

(4) Pull the membrane from the outside of the skirt, also from the plate meat (fig. 74).

*h. Removing breastbone and rib cartilages.*—(1) Cut under the skirt and over the rib cartilages to separate the skirt meat from the plate (fig. 75).

**Figure 75.**



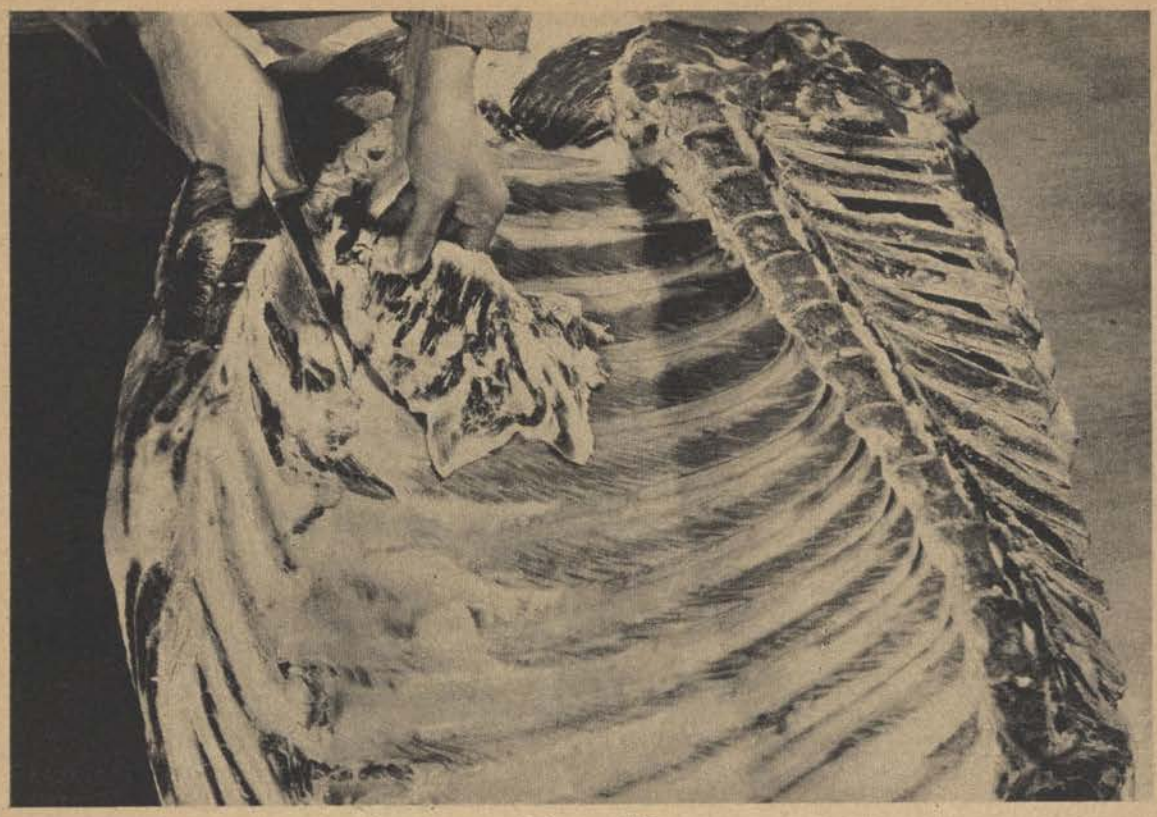


**Figure 76.**

(2) Remove the thin layer of meat from the rib cartilages which are attached to the breast bone (fig. 76).

(3) Cut meat free from the breastbone and rib cartilages (fig. 77).

**Figure 77.**





Figure 78.

(4) Remove the breastbone and rib cartilages. Cut through the cartilages at the ends of the rib bones (fig. 78).

*15. Separating wing from cross-cut chuck.*—*a*. The forequarter is still in its original position, meat side down (fig. 79). Cut from (a) to (b) to divide it into two major pieces—wing (rib and plate) and cross-cut chuck. Commercial cutting leaves five ribs on the chuck; Army style, seven ribs.

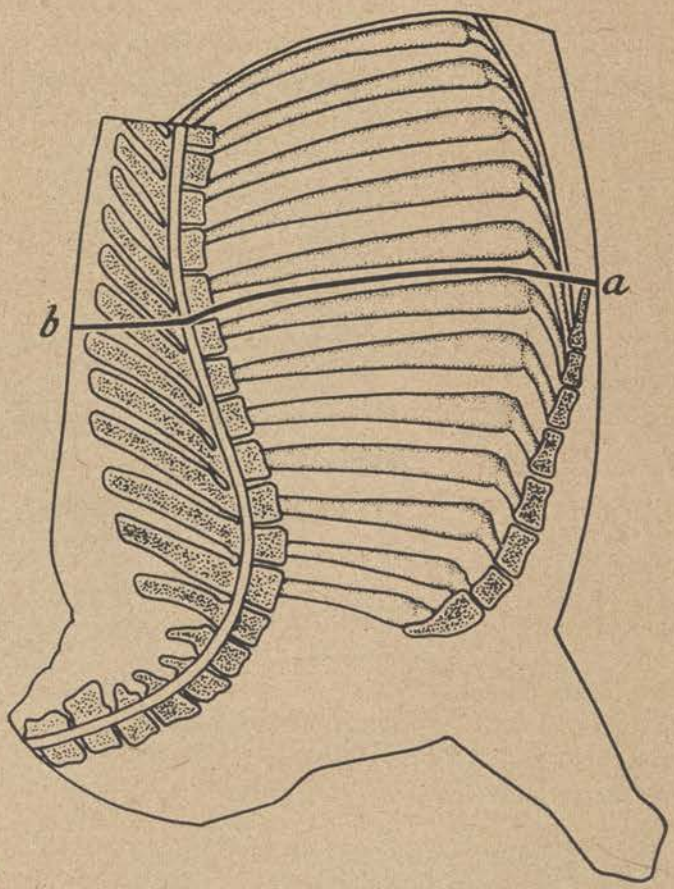



Figure 79.

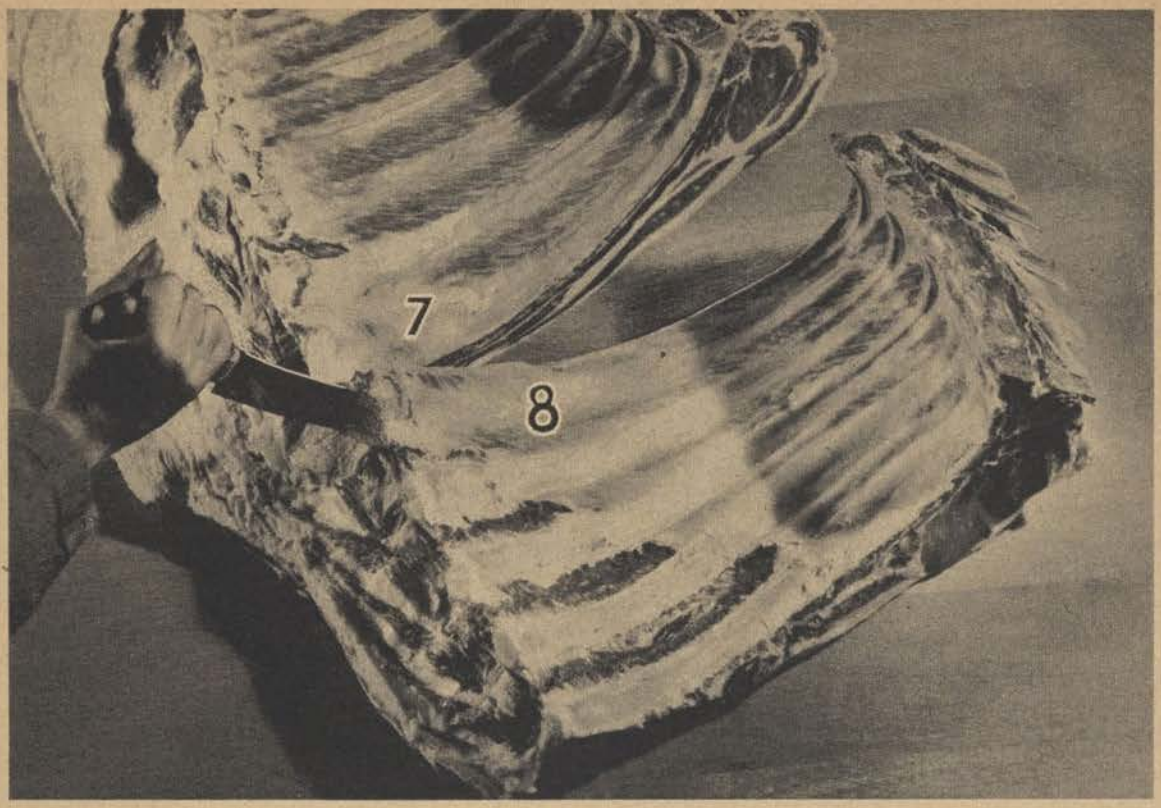
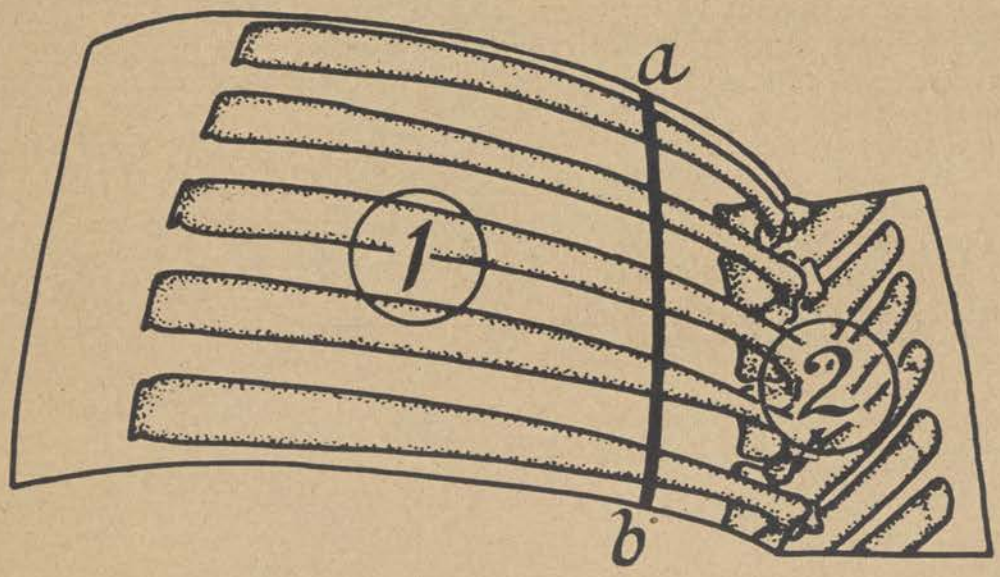



Figure 80.

*b*. Separate the wing from the cross-cut chuck (fig. 80). Cut between the seventh and the eighth ribs. Saw across the backbone, or unjoint it with a knife, or break it by lifting the loin side of the wing.

*16. Cutting wing.—a*. Turn the wing (rib and plate) over so that the meat side will be on top (fig. 81). Cut from (a) to (b) to separate the plate (navel) (1) from the rib (2) at the edge of the "rib eye."

Figure 81.



