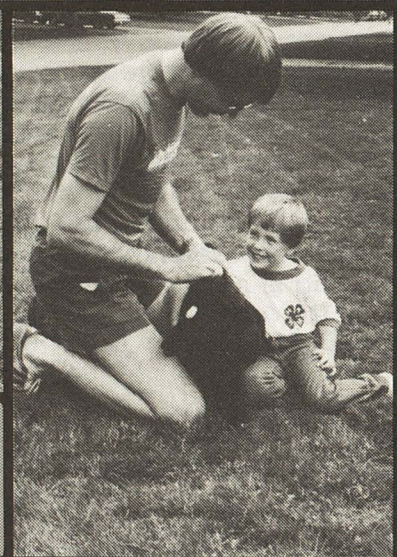
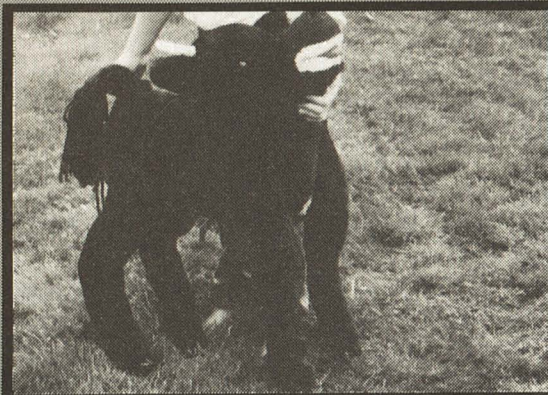


MAGR
GOVS
MN 2500 FHBU-2181

CALF

PATTERN



Minnesota 4-H Calf Pattern

Authors: Thomas D. Zurcher, University of Minnesota, Extension Specialist, 4-H Youth Development
Margaret Lonnquist, Community Program Associate, 4-H Youth Development

Special thanks to the Minnesota Livestock Breeders' Association for providing funding to assist in the development of this pattern.

Advantages of the Model Calf:

The model calf made from this pattern provides an excellent training aid for 4-H project leaders and members, extension educators, vocational instructors, and classroom teachers. When the welfare, suitability or availability of the live animal is a factor the model will provide an important contribution to the learning outcomes desired. The following is a list of some of the activities in which the calf model has been used as a training aid:

- Identifying Breeds
- Identifying Parts
- Recognizing Strengths and Faults
- Selecting
- Judging
- Castrating
- Delivering
- Caring for the Newborn
- Saving a Weak Newborn
- Taking Temperature
- Controlling External Parasites
- Administering Medication
- Identifying
- Fitting & Showing
- Making a Rope Halter
- Dehorning
- Implanting
- Identifying Location of Meat Cuts
- Determining Weight

- Trimming Hooves
- Costing
- Removing Extra Teats
- Treating Scours
- Treating Foot Rot
- Giving a Demonstration

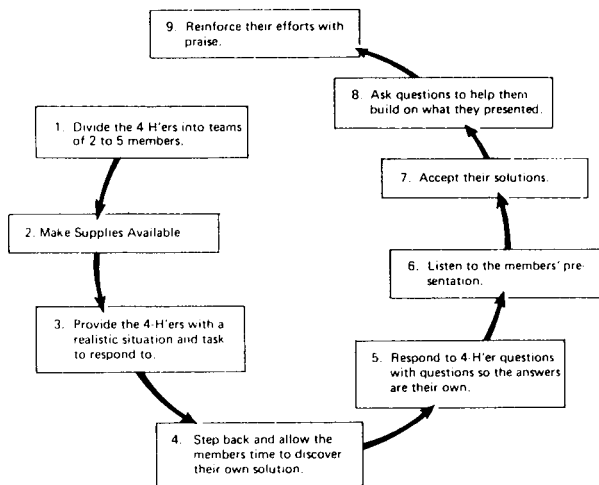
The model calf is also an effective training aid to help 4-H'ers to not only develop project skills, but also to develop their life skills. When safety and injury are not overriding factors to the learning process, both leaders and members can be involved in more of a learn by doing or experiential manner rather than a lecture or demonstration. The result is often the enhancement of important life skills such as:

- Problem Solving
- Asking Questions
- Risk Taking
- Relating to Others
- Discovering the Excitement of Learning
- Making Decisions
- Defending Decisions
- Developing Leadership Skills
- Using Knowledge
- Facilitating a Group Effort
- Expressing Themselves
- Questioning
- Working Together

Ideas for Using the Model for Teaching

The 4-H Program is built on the principle of allowing the participants to learn by doing before being told or shown how. With this approach the participants not only can perform the activity but are also allowed to explore the what and the why from their own frame of reference rather than the leader's or teacher's. Consequently, the experience becomes more personal and meaningful.

Because the calf can interject a degree of realism into the activity, when used in conjunction with the experiential learning model pictured below, the impact is particularly effective.



In this model the learners are given an opportunity to discover their own solutions. Questions and discussions help them broaden and clarify their understanding. As can be seen, the teacher or group facilitator does not impose his/her answers directly on the group but instead helps the participants build on what they presented by asking thought-provoking questions which will lead to greater understanding.

The need to move from a "leader centered" to a "member centered" learning situation is very important. One method is to give the team a realistic situation and task with which they can relate. This will allow the learner to assume ownership of the activity. An example of these two statements may be as simple as the following:

Situation: You have been asked by your neighbor to dehorn his calf. You accept.

Your Task: Demonstrate how you will dehorn the calf.

By using this technique, 4-H project leaders have discovered that not only do their members enjoy figuring out solutions to the situations and tasks presented, but also that important life skills are developed in the process.

Conducting a Beef or Dairy Skillathon

An activity which makes extensive use of the experiential learning approach and the model animals is popularly called a 4-H skillathon. This has been proved to be an exciting learning activity at club meetings, workshops and fairs. A skillathon is simply a series of learning stations at which teams are given situations and tasks to perform plus the necessary supplies and training aids. A facilitator at the station allows the teams to demonstrate how they would solve the task and then follows up with questions. Depending on the number of teams, stations, and the complexity of the tasks, the time at each station may be set anywhere from 5-10 minutes. Even after 15-20 teams have used the model calf to demonstrate how to administer medication it is still ready for the next group.

Taken from PMG AS-24, Caring For The Newborn Calf.

MINNESOTA 4-H CALF PATTERN

Materials Needed:

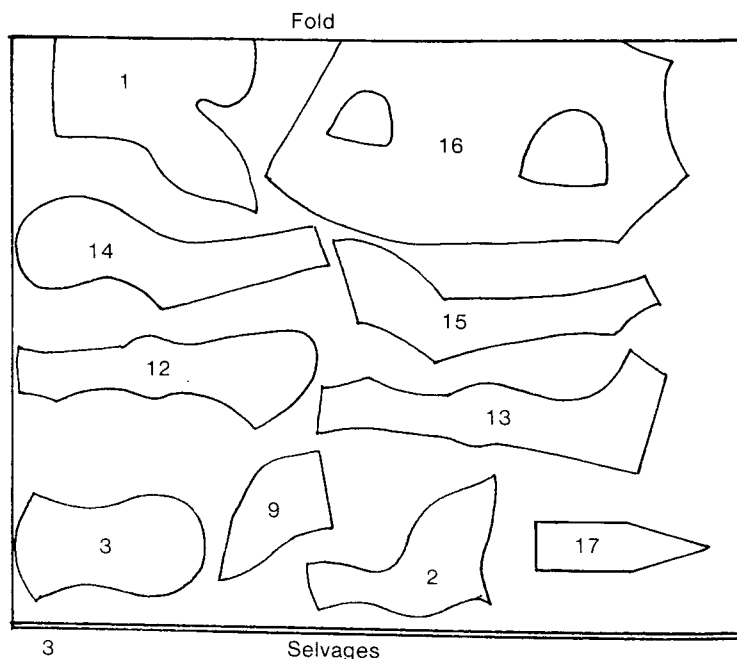
- 1 yard fake fur
- 1 felt craft square (9" x 12"), pink, for mouth lining
- 1 felt craft square of a suitable color for nose and nostrils
- 1 - 4" x 4" piece of red felt for tongue
- 8½" x 9" piece of interfacing
- ⅛ yard vinyl or plastic suitable for hoofs and horns
- 12" x 3" piece of stretch fabric for gullet
- 2 craft eyes or shank buttons
- ¼ yard heavy macrame cord
- 2 marbles or beads
- 4 inches velcro (or 4 velcro circles and 1" velcro)
- 2 yards strong string
- 4 inches plastic tubing
- 1 yard pink yarn or heavy crochet thread
- 1 large snap

Cutting Directions:

1. Remove pattern pages from book. Cut out and assemble pattern pieces for body, outside front leg, and outside rear leg, matching lines as directed on pattern.

Use paper pattern pieces or trace onto non-woven interfacing.
2. Fold fake fur in half, right sides together. Pin pattern pieces on fake fur, following cutting layout. Cut.
3. Cut nose and nostrils from felt.
4. Cut tongue from red felt.
5. Cut mouth lining from pink felt.
6. Cut 4 horn pieces (pattern piece 10), 8 dew claws (pattern piece 11), 8 upper hooves (pattern piece 19) and 8 hoof pads (pattern piece 20) from vinyl.
7. Cut 2 ear interfacings.

Cutting layout for fur fabric



Marking Directions:

1. Mark dots and X's with chalk or tailor's tacks.
2. Using a basting stitch in a color contrasting with fur fabric, mark ear veins, fold lines, tongue placement, and scrotum placement.

Sewing Instructions:

Use $\frac{3}{8}$ " seam allowance except where indicated.

Head and Ears

1. Make all four darts on back of head and ears (pattern piece 1). With right sides together, match small dots, pin and stitch. Figure 1.
2. By hand, whipstitch heavy macrame cord to wrong side of ear on vein placement markings. Figure 2.
3. Make 1 small round buttonhole in left ear at circle. Figure 2.
4. Baste ear interfacings to wrong sides of ears (pattern piece 2). Figure 3.
5. With right sides together, pin ear (pattern piece 2) to face (pattern piece 3). Match notch and small dots. Ease ear (pattern piece 2) along seamline A. Pin and stitch from small dot to lower edge. Figure 4.
6. With right sides together, pin face and ears (pattern pieces 2 & 3) to back of head (pattern piece 1). Match double notches at top of head, and large dots at base of ears.
7. Open darts at top of ears. Fold darts at base of ears down. Pin and stitch around ears and top of head. (Figure 5)
8. Trim ear interfacing to $\frac{1}{4}$ inch. Clip away tips of ears (Figure 5).

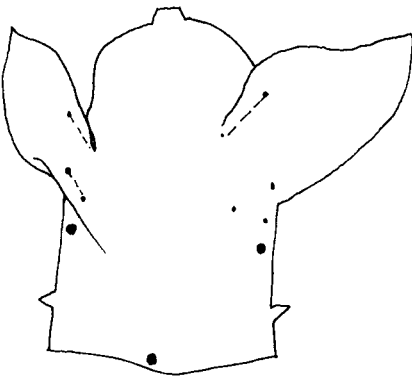


Figure 1

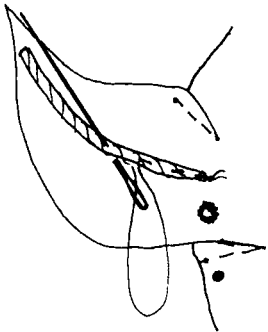
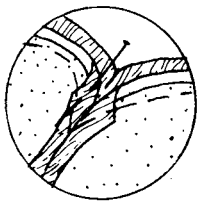


Figure 2



Detail

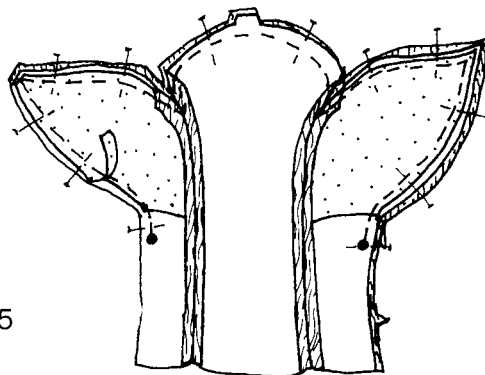


Figure 5

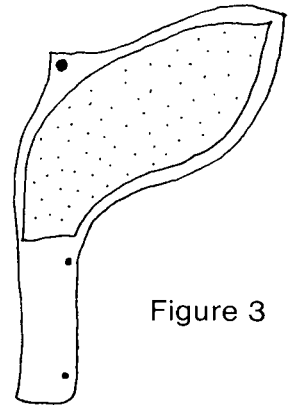


Figure 3

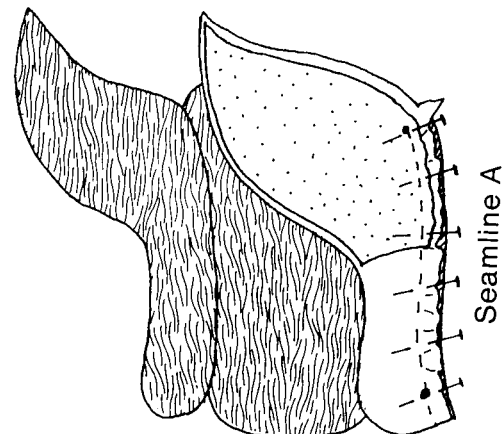


Figure 4

Seamline A

Seamline B

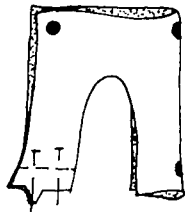


Figure 6a

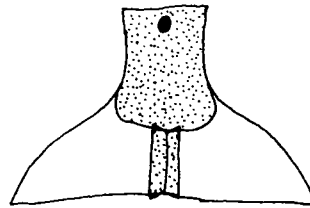
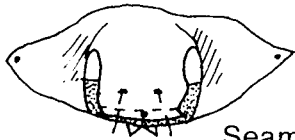


Figure 6b



Seamline C

Figure 7

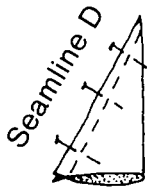


Figure 8

Nose

1. With right sides together, match notched edges, pin and stitch seamline B using $\frac{1}{4}$ inch seam allowance on nose (pattern piece 4). Figure 6a. Open seam flat, Figure 6b.
2. With right sides together, match small dot on seamline C with seamline B, pin and stitch, using $\frac{1}{4}$ " seam allowance. Figure 7.
3. To make nostrils (pattern piece 5), fold on markings, pin and stitch seamline D, using $\frac{1}{4}$ " seam allowance. *Do not turn right side out.* Figure 8.
4. To join nostril to nose, match seamline C to seamline D, with right sides together. Pin and stitch by hand. Figure 9.

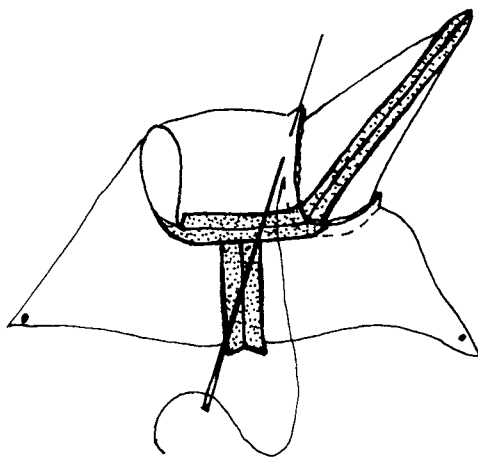
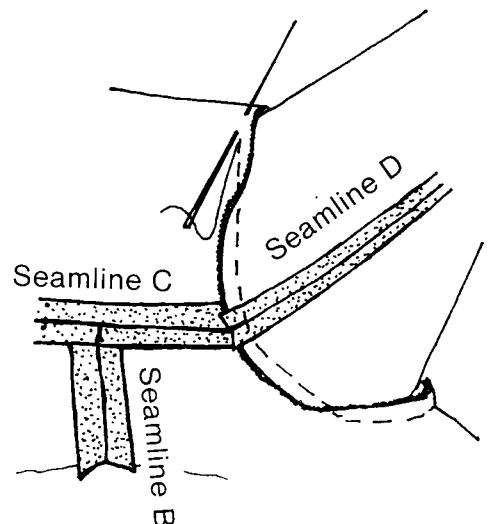


Figure 9



Detail

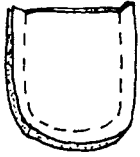


Figure 10a

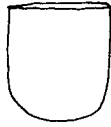


Figure 10b

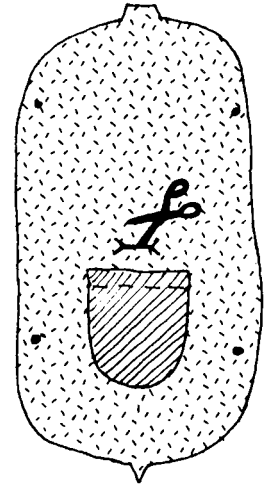


Figure 11

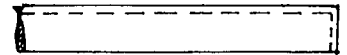


Figure 12

Mouth

1. With right sides together, pin and stitch tongue (pattern piece 6) on three sides, using $\frac{1}{4}$ " seam allowance. Figure 10a. Turn tongue right side out. Figure 10b.
2. Place open end of tongue on placement marking of mouth lining, matching small dots (pattern piece 7). Pin and stitch. Figure 11.
3. Cut 1 inch slit for gullet at markings on mouth lining. Figure 11.
4. Fold gullet (pattern piece 8) lengthwise, stitch along edge and one end. Figure 12.
5. Bring open end of gullet through opening from back of mouth lining. Roll under $\frac{1}{8}$ " of gullet to cover raw edge of felt. Figure 13a. Stitch gullet in place by hand, stretching to fit opening, using short, firm stitches. Figure 13b.
6. Fold mouth lining, right sides together, on fold line, matching small dots. Tongue and gullet opening will be on inside. Pin and stitch side seams from fold to small dots. Figure 14.

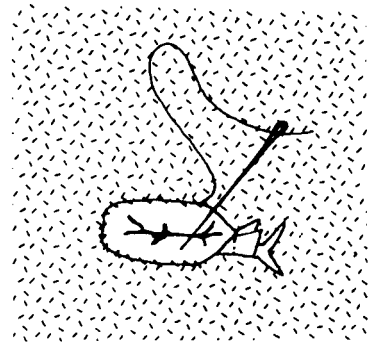


Figure 13a

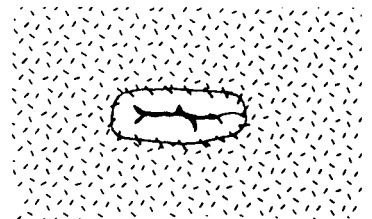


Figure 13b

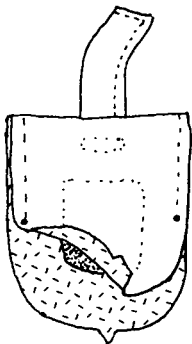


Figure 14

Joining Nose to Mouth Lining

1. With right sides together, match double notches in mouth lining to seamline B on nose. Match medium dots, pin and stitch seamline E between medium dots only, easing to fit. Figure 15.

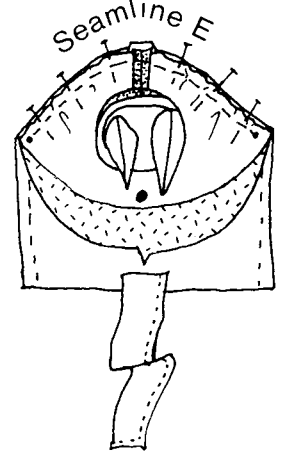
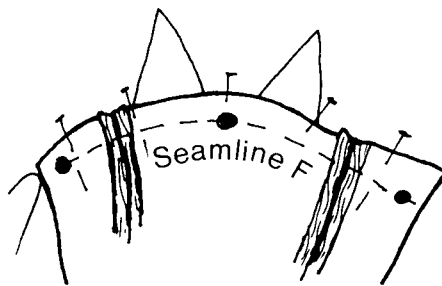


Figure 15

Joining Nose and Mouth Assembly to Face and Ears Assembly

1. With right sides together, match large dot on nose piece (pattern piece 4) to large dot on face (pattern piece 3), match medium dots on ear pieces 2 with medium dots at ends of seamline F of nose piece. Pin and stitch seamline F. Figure 16.



Detail

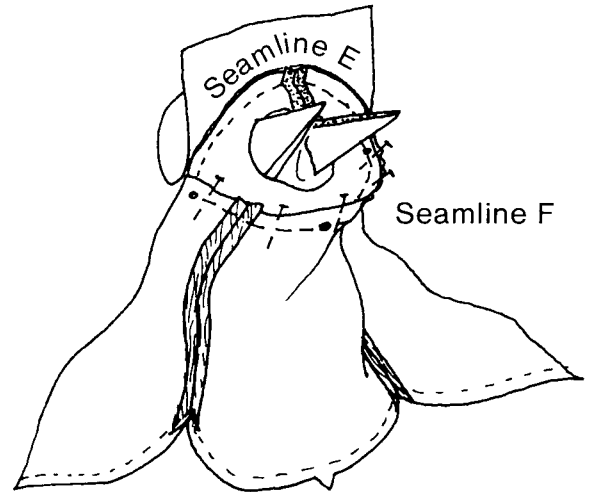


Figure 16

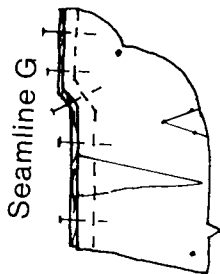


Figure 17a

Lower Jaw and Neck

1. With right sides of lower jaw and neck (pattern piece 9) together, pin and stitch seamline G. Figure 17a.
2. Press seam open. Figure 17b.
3. Pin and stitch large dart. Figure 17c.
4. Pin and stitch 2 small darts. Figure 17d.

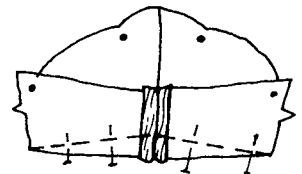


Figure 17c

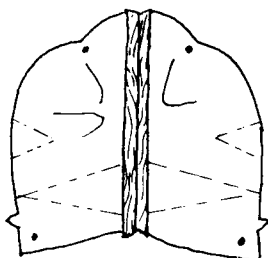


Figure 17b

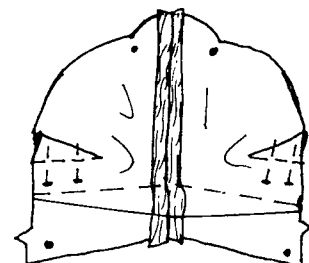


Figure 17d

Assembling Head

1. With right sides together, join lower jaw to mouth lining by matching single notch on mouth lining (pattern piece 7) to seamline G on lower jaw (pattern piece 9). Match medium dots at corners of mouth, pin and stitch seamline H. Figure 18a.

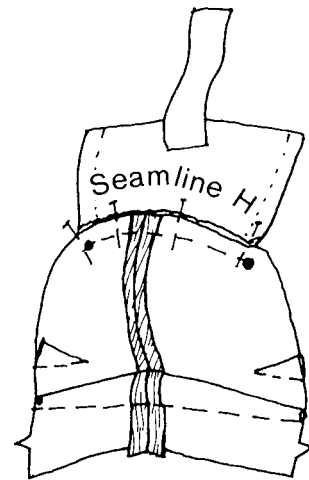


Figure 18a

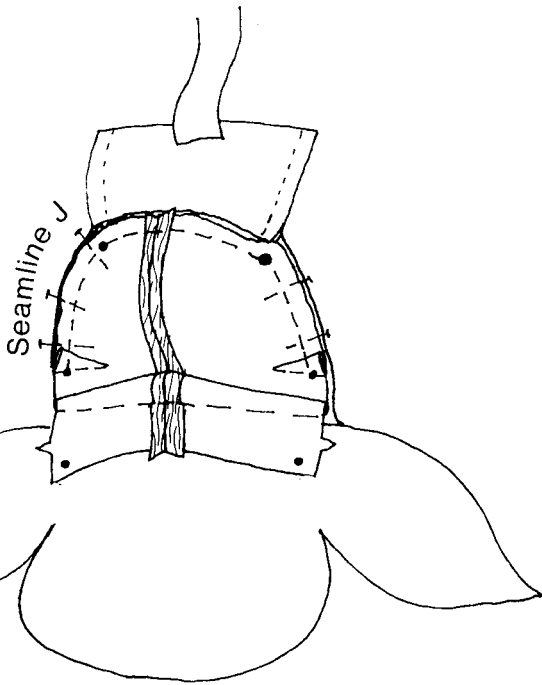


Figure 18b

2. With right sides together, match medium dots on seamline J of neck (pattern piece 9) with medium dots on ear (pattern piece 2). Pin and stitch seamline J. Figure 18b.

3. With right sides together, match medium dots at base of small darts on neck (pattern piece 9) with medium dots below darts on back of head (pattern piece 1), matching notches. Pin and stitch seamline K from medium dot to lower edge of neck (pattern piece 9). Figure 18c.

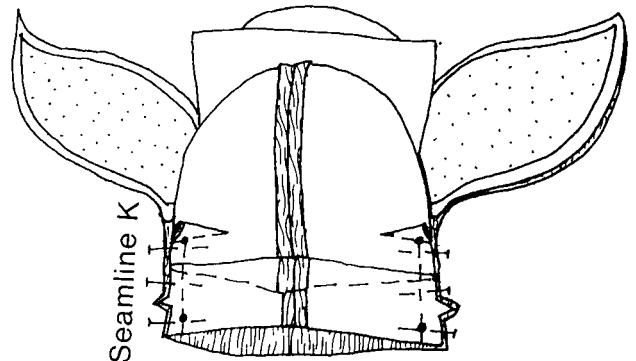


Figure 18c

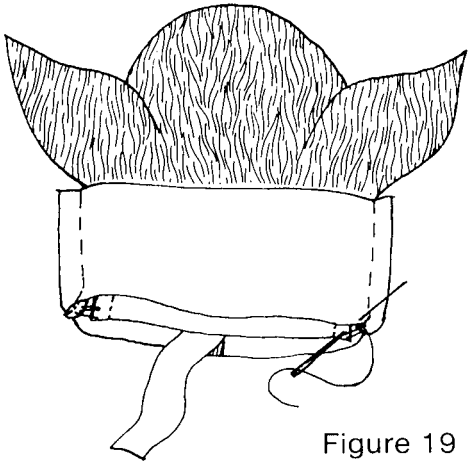
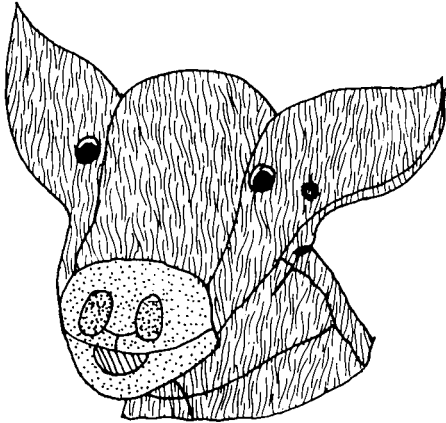


Figure 19

Finishing Head

1. Turn head right side out. Pull mouth lining into place. By hand, securely tack corners of mouth lining to side seams close to small darts. Figure 19.



2. Set eyes at X markings. Make one buttonhole closer to lower edge of left ear for ear tag. Figure 20.

3. Sew velcro dots or 1 inch pieces of velcro (loop side) to head at X markings. To make horn buds, cover hook side of velcro (either dots or 1" pieces) with small circles of fake fur; whipstitch in place. Figure 21.