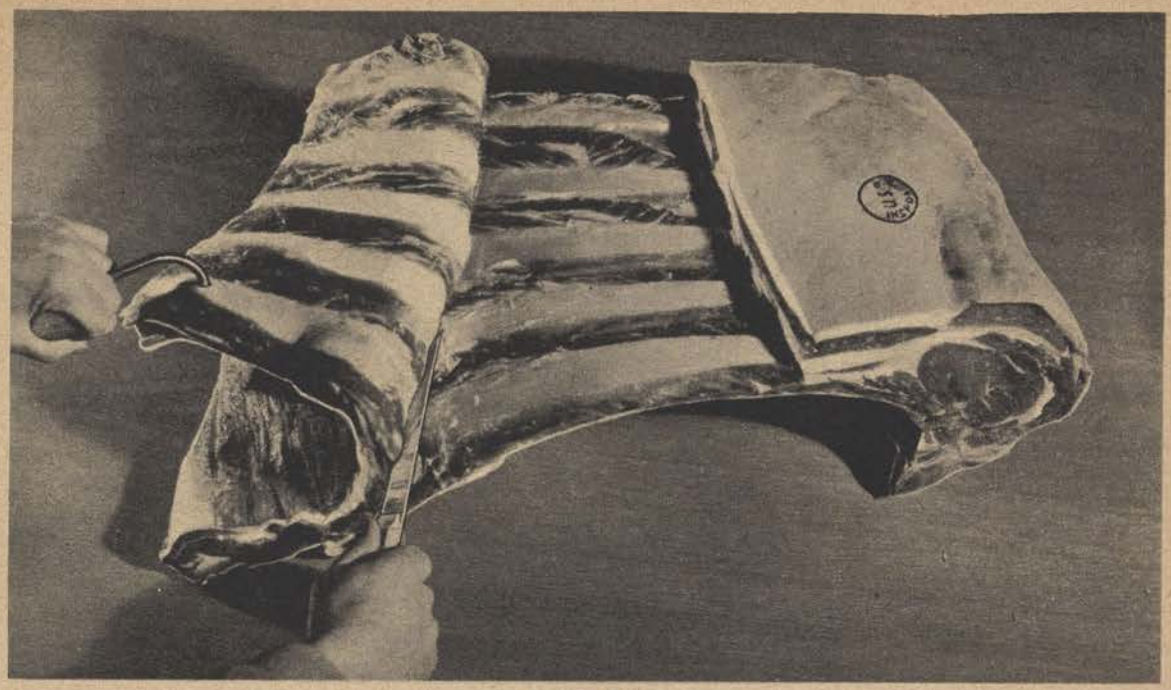


Figure 82.

(1) Cut the plate meat from the ribs (fig. 82), starting near the "rib eye."

(2) The boneless plate may be rolled and tied for braising or used for roasting, if necessary (fig. 83).

Figure 83.

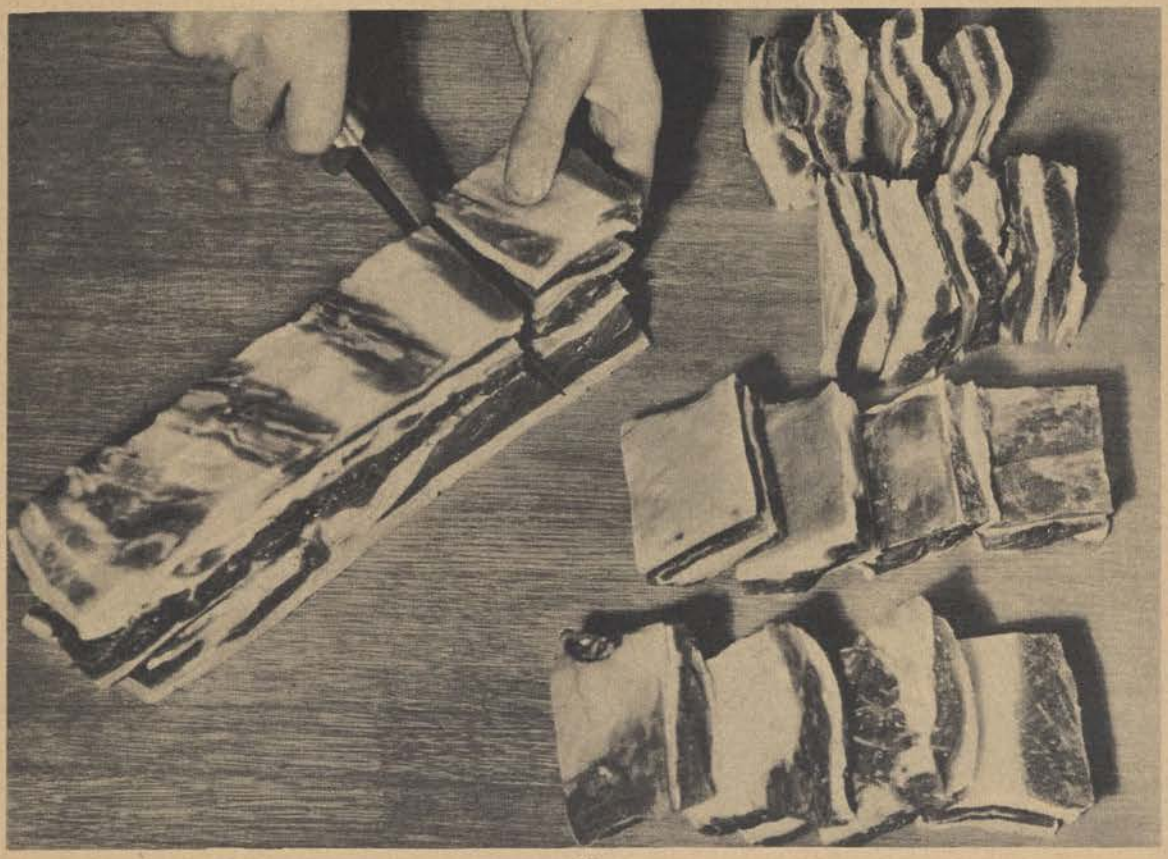




**Figure 84.**

(3) Boneless plate may be cut into strips for braising (fig. 84).
(4) The boneless plate may also be cut into 2-inch squares for stewing or grinding (fig. 85).

**Figure 85.**



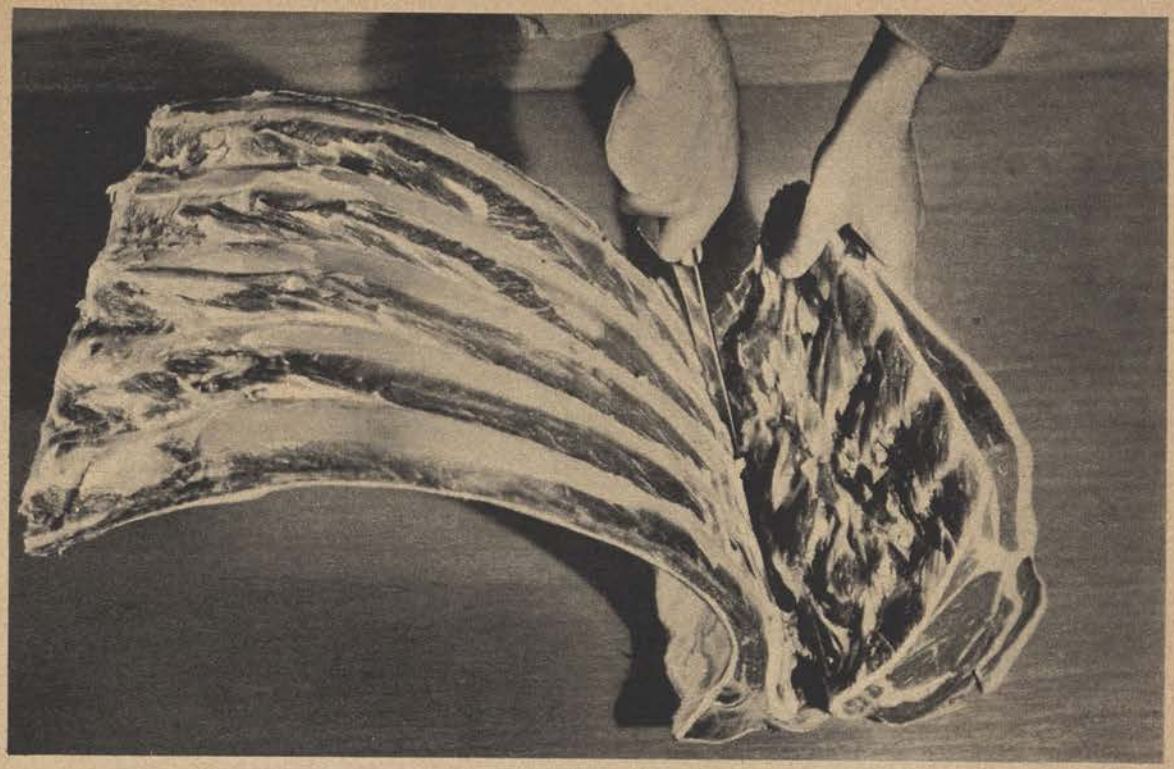
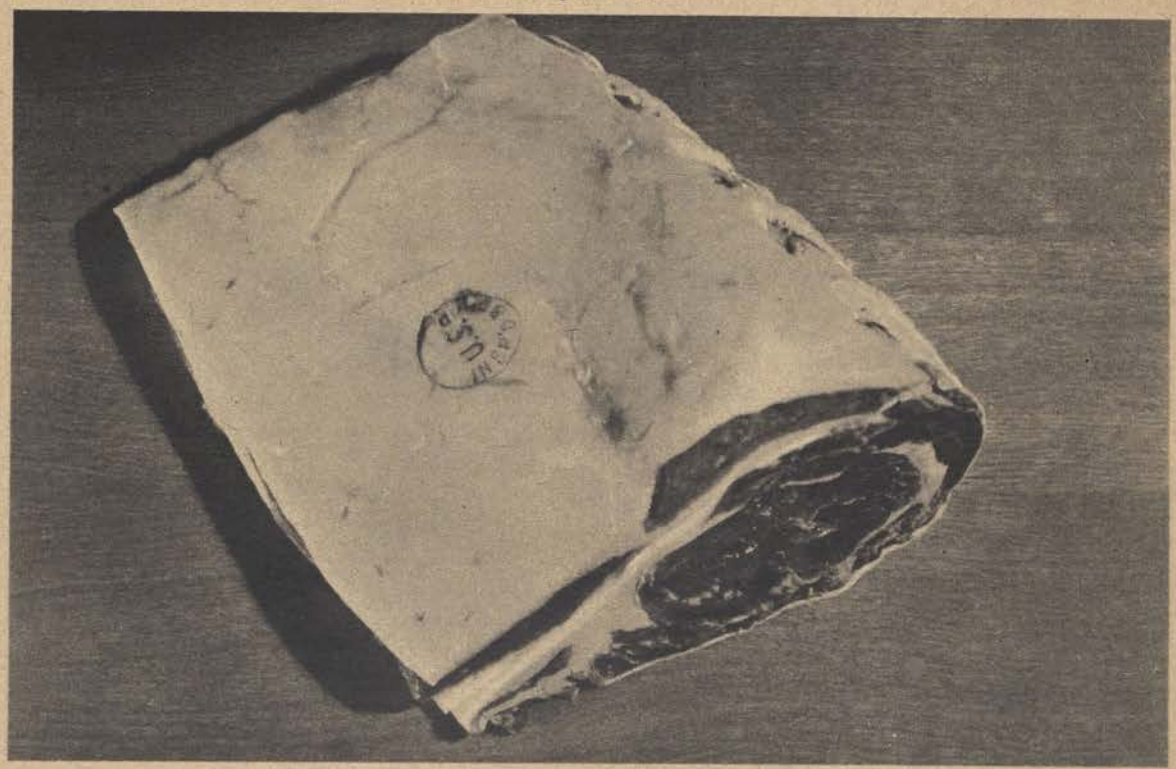


Figure 86.