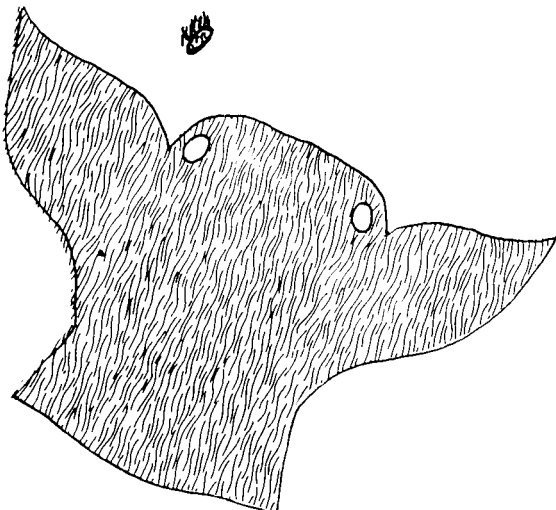
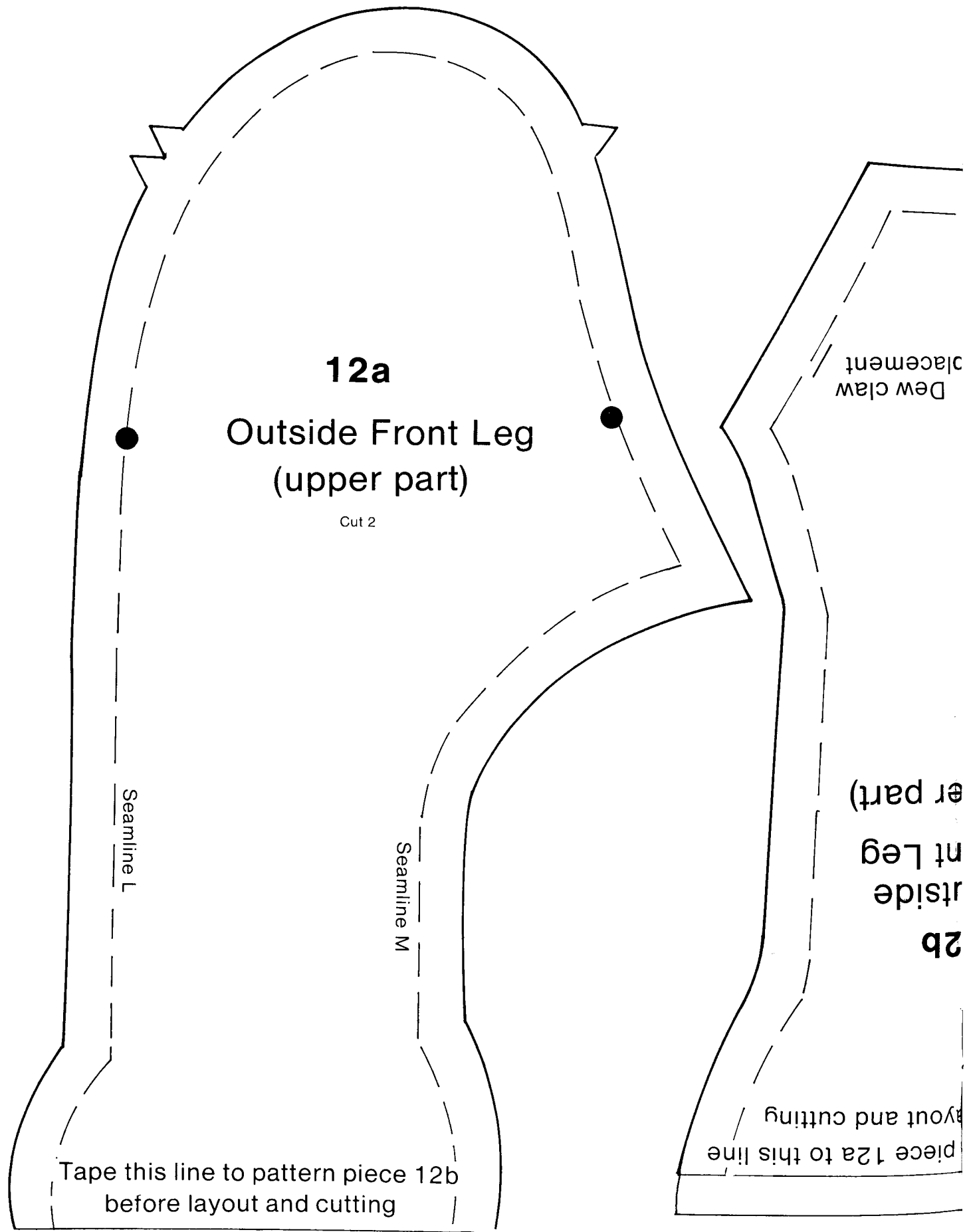


Figure 21



12a

Outside Front Leg
(upper part)

Cut 2

Seamline L

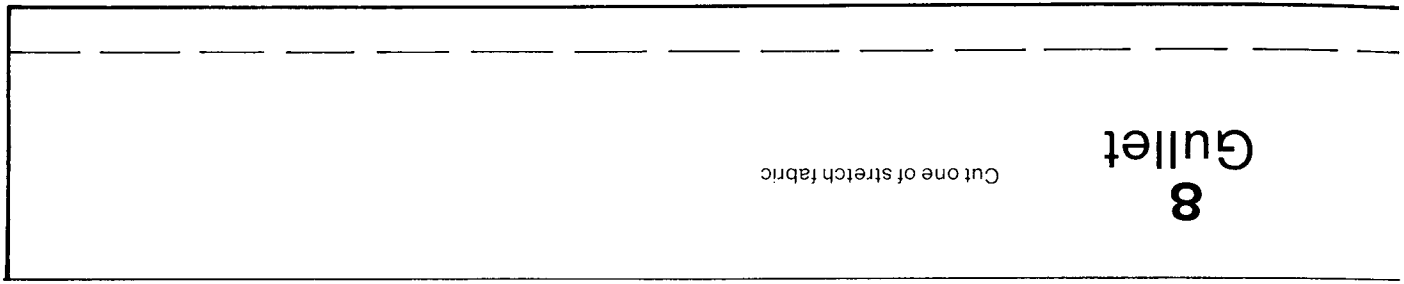
Seamline M

Tape this line to pattern piece 12b
before layout and cutting

Dew claw
placement

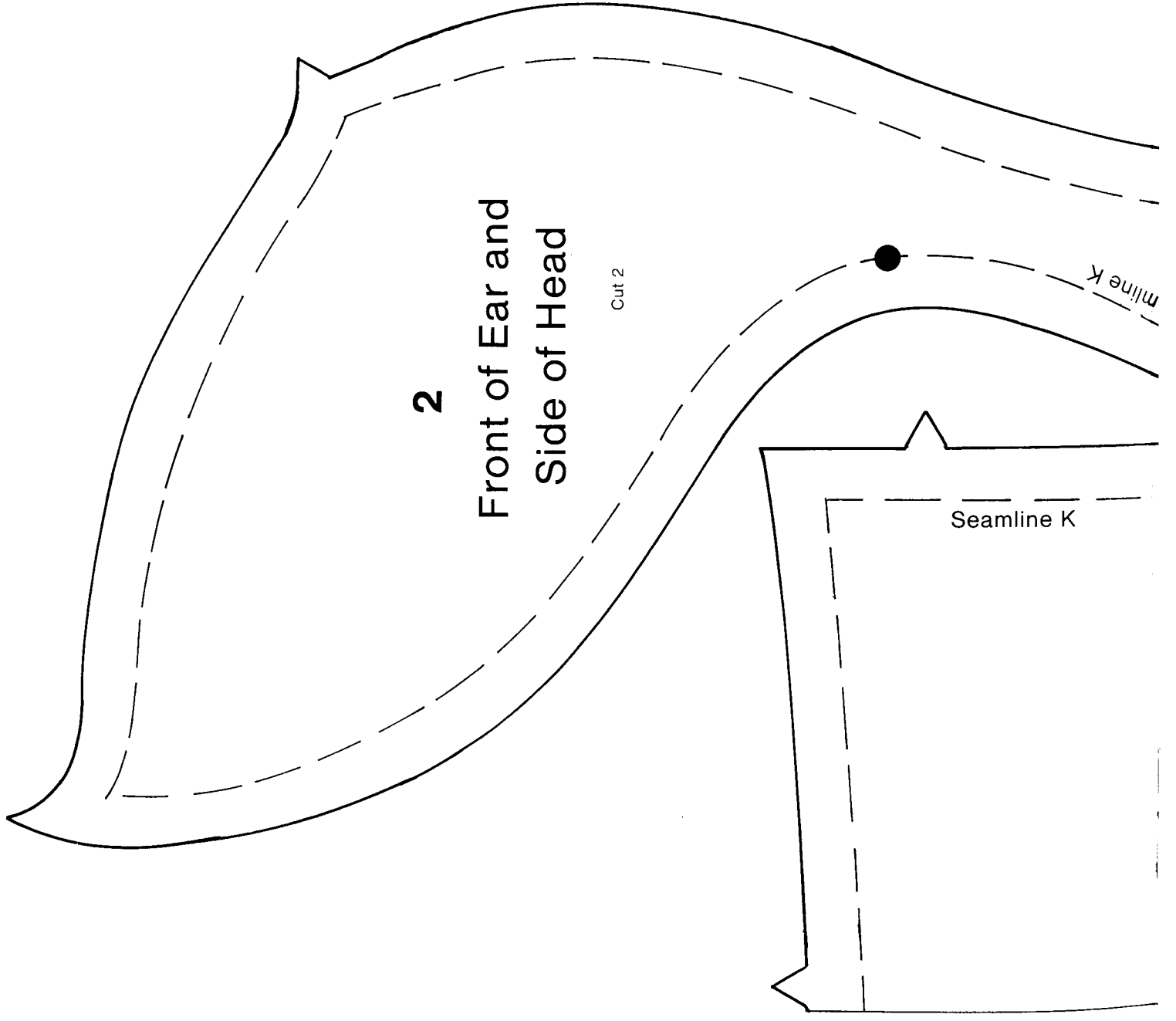
12b
Outside Front Leg
(lower part)

Tape piece 12a to this line
before layout and cutting



8
Gullet

Cut one of stretch fabric

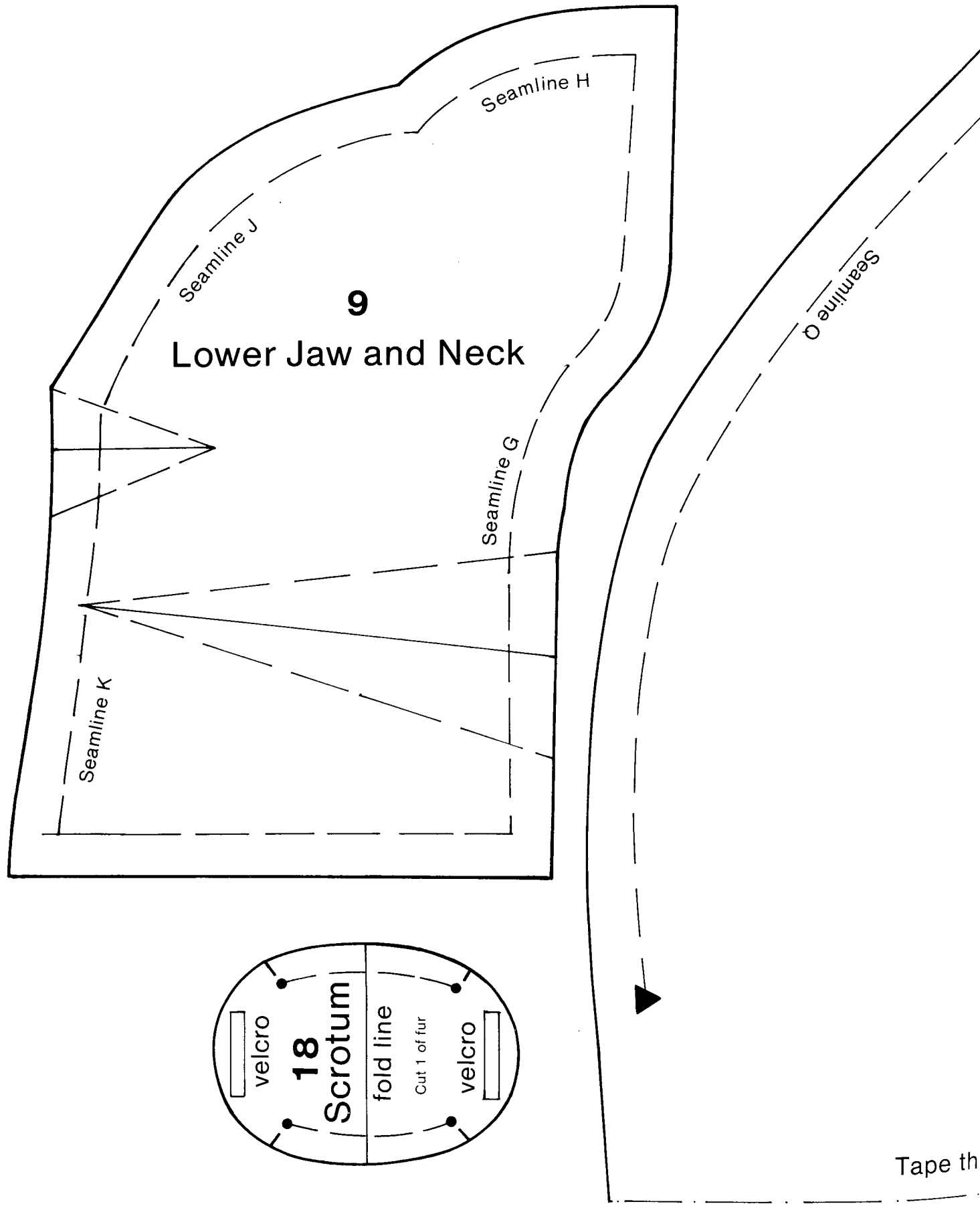


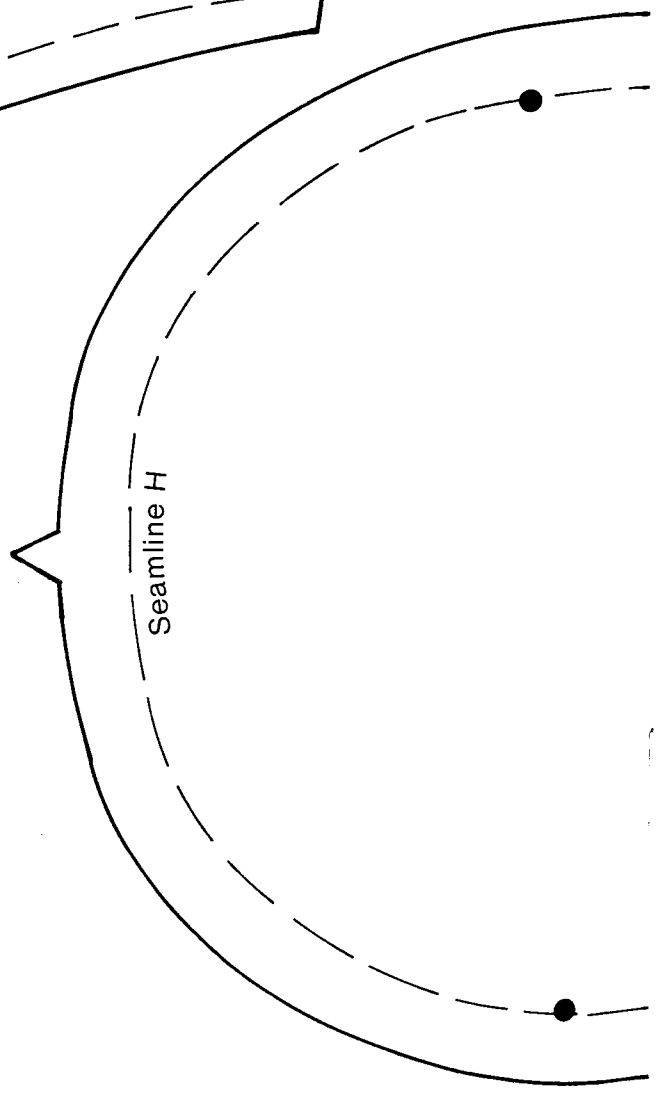
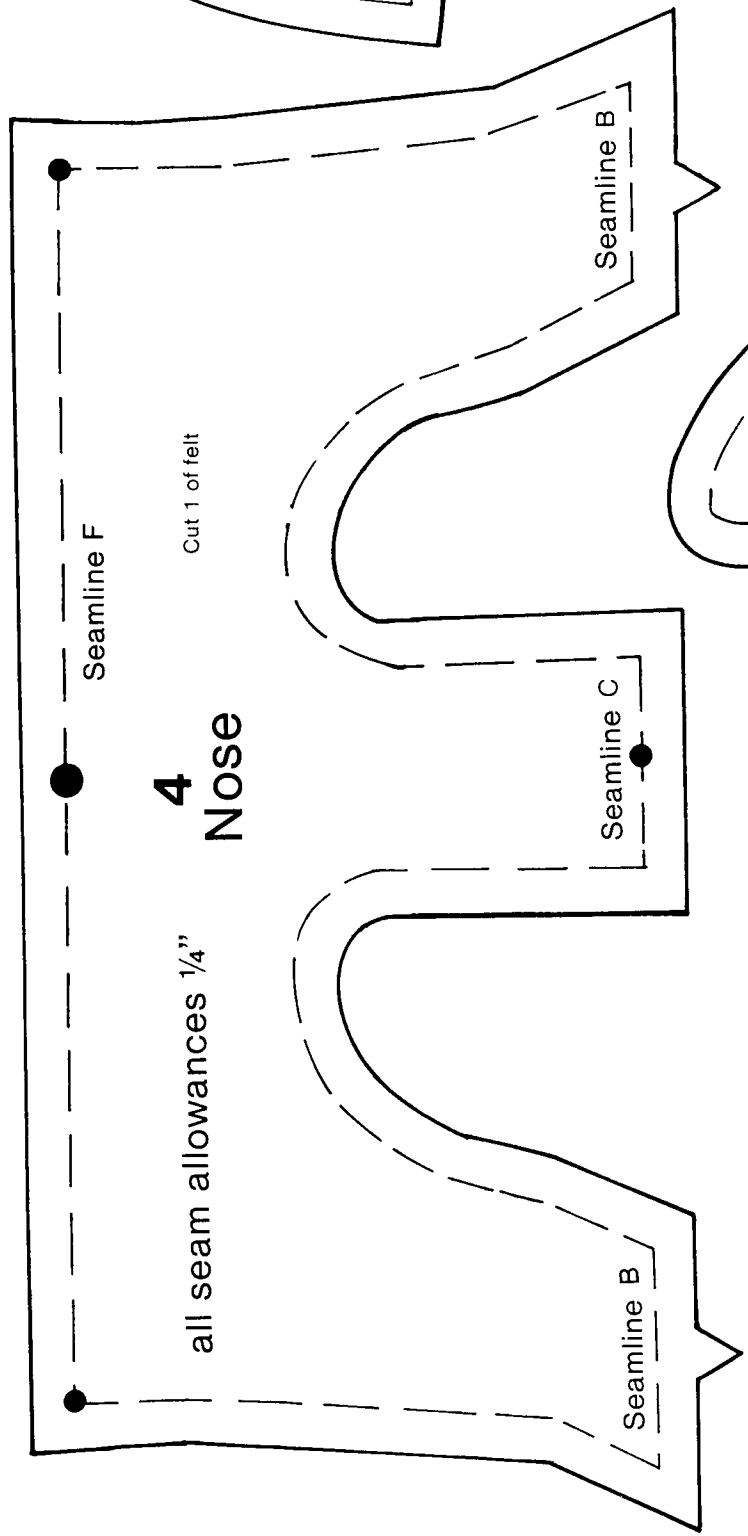
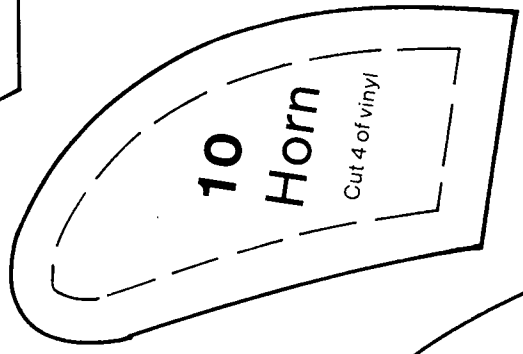
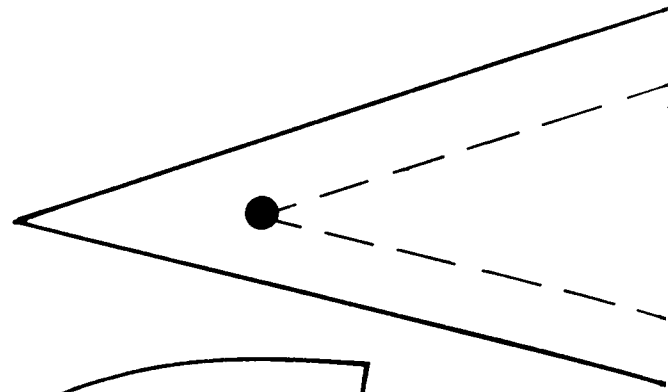
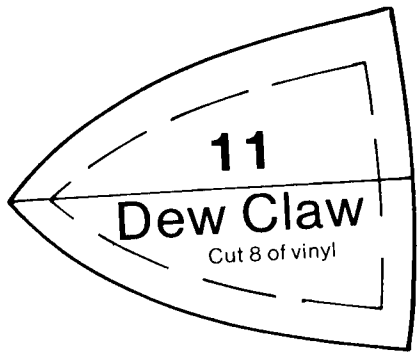
2
Front of Ear and
Side of Head

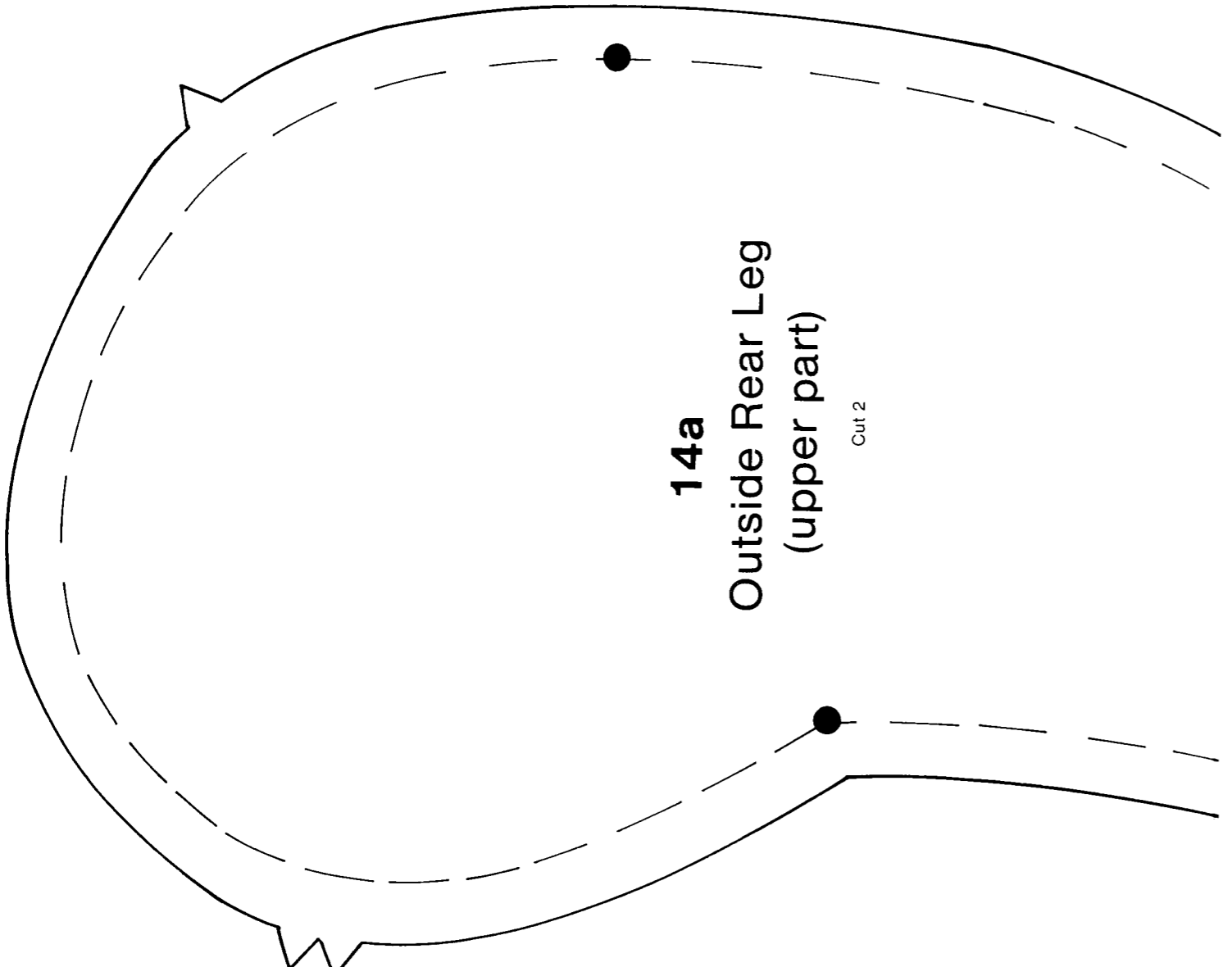
Cut 2

line K

Seamline K

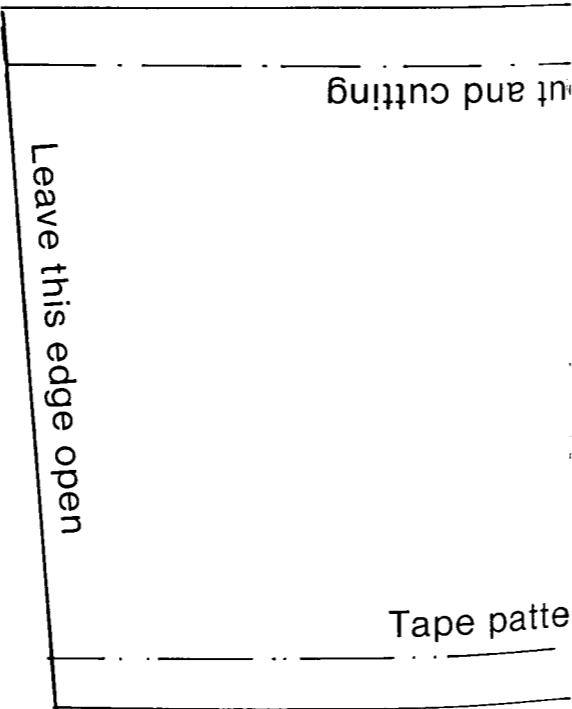






14a
Outside Rear Leg
(upper part)