*b. Cutting boneless rib.*—(1) Cut along the ribs and lift the boneless rib from outside its cradle of bones (fig. 86).

(2) Use boneless rib (fig. 87) for roasts or steaks.

Figure 87.



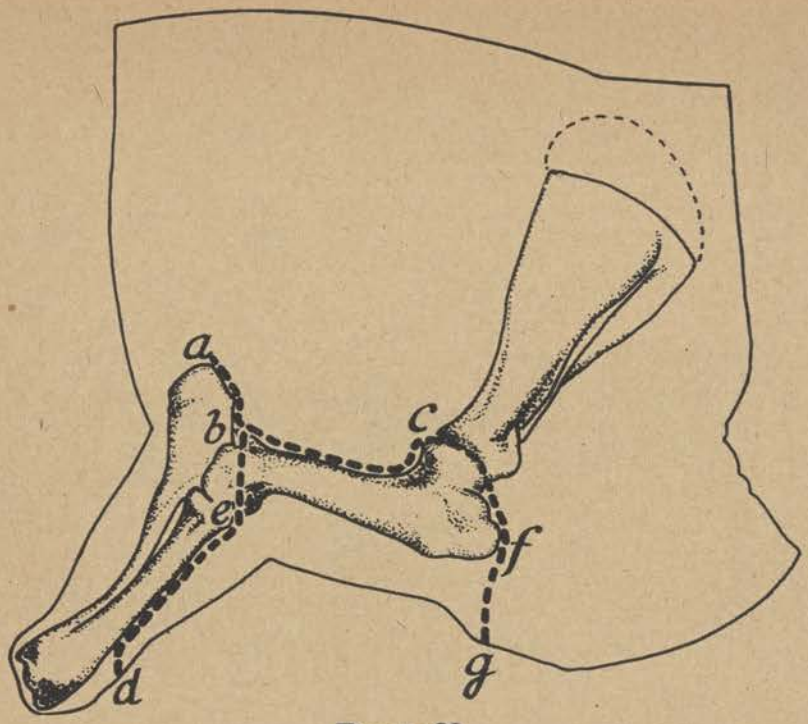



Figure 88.

*17. Cutting cross-cut chuck (outside).*—Turn the cross-cut chuck over so that the meat side is up. A natural dividing seam separates the outside and inside chuck muscles. The outside or top half of the chuck is cut first.

*a. Removing arm and shank.*—To remove arm bone and shank, cut along the dotted line (a), (b), (c), (f), (g) (fig. 88), and then along the dotted line (d), (e), (b). Loosen the meat around the arm bone, then lift the shank with the arm bone attached.

(1) Pull knife from the point of the elbow to the arm bone. Cut along the arm bone to the socket joint. Cut through the socket joint to separate the arm and the blade bones (fig. 89).

Figure 89.





**Figure 90**

(2) Cut meat from the front of the shank and from around the arm bone (fig. 90).
(3) Lift shank with the arm bone attached from the chuck meat (fig. 91).

**Figure 91.**



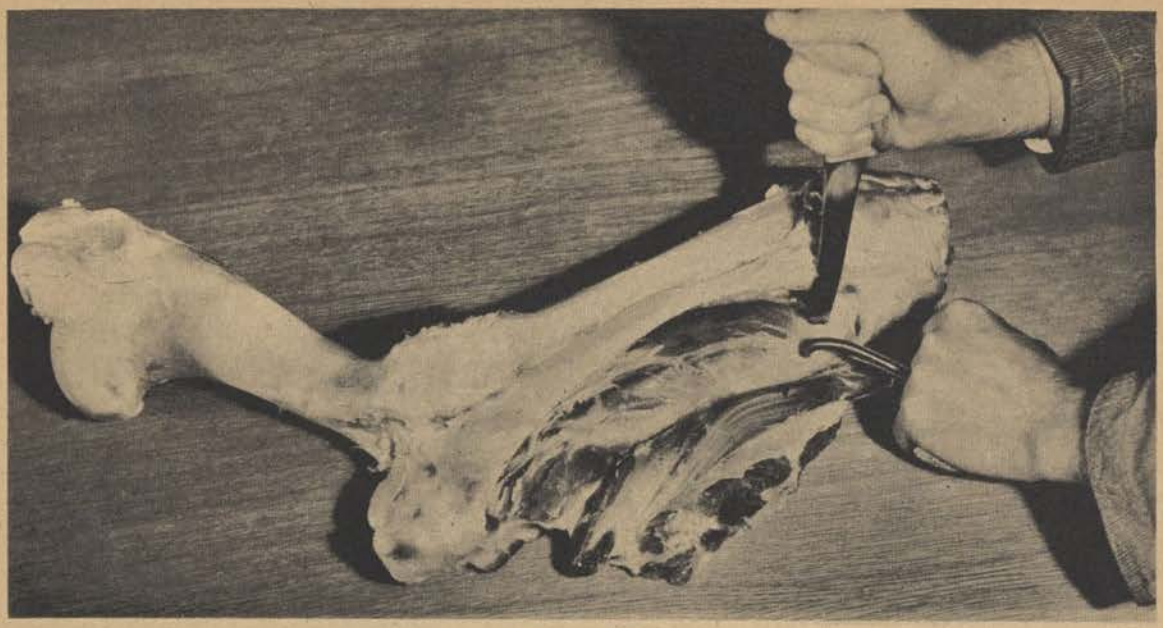


**Figure 92.**

(4) Trim meat from the shank bone (fig. 92).

(5) Detach the forearm meat from the brisket (fig. 93).

**Figure 93.**





Figure 94.

(6) Cut meat from the skirt, shank, and arm, into pieces for stew (fig. 94).

*b Removing shoulder clod.*—To remove shoulder clod (1) (fig. 95), cut along the ridge of the bladebone (a) from (x) to (y), then pull clod from (z) toward the back of the chuck. Remove the chuck tender (2) by cutting along the ridge of the bladebone (x) to (y) and through the natural seam underneath the tender.

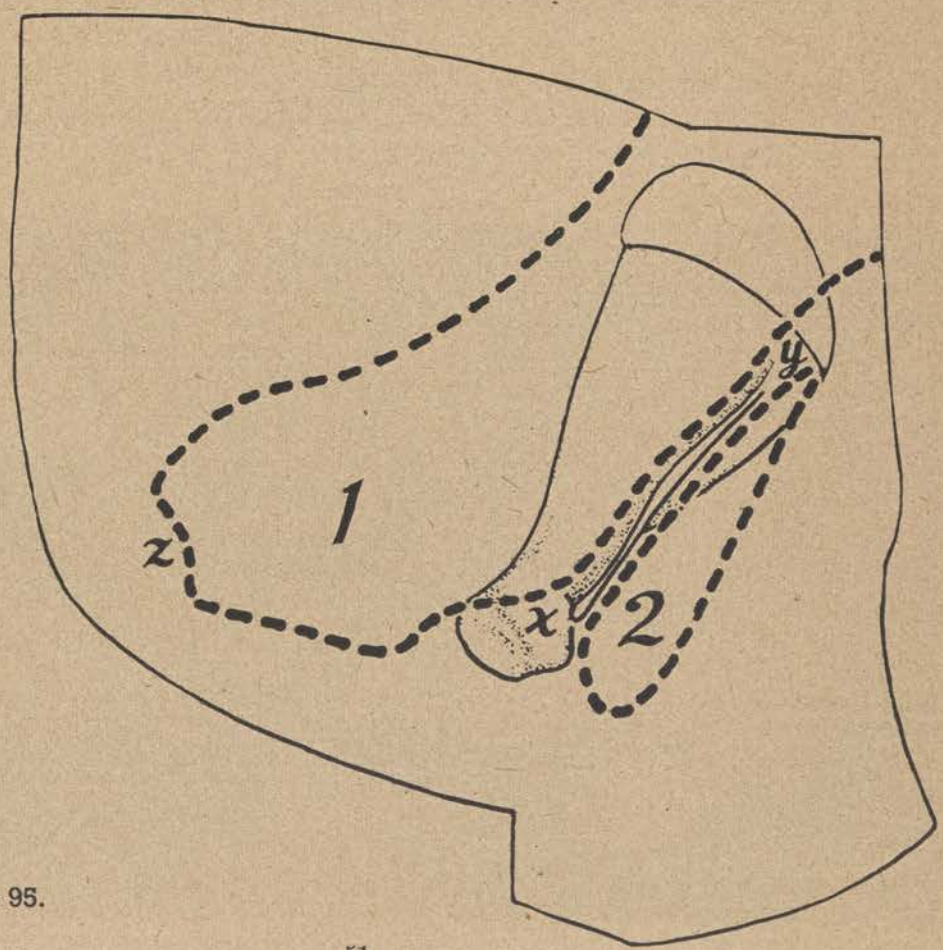



Figure 95.

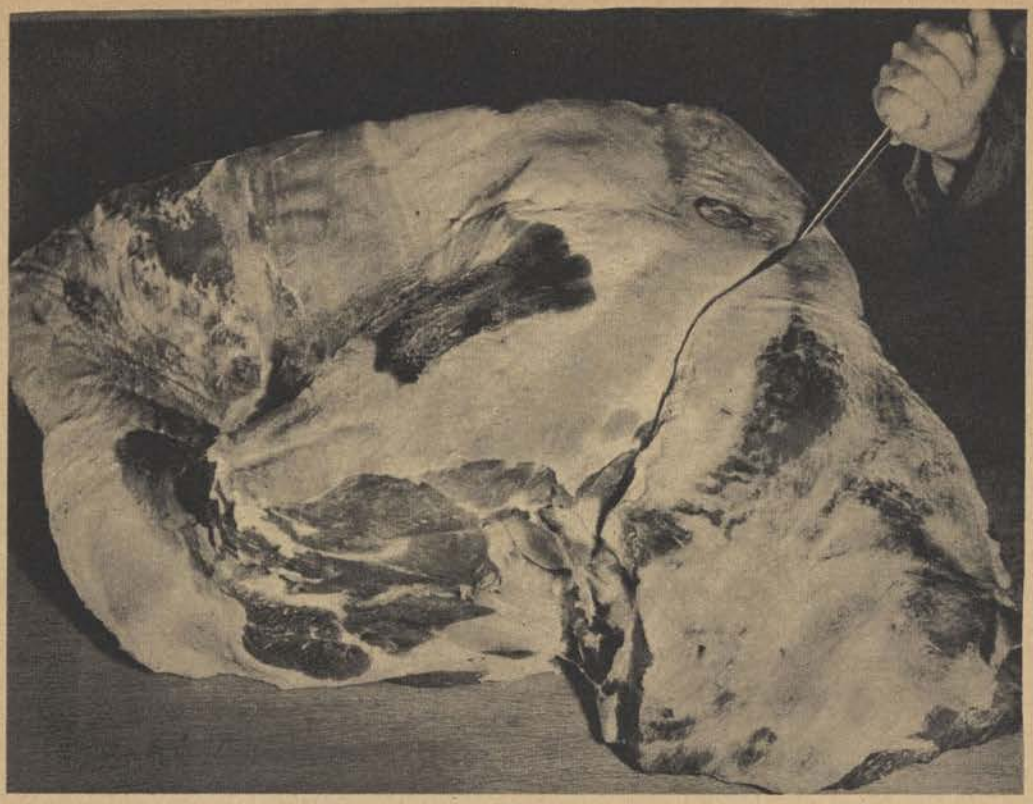


**Figure 96.**

(1) Run the knife along the ridge of the bladebone (fig. 96).