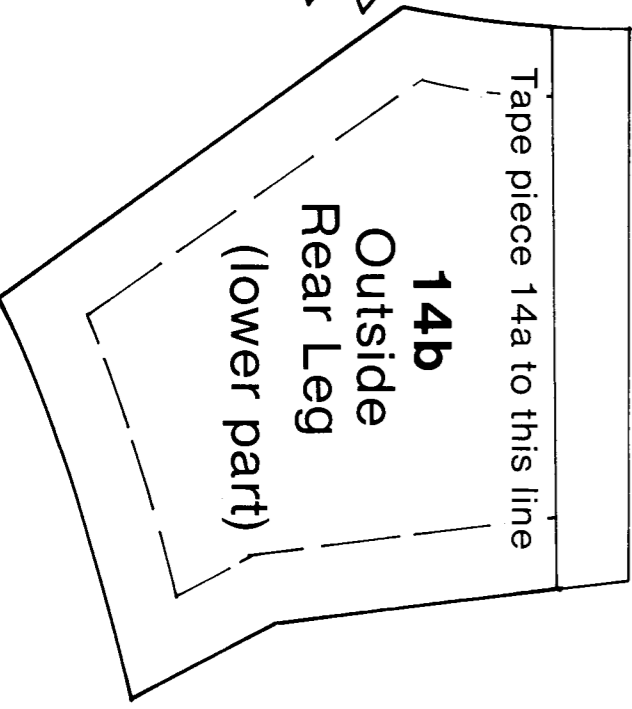
Cut 2



cut and cutting

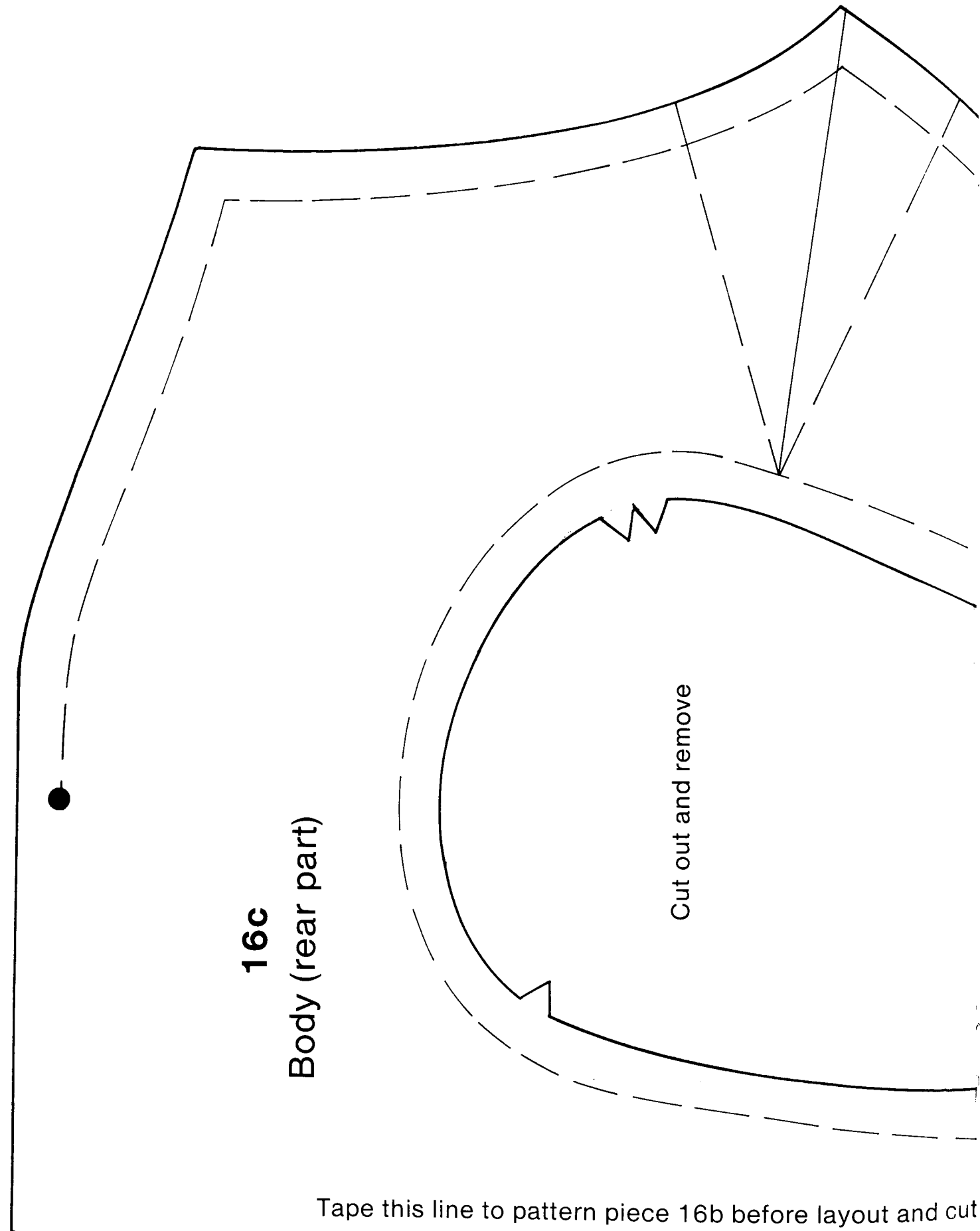
Leave this edge open

Tape patte



14b
Outside
Rear Leg
(lower part)

Tape piece 14a to this line

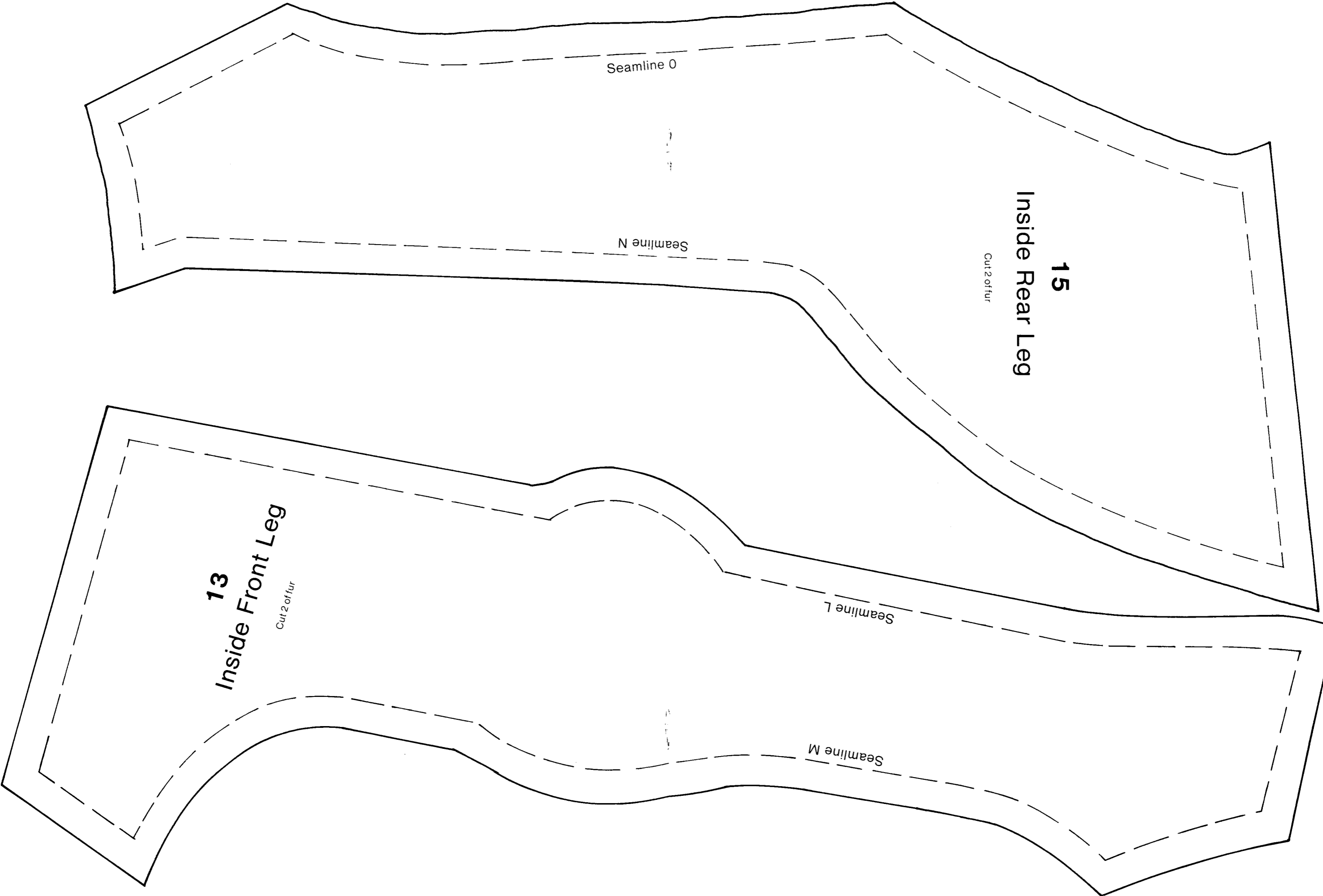


16c

Body (rear part)