(2) Pull the shoulder clod from the heavy end toward the back of the chuck. Follow the natural seam over the brisket, then cut through the meat to the edge of the bladebone (fig. 97).

**Figure 97.**



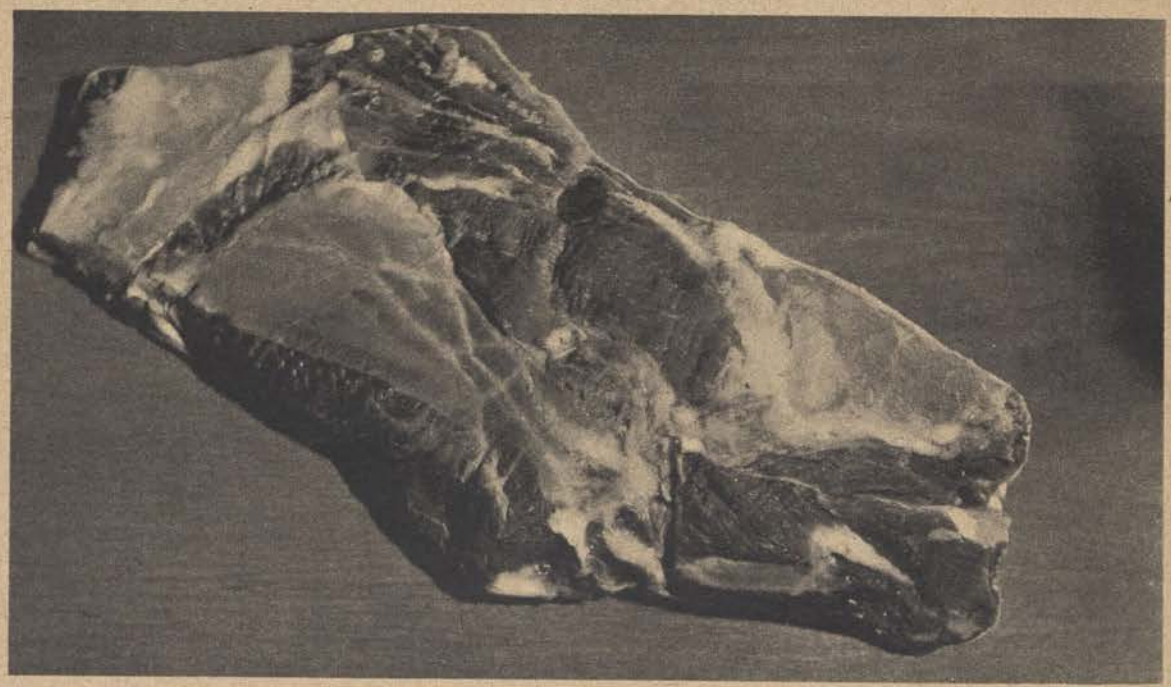


**Figure 98.**

(3) Pull the shoulder clod from the bladebone. Use a knife to loosen meat from the bladebone cartilage (fig. 98).

(4) Use shoulder clod for braising or stewing, or for roasts or steaks when necessary (fig. 99).

**Figure 99.**



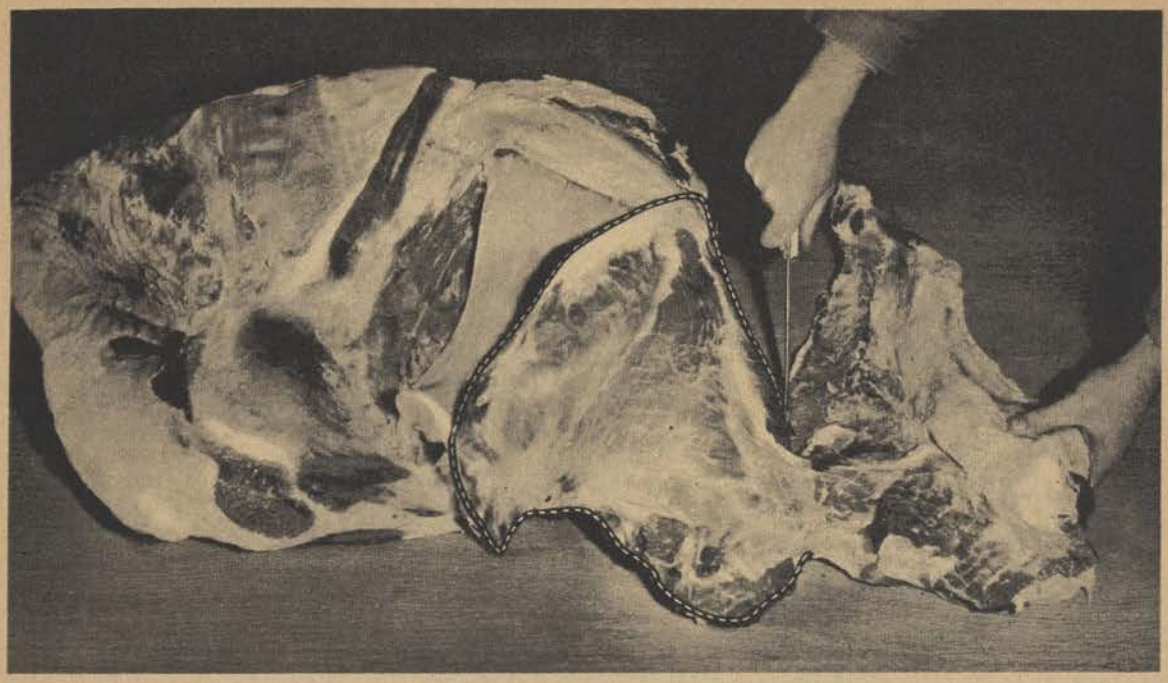
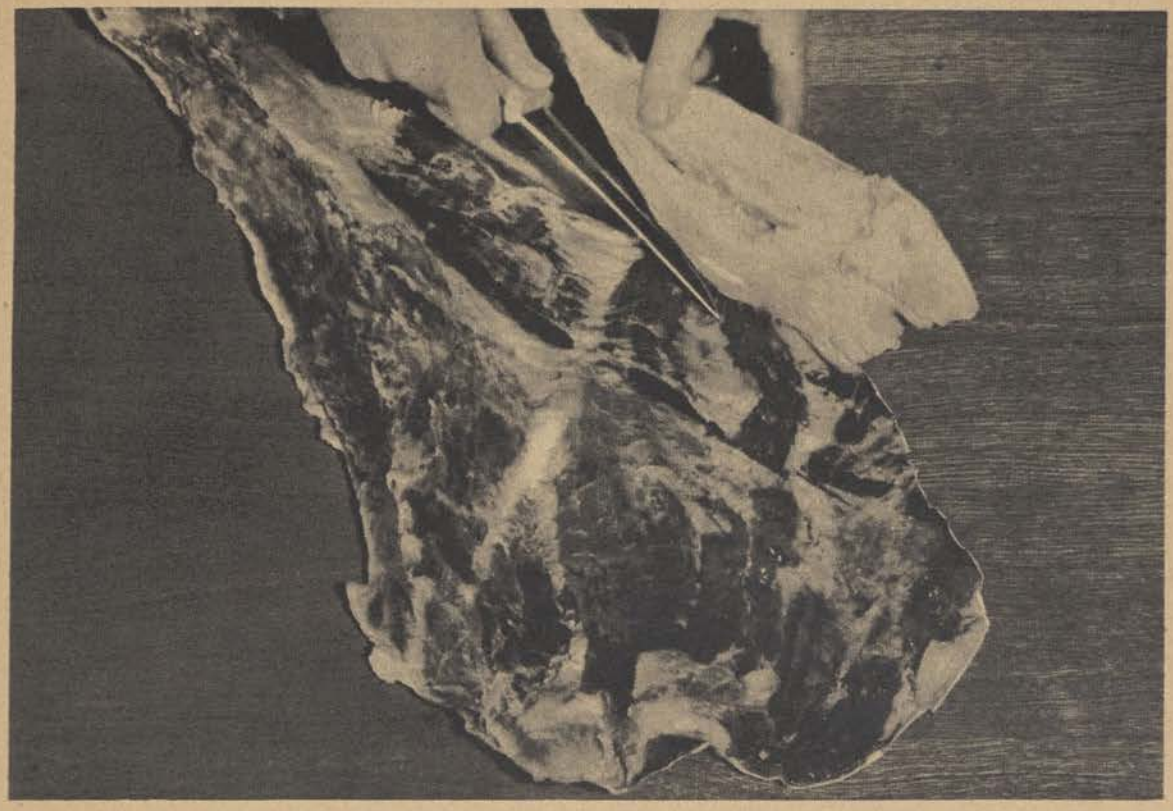


**Figure 100.**

*c. Cutting outside neck meat.*—(1) Peel the thin layer of meat and the fat pocket from the neck. Start at the ridge of the bladebone and follow the natural seam (fig. 100).

(2) Remove the fat pocket (fig. 101). The outside neck meat can be used either for stewing or for grinding.

**Figure 101.**



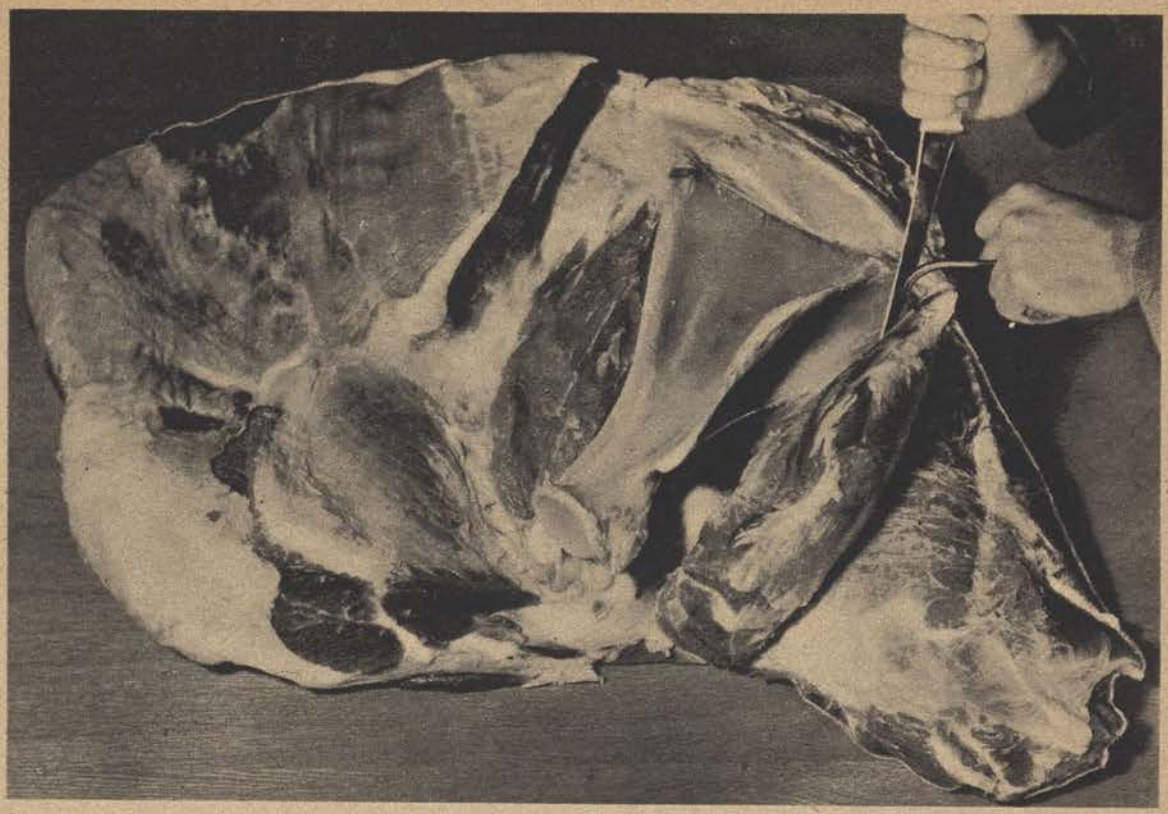


**Figure 102.**

*d. Cutting out chuck tender.*—(1) Scoop out the chuck tender. Cut along the ridge of the bladebone, then follow the natural seam under the tender (fig. 102).