Cut out and remove

Tape this line to pattern piece 16b before layout and cut



Seamline O

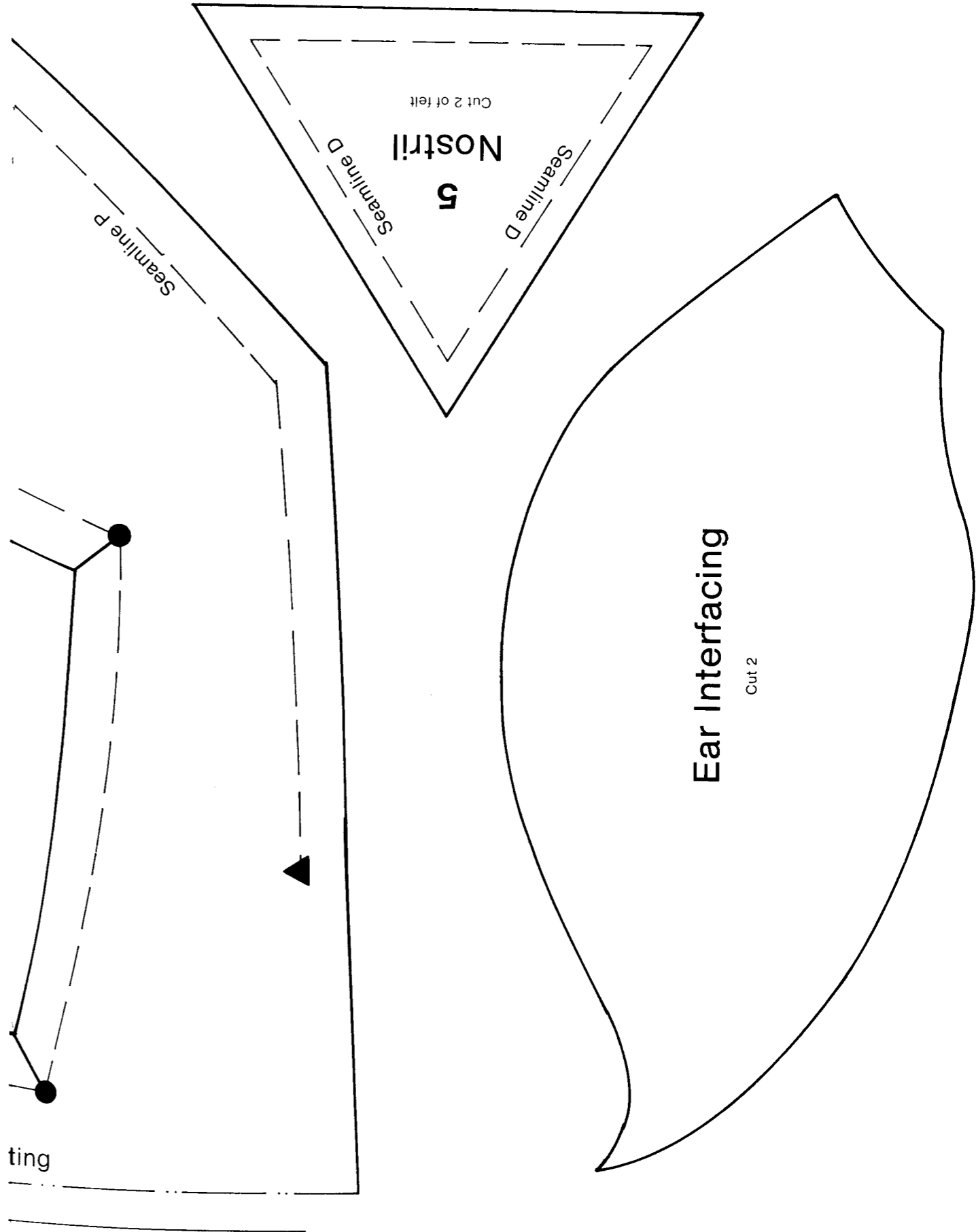
Seamline N

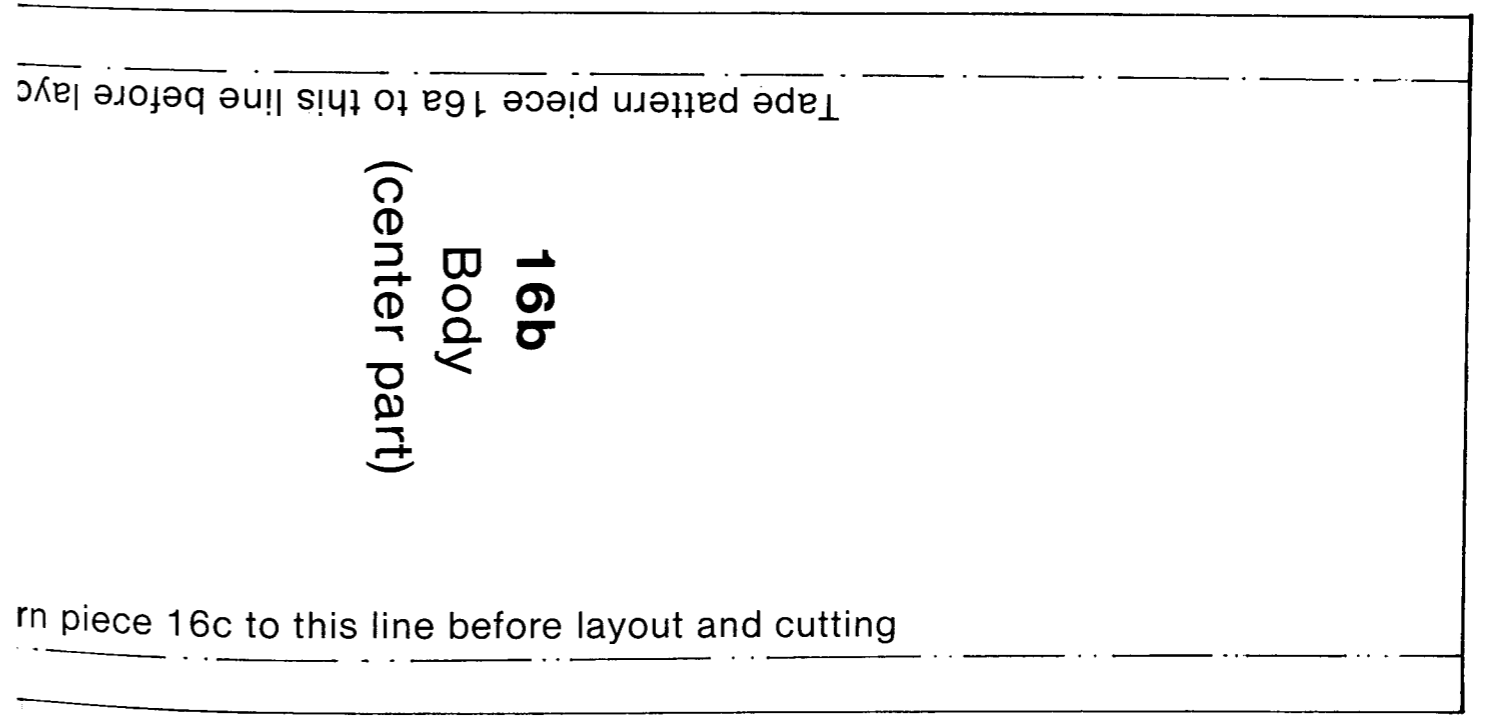
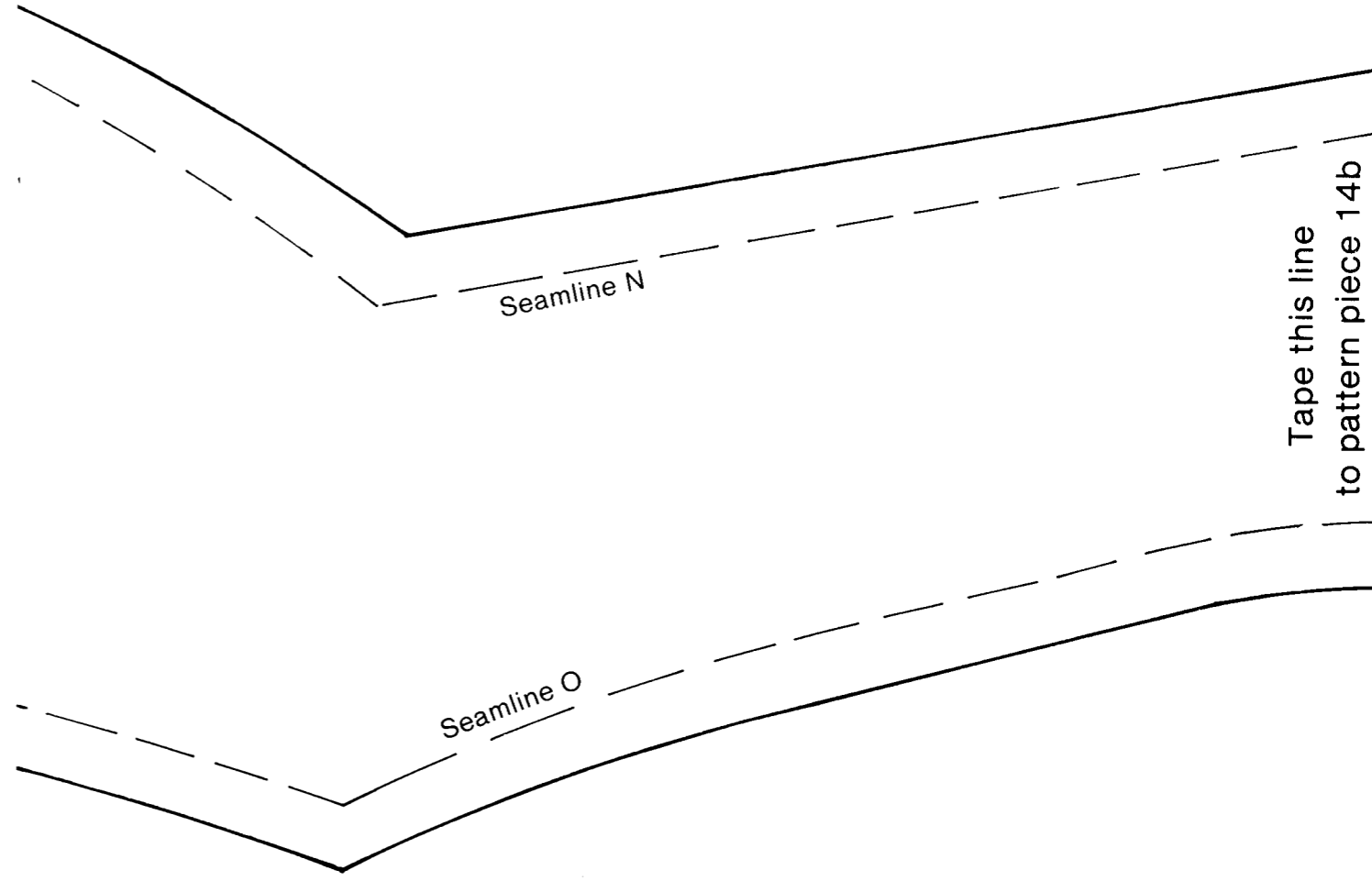
15
Inside Rear Leg
Cut 2 of fur

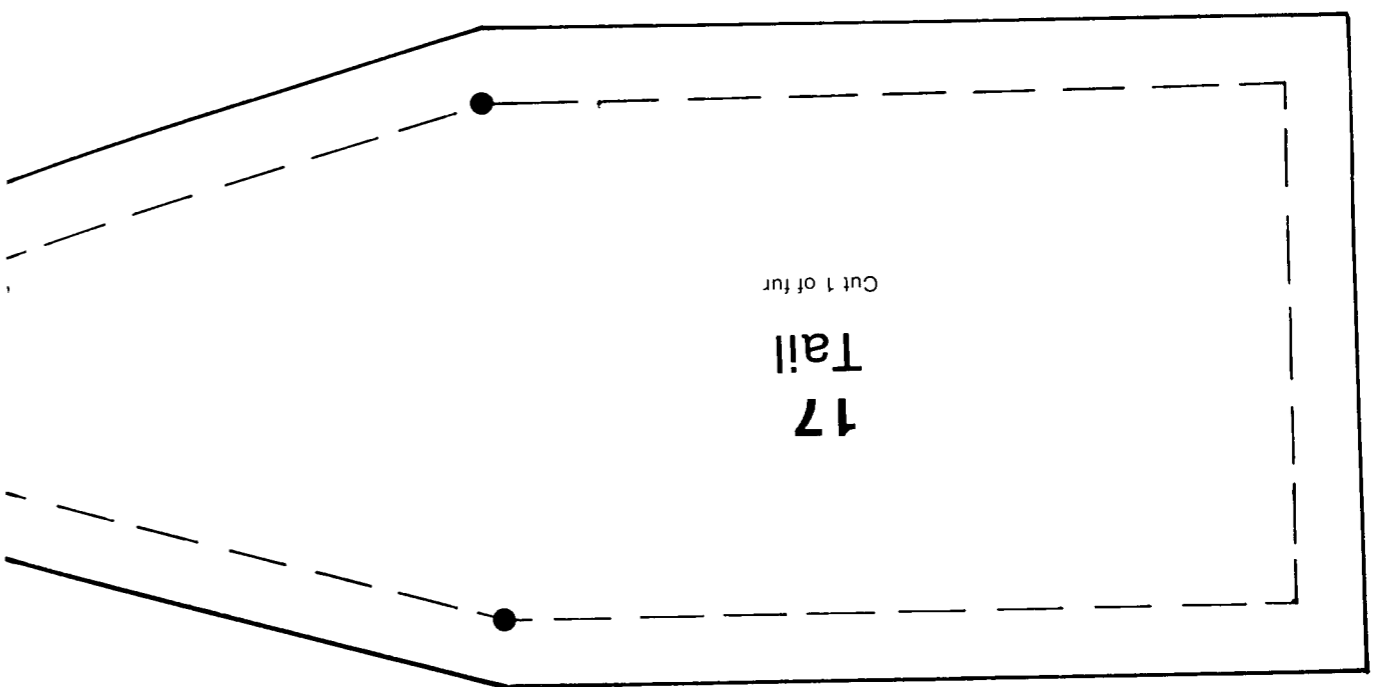
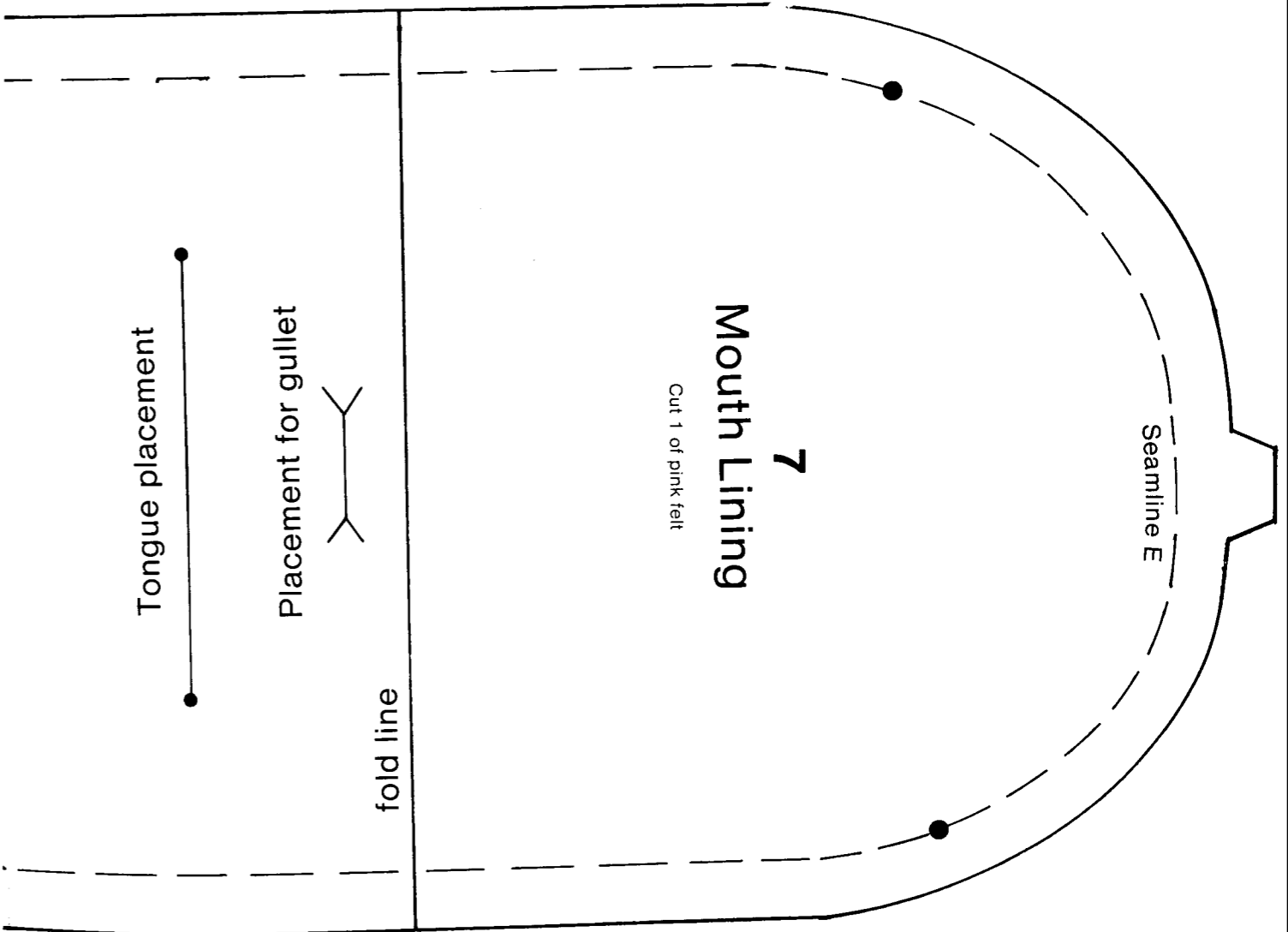
13
Inside Front Leg
Cut 2 of fur