(2) The chuck tender is then ready for braising, stewing, or grinding (fig. 103).

**Figure 103.**





**Figure 104.**

e. *Removing bladebone.*—(1) Use a knife or meathook to score the periosteum (membrane or connective tissue) near the underneath edges of the bladebone (fig. 104).

(2) Pull the bladebone, then cut underneath the cartilage at the wide end of the bladebone (fig. 105).

**Figure 105.**

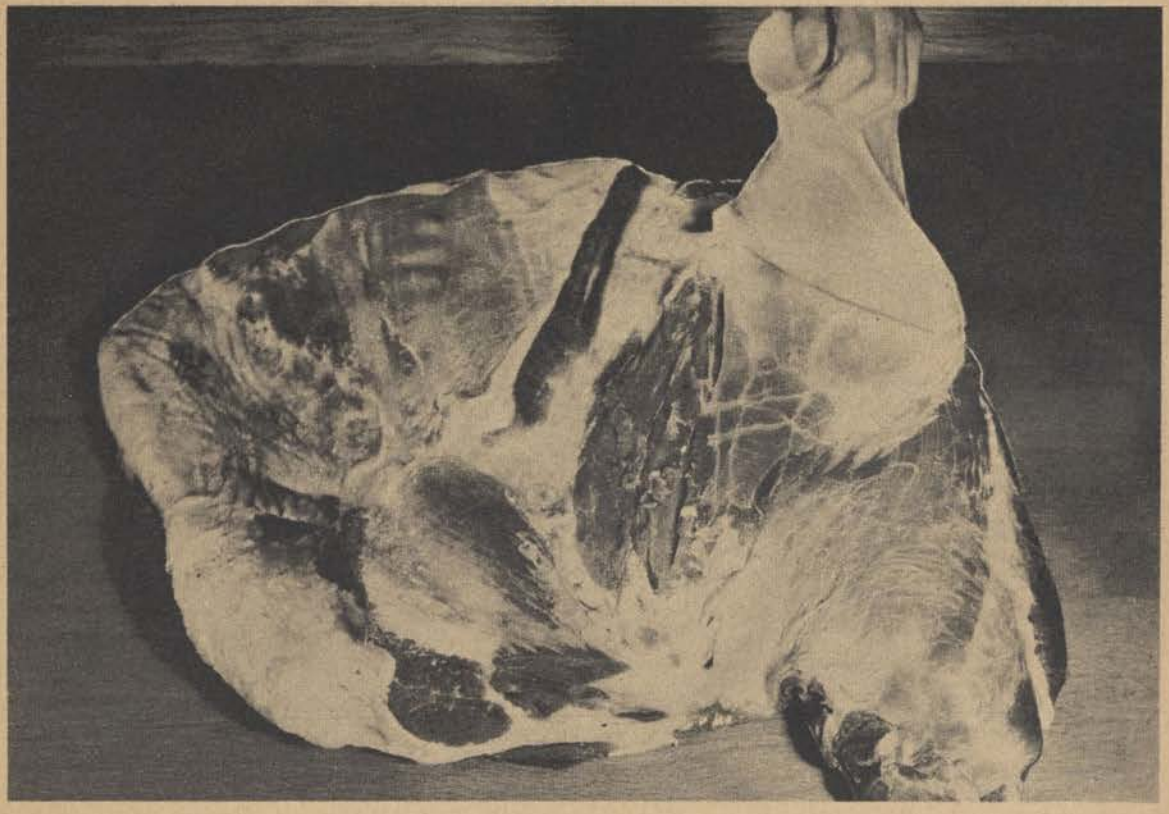




Figure 106.

*f. Removing loose meat.*—Follow the natural seam to remove the thin layer of meat located between the bladebone and the inside chuck muscle (fig. 106). This can be used either for stewing or for grinding.

*18. Cutting cross-cut chuck (inside).*—To cut the cross-cut chuck (inside), separate the brisket meat (1) (fig. 107) from the back muscle (2) and (3), by cutting from (a) to (b). Start at point (c) between the third and fourth ribs, and cut to (d) to separate the boneless inside chuck (2) from the boneless neck (3).

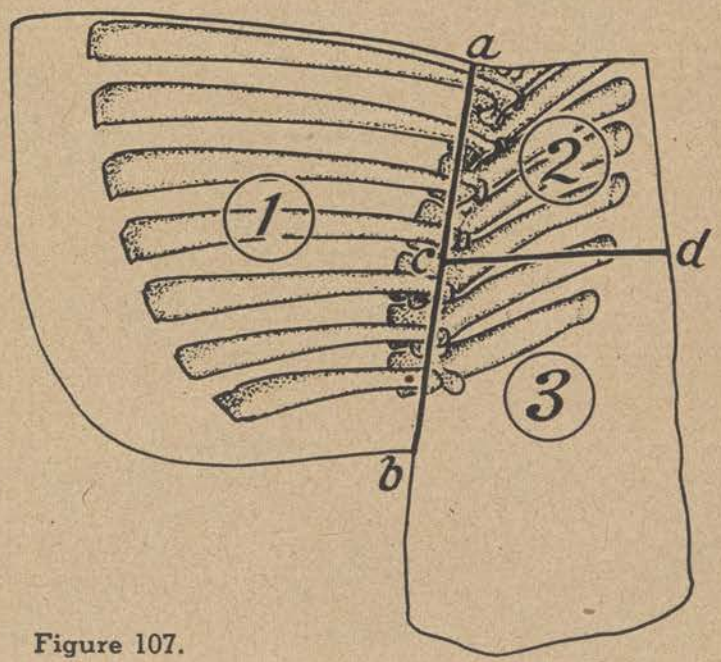



Figure 107.

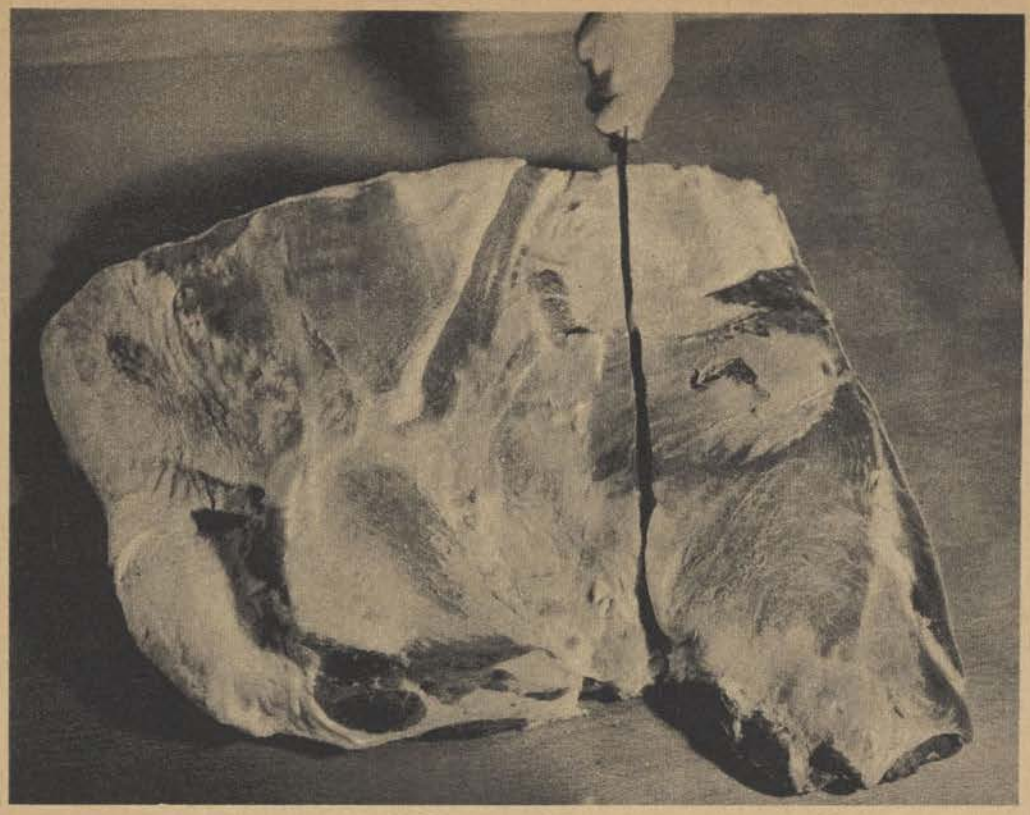


Figure 108.

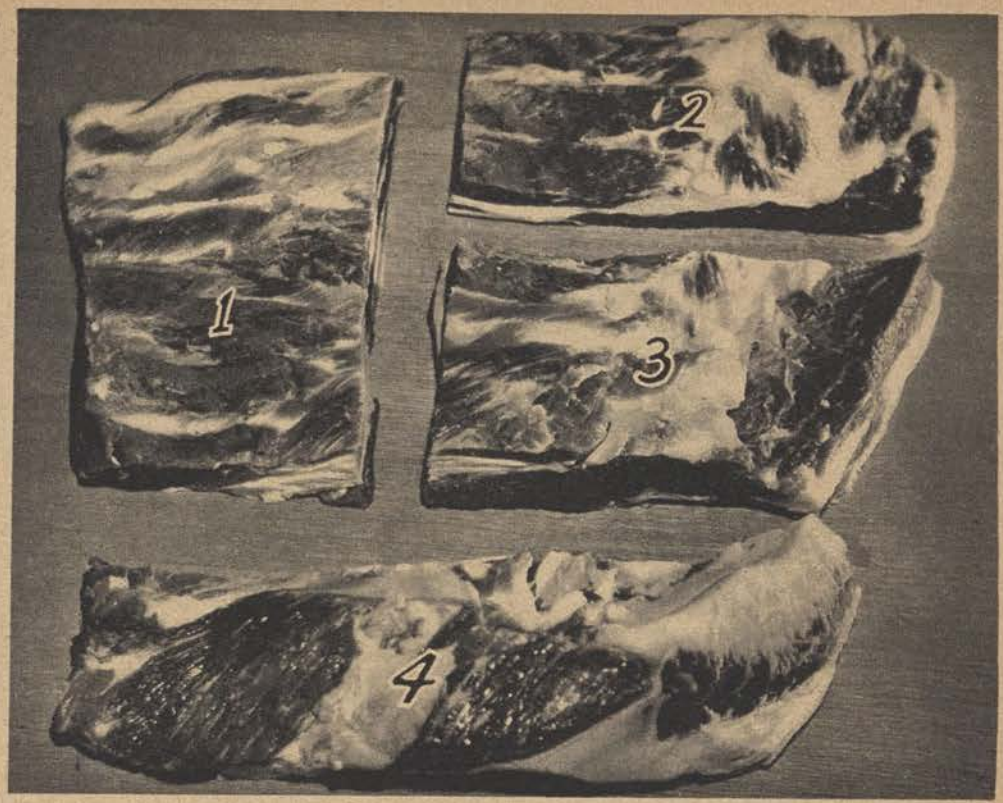
*a. Preparing boneless brisket.* (1) Cut along the edge of the "chuck eye" to separate the brisket meat from the back meat (fig. 108).

(2) Cut the brisket meat from the ribs (fig. 109).

Figure 109.



Figure 110.




(3) Divide the boneless brisket into four pieces (fig. 110). Piece (4) can be used either for stewing or for grinding.

(4) Roll and tie brisket pieces (1), (2), and (3), figure 111.




Figure 111.



**Figure 112.**

(5) Brisket rolls (fig. 112) can be used either for braising or for roasting, if necessary. The meat can also be used for stewing or grinding.

*b. Preparing inside chuck.*—(1) Cut at a point between the third and fourth ribs to separate the inside chuck from the neck (fig. 113).

**Figure 113.**

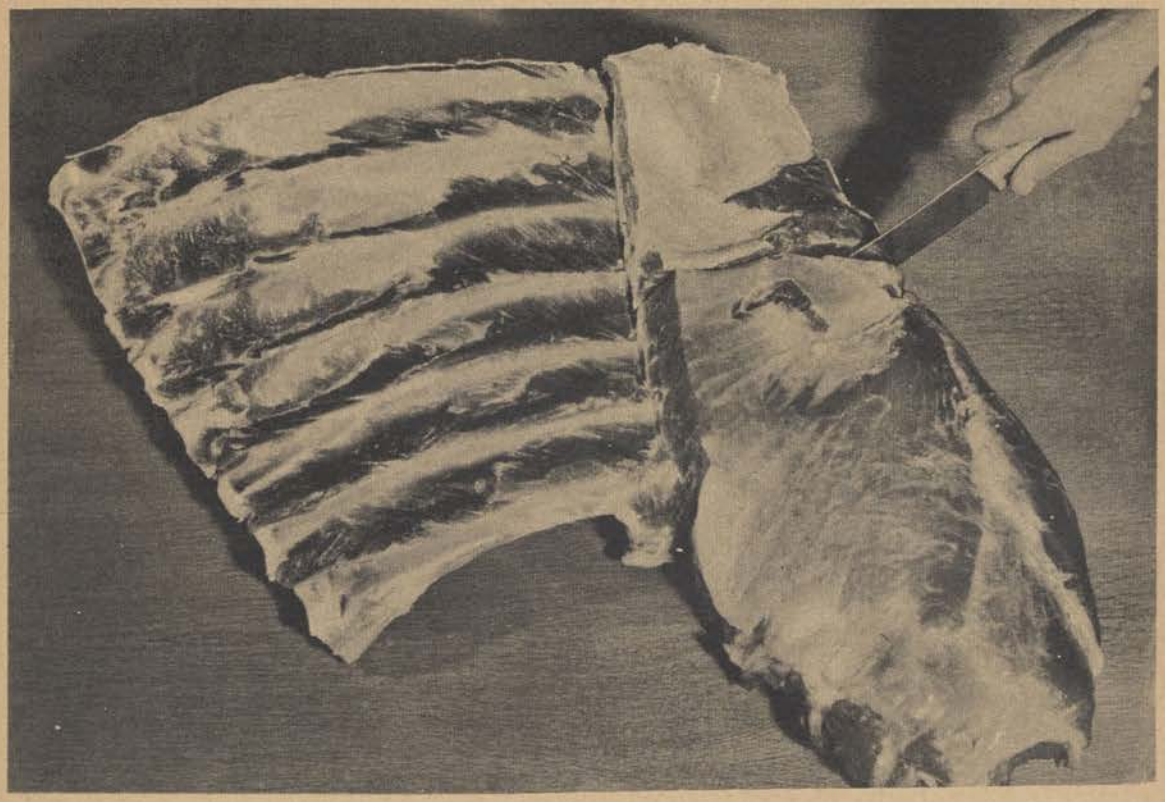
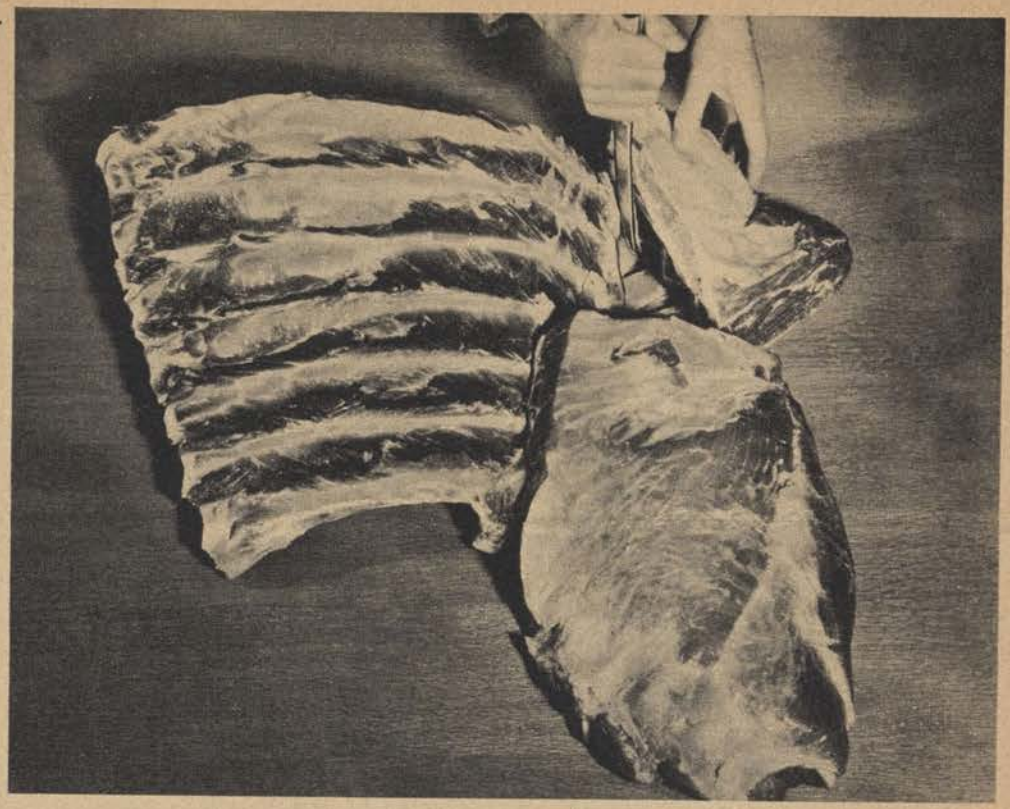


Figure 114.



(2) Separate the boneless inside chuck from the ribs and backbone (fig 114).
(3) Boneless inside chuck can be used for roasts or steaks (fig. 115).



Figure 115.

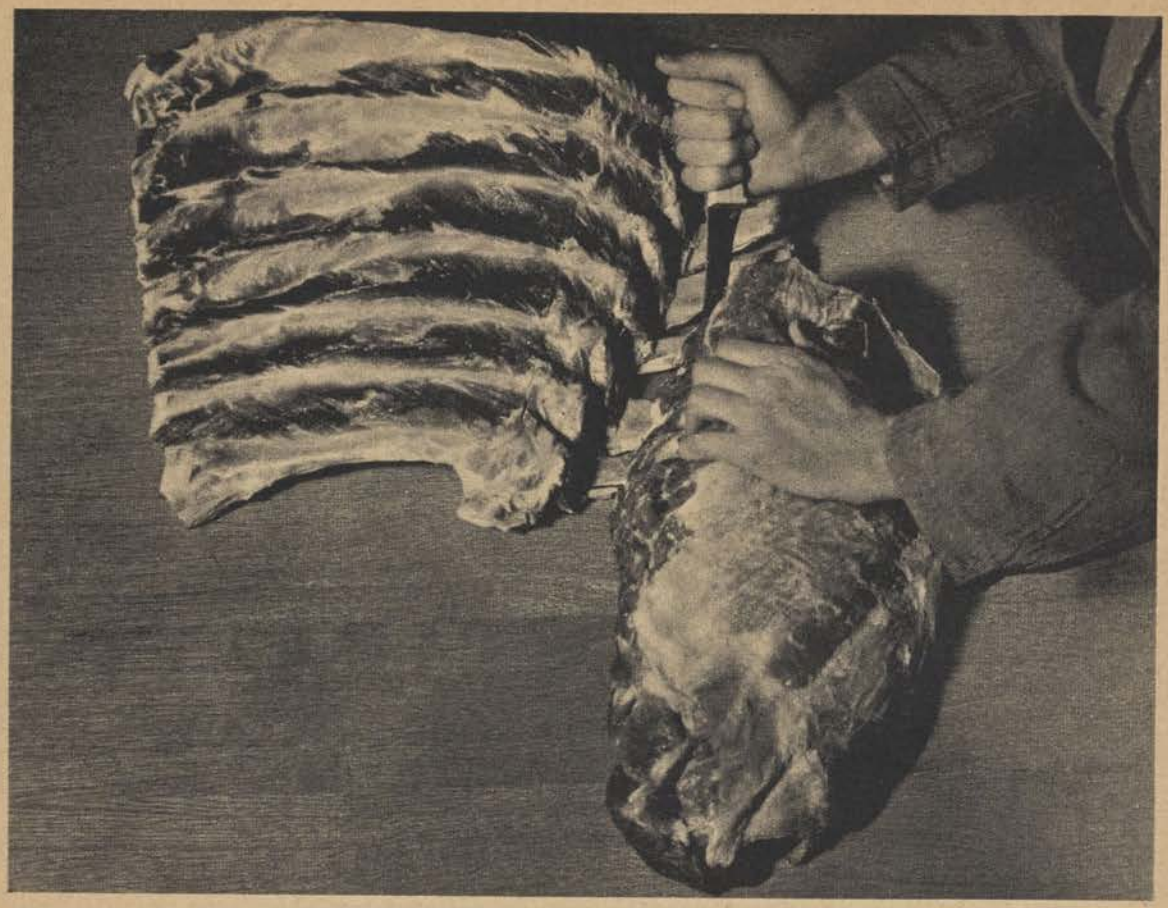


Figure 116.

c. *Preparing boneless neck.*—(1) Take the boneless neck from the ribs and the backbone (fig. 116).

(2) The boneless neck can be used either for braising, stewing, or grinding, or for roasts, when necessary (fig. 117).

Figure 117.