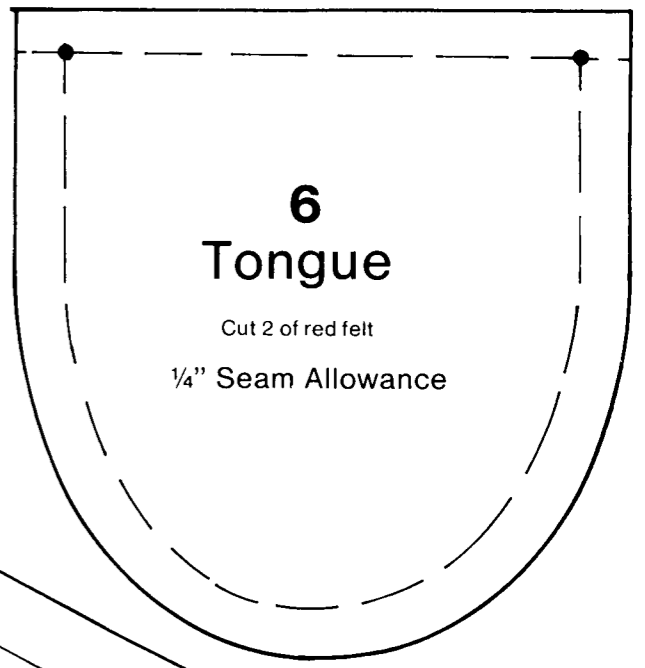
Seamline L

Seamline M



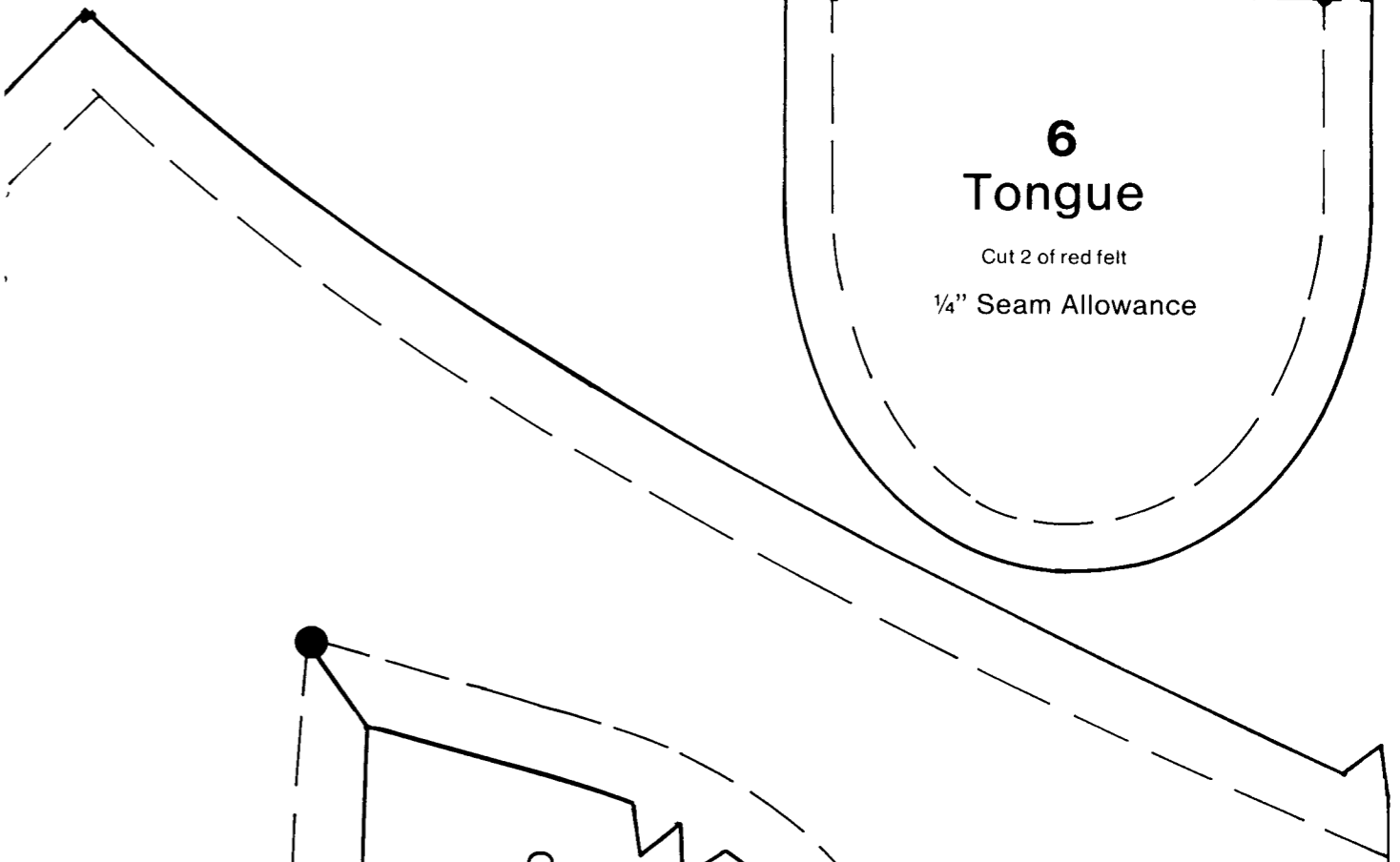




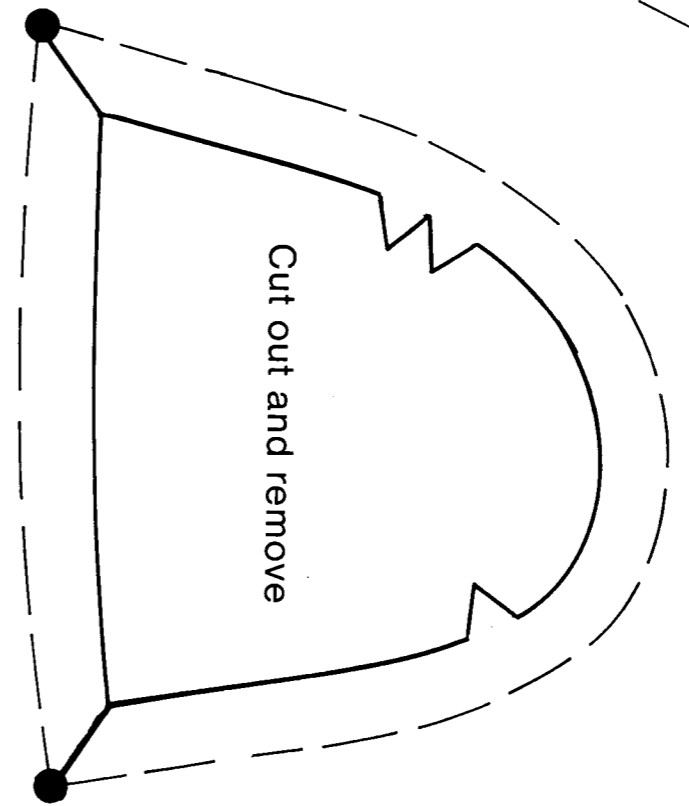


6
Tongue

Cut 2 of red felt
1/4" Seam Allowance



Cut 1 on fold (fur)

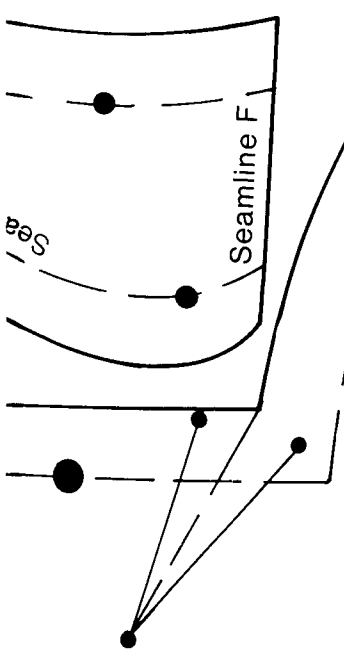
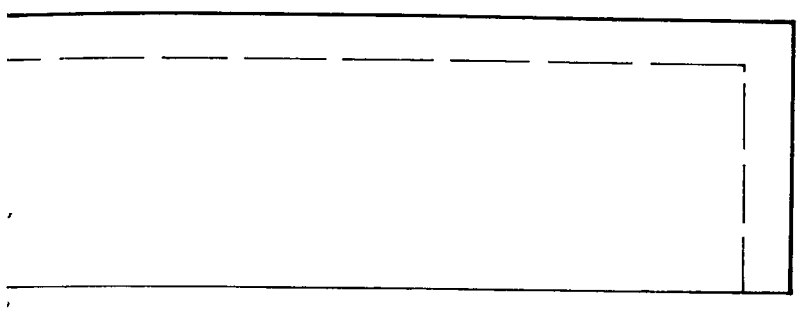
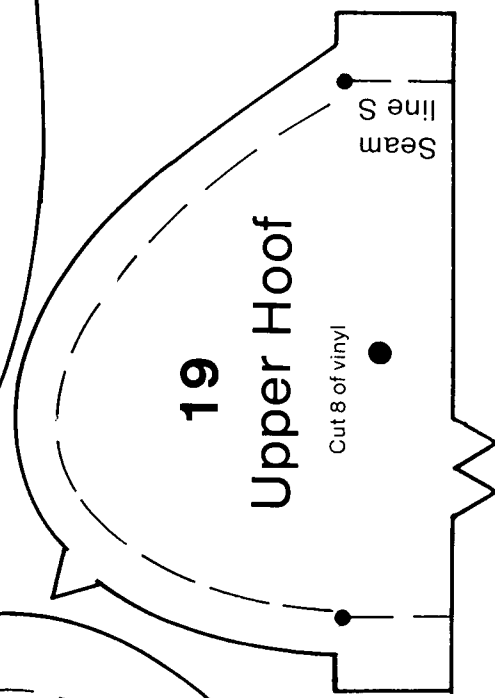
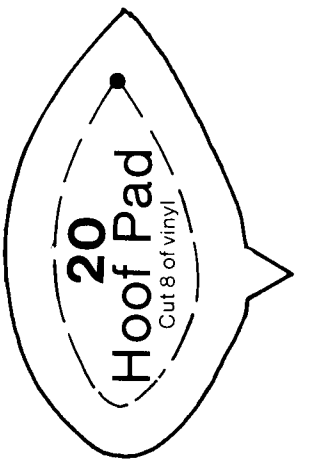


Cut out and remove

16a

Body (front part)

Line to pattern piece 16b before layout and cutting



Buttonhole (left side only)

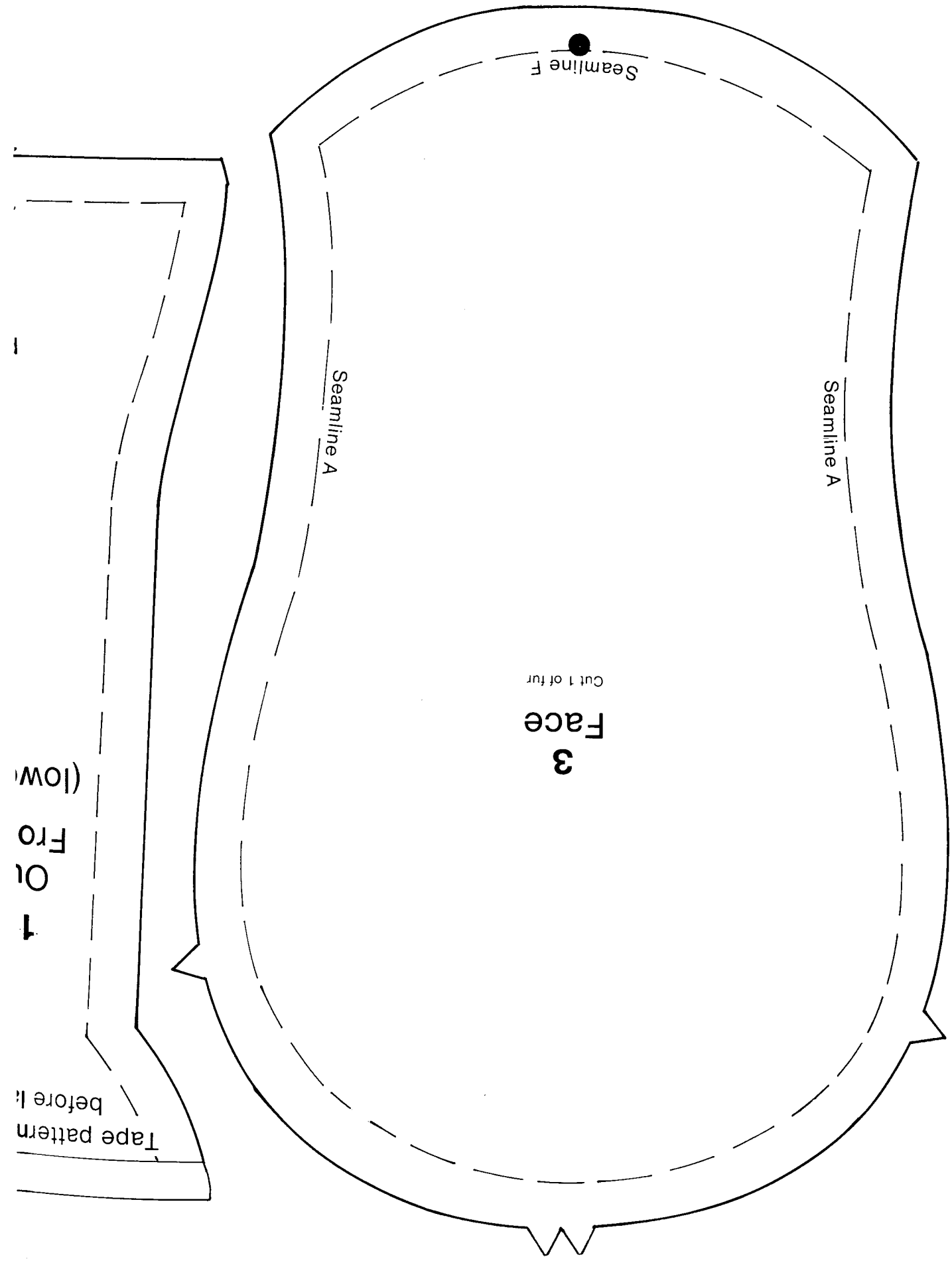
Head

1

Cut 1 on fold (fur)

Placement for ear vein

Place on fold



3
Face
Cut 1 of fur

Seamline A

Seamline A

Seamline F

1
Fro
01
(low)

Tape pattern
before

Horns

1. Place two horn pieces (pattern piece 10) right sides together with a length of sturdy string between them as shown. Figure 22a. Stitch string in place, as shown.
2. Pin and stitch horn pieces together, leaving 4" – 5" of string protruding from open end of horn. Figure 22a.
3. Turn horn by firmly pulling string through open end. Cut string away. Figure 22b.
4. Stuff horn lightly. Trim hook side of velcro to fit open end of horn. Whipstitch velcro over open end of horn. Figure 22c.
5. Repeat steps 1 through 4 for other horn.