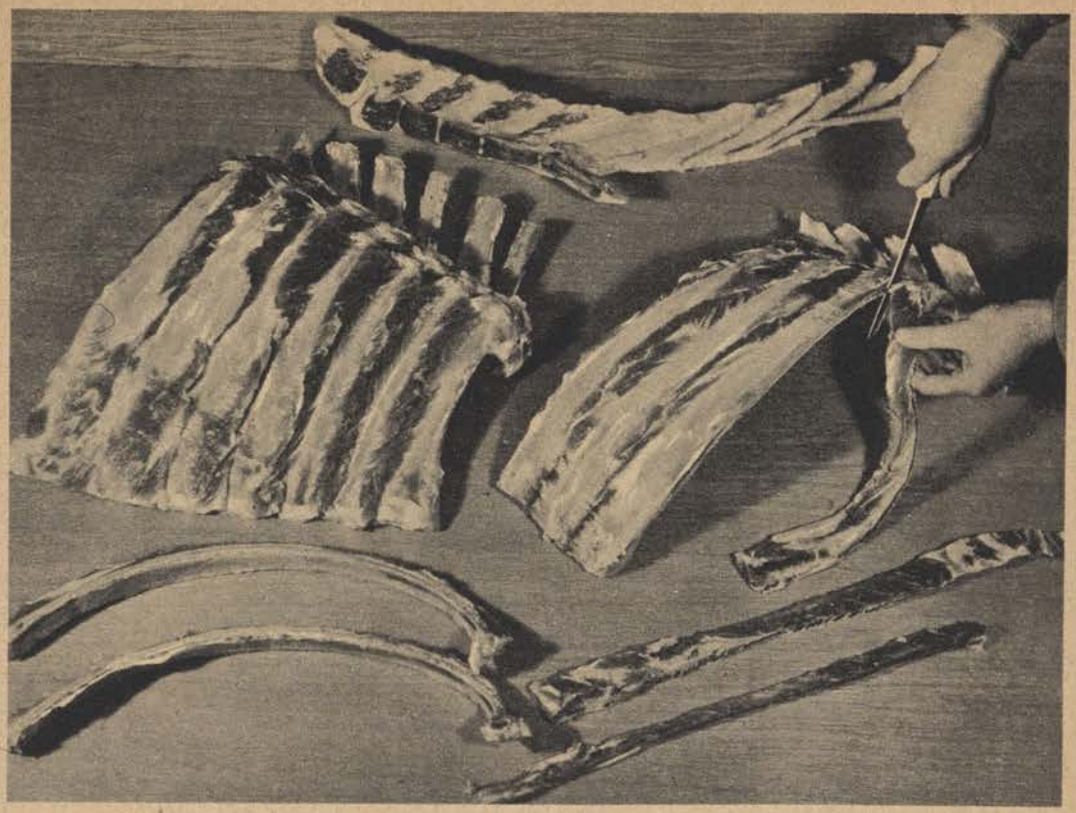
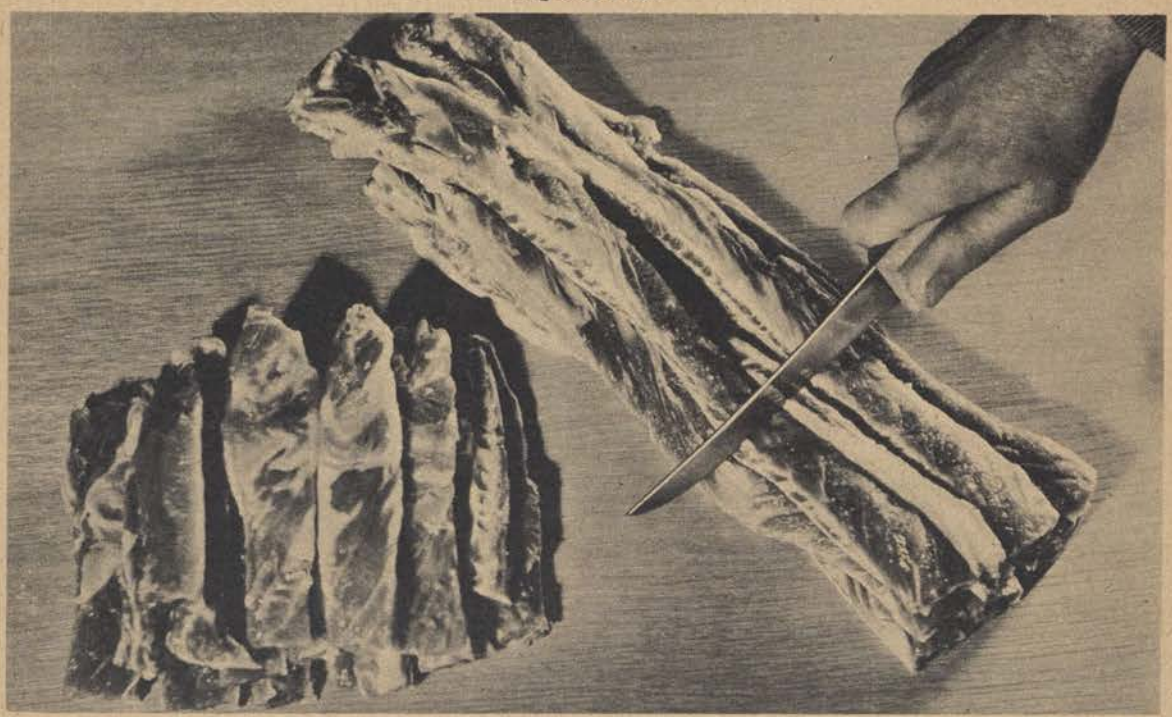


Figure 118.

*d. Cutting rib fingers.* (1) Remove the rib fingers by cutting along the sides of each rib bone. Unjoint the ribs from the backbone, if desired (fig. 118).

(2) Cut the rib fingers into pieces for stewing or for grinding (fig. 119).

Figure 119.



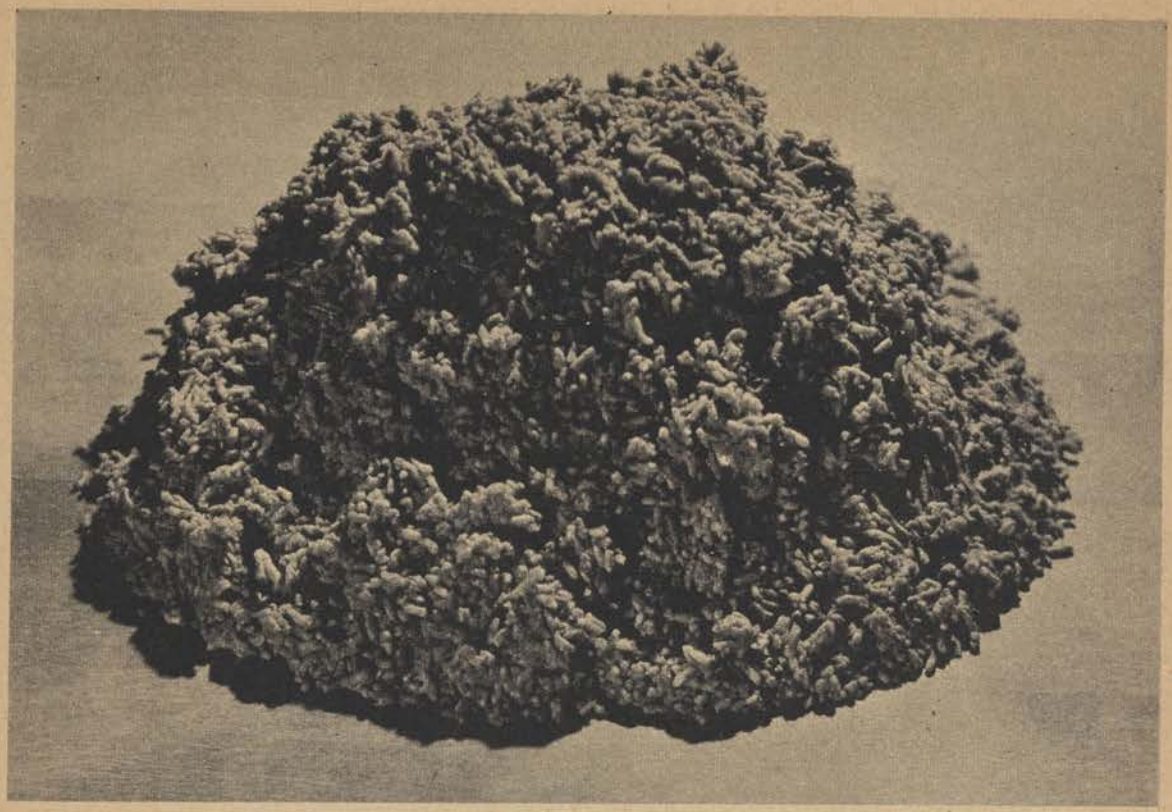


**Figure 120.**

(3) Ground meat for loaf, patties, chili, hash, and other ground meat dishes can be made from the rib fingers (fig. 120).

(4) Ground meat can be made into patties for griddle-broiling or frying (fig. 121).

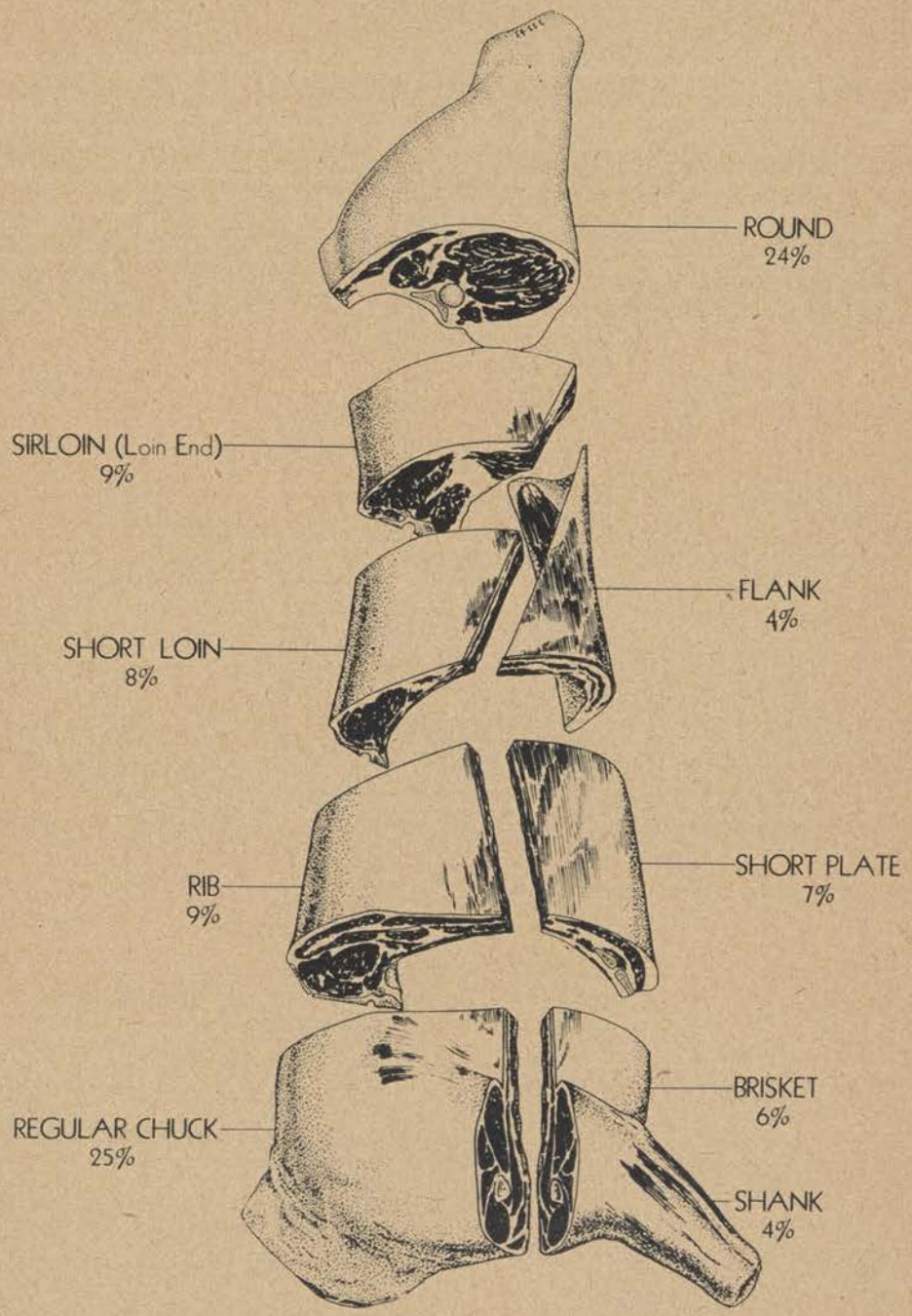
**Figure 121.**



APPENDIX I

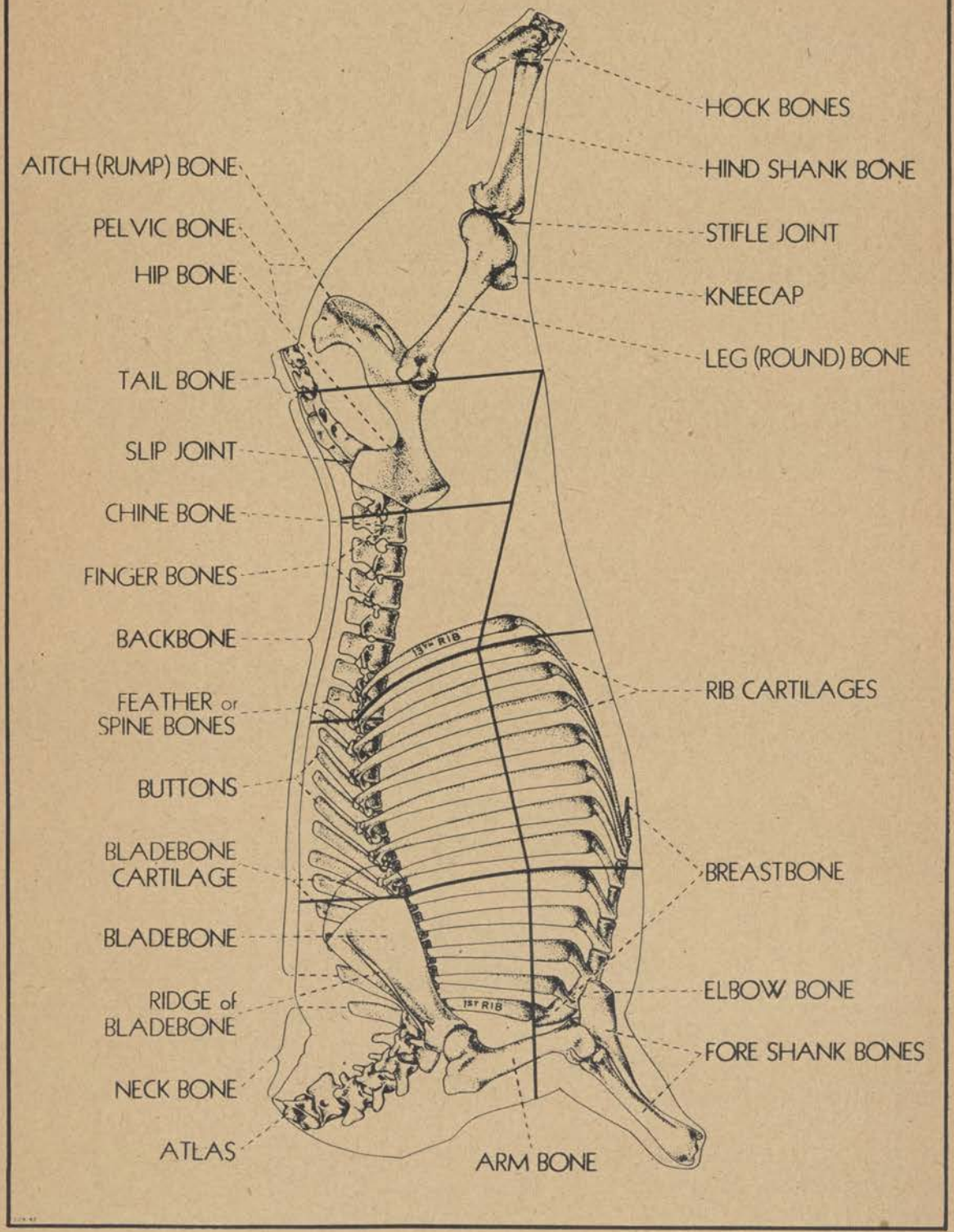
# BEEF CHARTS

## LOCATION AND NAMES OF WHOLESALE CUTS



APPENDIX I—Continued

# LOCATION, STRUCTURE AND NAMES OF BONES



## APPENDIX II

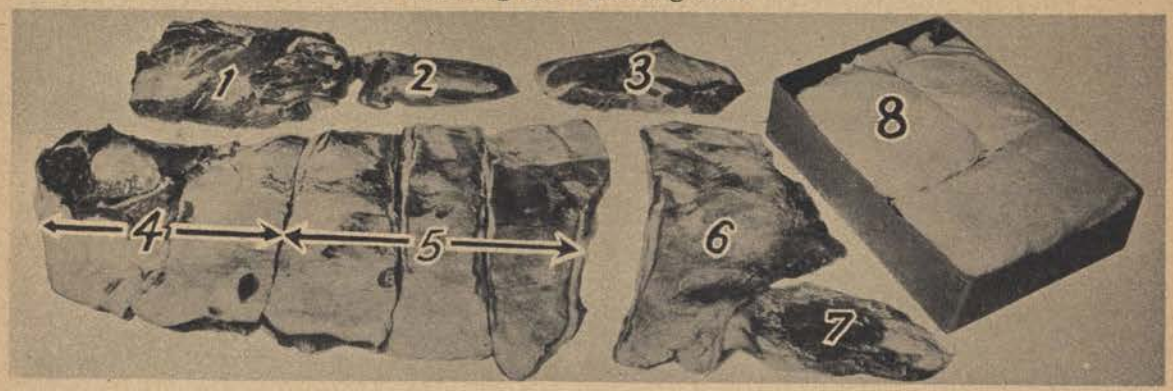
# ARMY BEEF (FRESH, FROZEN, BONELESS)

### *Roasting and frying beef*




1. Scotch roll.
2. Shoulder clod.
3. Spencer roll.
4. Loin strip.
5. Tenderloin.
6. Knuckle.
7. Rump butt.
8. Outside round.
9. Inside round.
10. Sirloin butt.
11. Packaged box of roasts and steaks.

### *Stewing and boiling beef*

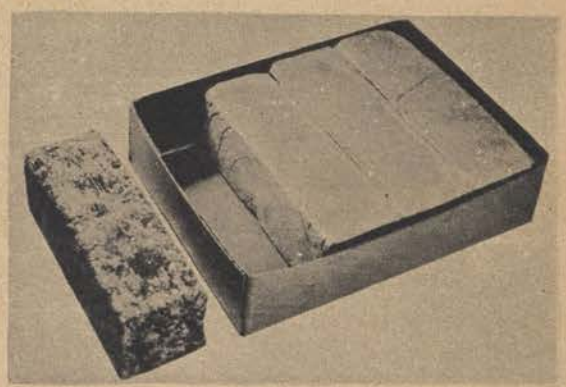



1. Boneless neck.
2. Chuck tender.
3. Heel.
4. Brisket.
5. Plate (navel).
6. Flank.
7. Flank steak.
8. Packaged box of stewing and boiling beef.

### *Chopped beef*



Shank meat, skirt, rib fingers, hanging tenderloin, neck meat, loose trimmings.



Ground beef pressed and packaged for shipping.

QUARTEMASTER CORPS)

## APPENDIX III

# BEEF COOKING METHODS

*Roasting*

1. Season with salt and pepper.
2. Place roast on rack in pan, fat side up.
3. Do not sear.
4. Do not add water.
5. Do not cover.
6. Roast at constant temperature—325° F.
7. Turn boneless roast.
8. Roast until done.

*Griddle-broiling*

1. Place meat on ungreased griddle.
2. Brown, turn and brown.
3. Season each side after browning.
4. Turn occasionally.
5. Cook at moderate temperature.
6. Scrape away surplus fat as it collects.
7. Do not add water. Do not cover.
8. Cook to desired degree of doneness.
9. Serve hot on a hot plate.

*Frying*

1. Dredge thin slices of meat in flour, if desired.
2. Brown quickly on both sides in small amount of hot fat.
3. Season each side after browning.
4. Turn occasionally.
5. Do not cover.
6. Cook at moderate temperature until done.

*Braising*

1. Season with salt and pepper.
2. Brown meat on all sides in hot fat.
3. Add very little liquid.
4. Cover closely to retain steam.
5. Use oven or top of range.
6. Cook at simmering temperature—185° to 200° F.
7. Cook until tender.

*Stewing*

1. Cut meat in small pieces.
2. Season with salt and pepper.
3. If desired, brown on all sides in hot fat.
4. Cover meat with hot or cold water.
5. Cover kettle and cook meat until tender.
6. Cook at a simmering temperature—185° to 200° F.
7. Add vegetables before meat is done.

*Cooking in water*

1. Cover meat with hot or cold water.
2. Season with salt and pepper.
3. Cover kettle and cook meat until tender.
4. Cook at simmering (not boiling) temperature.
5. Add vegetables, if desired.

## APPENDIX IV

## ROASTING TEST

This test demonstrates that beef is roasted most efficiently in a moderate oven temperature (325° F.). By avoiding extreme heat, excessive shrinkage is avoided, more servings are obtained, and the meat is juicier and better flavored.

Each roast weighed exactly 9 pounds before it was cooked. Roast No. 1 was roasted at a temperature of 325° F. for 4 hours and roast No. 2 was roasted at a temperature of 500° F. for 2½ hours. Both were cooked to medium done.



Roast No. 1.

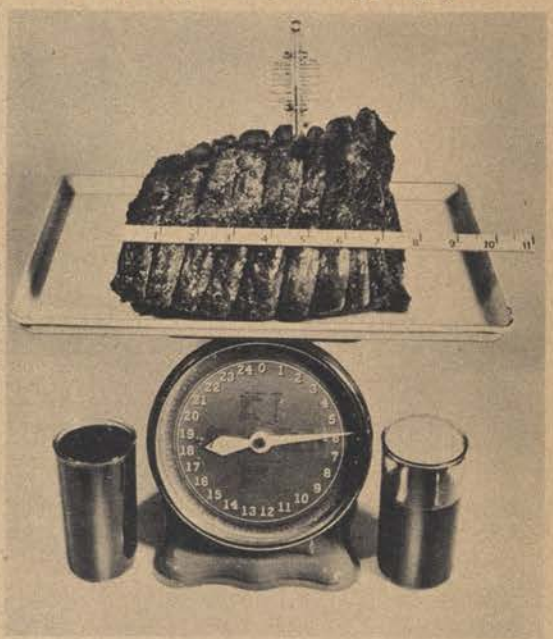


Roast No. 2.

Pictures of the two roasts after cooking show that roast No. 2 has shrunk considerably more than roast No. 1. (Note the difference in the quantity of drippings.)



Roast No. 1.



Roast No. 2.

*Statistical comparison of the two cooking methods*

| | *Roast No. 1* | *Roast No. 2* |
|---|---|---|
| Weight after cooking | 7 pounds 2 ounces | 5 pounds 12 ounces. |
| Weight loss | 1 pound 8 ounces | 3 pounds, 1 ounce. |
| Percentage loss | 16.66 percent | 36.11 percent. |
| Cooking time | 4 hours | 2 hours, 30 minutes. |

[A. G. 300.7 (1 Jun 1943).]

By order of the Secretary of War:

G. C. MARSHALL,
*Chief of Staff.*

Official:

J. A. ULIO,
*Major General,*
*The Adjutant General.*

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(For explanation of symbols see FM 21–6.)



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