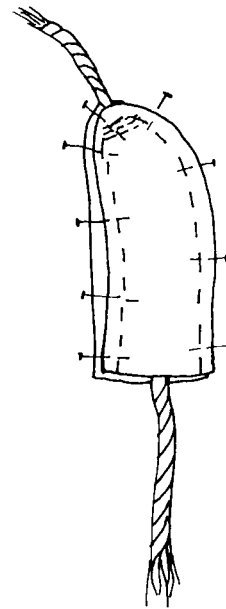


Figure 22a

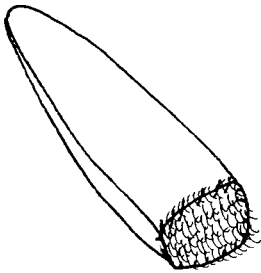


Figure 22c



Figure 22b

1. To make dew claws (pattern piece 11), fold dew claw pieces on markings, insert string as for horns, above, and stitch $\frac{1}{4}$ " seams. Turn right side out using string, as for horns, above. Figures 22a-22c.
2. Repeat step 1 until all 8 dew claws are assembled.

Legs

1. With right sides of front legs (pattern pieces 12 and 13) together, pin and stitch seams L and M. Figure 23a. Repeat for other front leg.
2. With right sides of rear legs (pattern pieces 14 and 15) together, pin and stitch seams N and O. Figure 23b. Repeat for other rear leg.
3. Cut $\frac{1}{4}$ " slits in all legs at dew claw markings. Insert tip of dew claw through slit. (Approximately $\frac{3}{4}$ " of the dew claw will be visible on the right side [furry side] of the leg.) Stitch securely in place by hand, with a portion of the dew claw remaining on the inside of the leg. Figure 23c.
4. Turn legs right side out. Figure 24.



Figure 23a

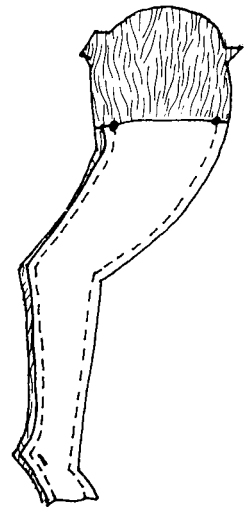


Figure 23b

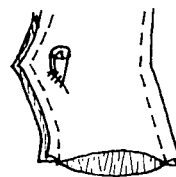


Figure 23c

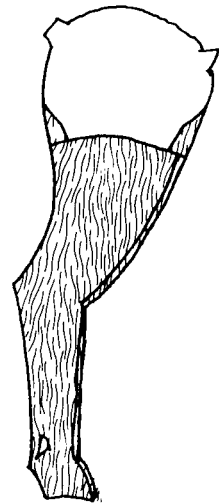


Figure 24

Attaching Legs to Body

1. With right sides together, pin leg to body, matching large dots and notches, easing legs to fit leg openings. Figure 25a. (This procedure is similar to setting in a sleeve.) Clip body piece on clipping lines to large dots. Stitch.
2. Repeat until all four legs are attached in the same manner. Figure 25b.

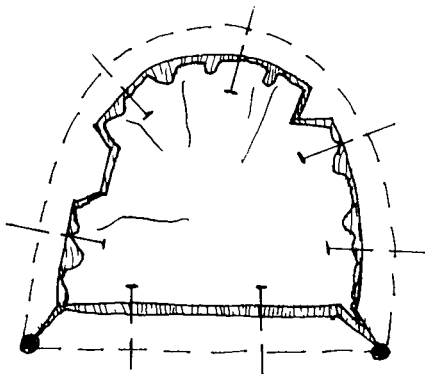


Figure 25a

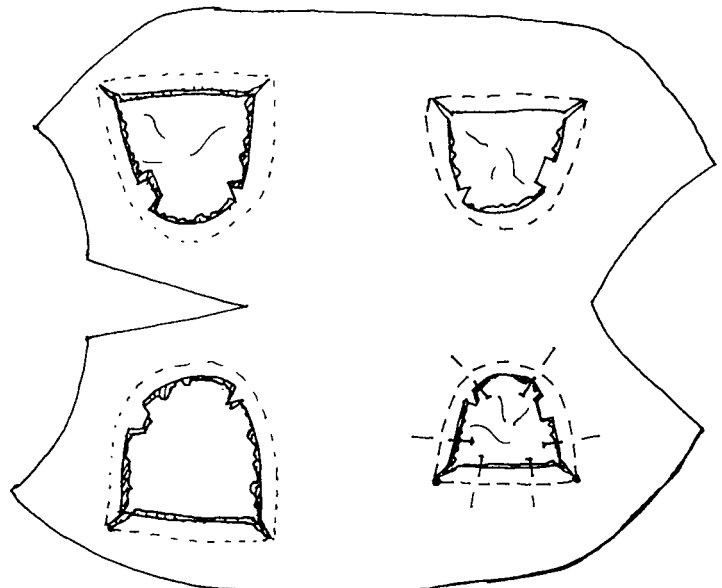


Figure 25b



Figure 26a

Tail

1. Fold tail (pattern piece 17) as shown. Stitch from small dot to end of tail. Figure 26a.
2. Press seam open. Figure 26b.
3. With right sides together, match small dot on tail to small dot on body. Match large dot on tail to large dot on body, as shown in figure 27a. Pin and stitch.
4. Repeat on other side, as shown in figure 27b. Clip away point.



Figure 26b

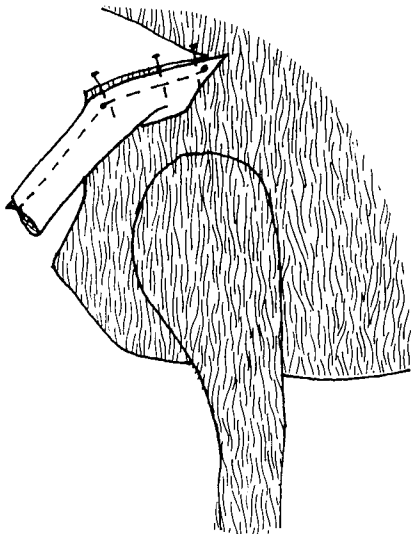


Figure 27a

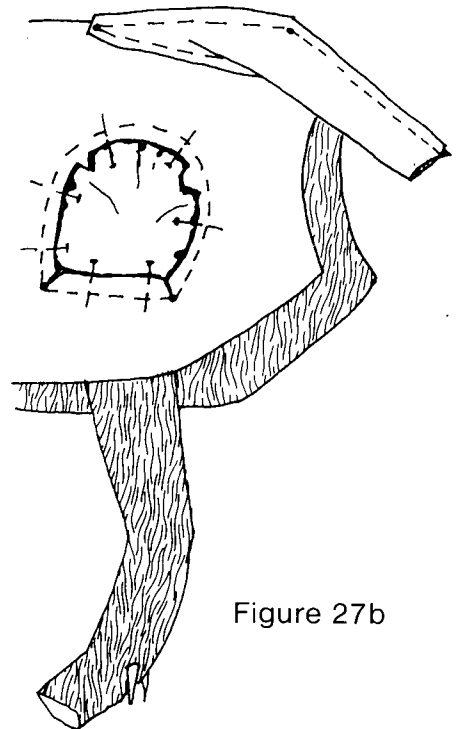


Figure 27b

Body

1. Fold body in half, right sides together. Pin seamline P from dot to large triangle. Pin seamline Q from neck opening to large triangle. Stitch, being careful to keep legs free of seamline. Leave open between triangles. Figure 28.

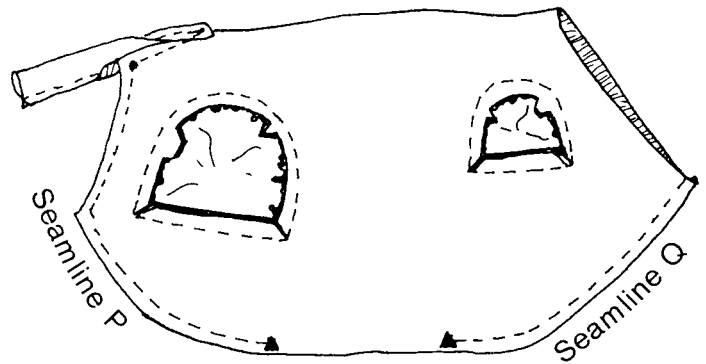


Figure 28

2. Pin large dart at rear of body and stitch. Figure 29a.
3. Insert 4-inch piece of plastic tubing at the point where tail seam joins body seam at base of tail. Figure 29b.
4. Turn body and tail right side out for ease of stitching. Stitch in place by hand. Figure 29c. For additional realism, use pink or red thread for stitching.

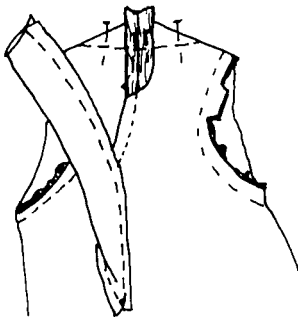


Figure 29a

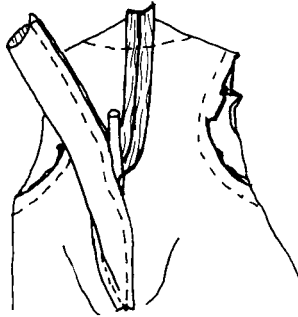


Figure 29b

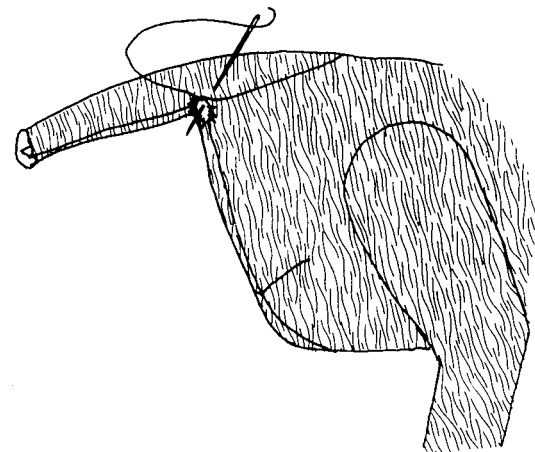


Figure 29c

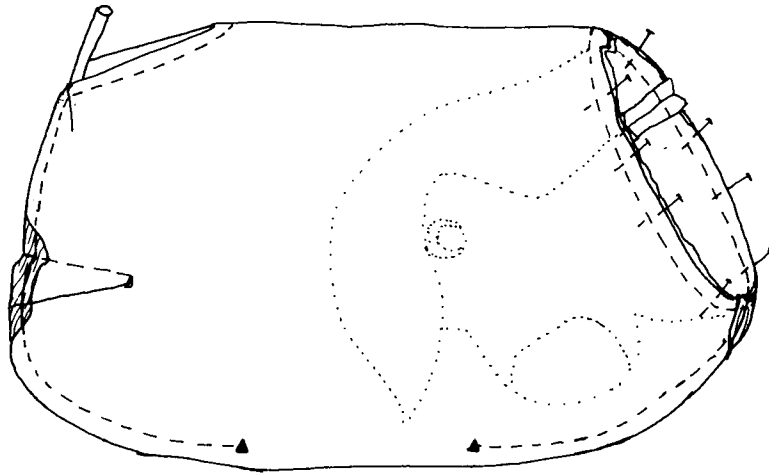


Figure 30

Attaching Head to Body

1. Turn body inside out again.
2. Insert head in body cavity, right sides together, matching body seam Q to neck seamline G. Match double notch on head to double notch on body. Pin and stitch. Figure 30.
3. Turn calf right side out. Stuff whole calf. Stitch closed by hand between large triangles.

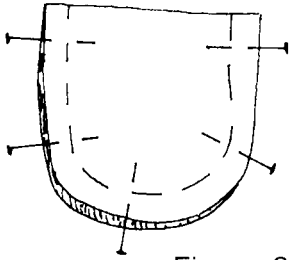


Figure 31a

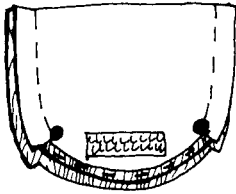


Figure 31b

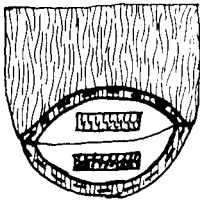


Figure 31c

Scrotum

1. Fold scrotum (pattern piece 18) on fold line, right sides together, matching small dots.
2. Stitch from folded edge to small dots, using 1/4" seam allowance. Figure 31a.
3. Clip seam allowance on markings close to small dots; fold edge to inside and whipstitch. Figure 31b.
4. Whipstitch hook side of velcro to inside of one side of scrotum, as shown; stitch loop side of velcro to other side of scrotum. Figure 31b.
5. Turn right side out. Insert two marbles or beads into scrotum; close with velcro. Figure 31c.
6. Whipstitch scrotum to body along seam line between rear legs as shown in figure 32.

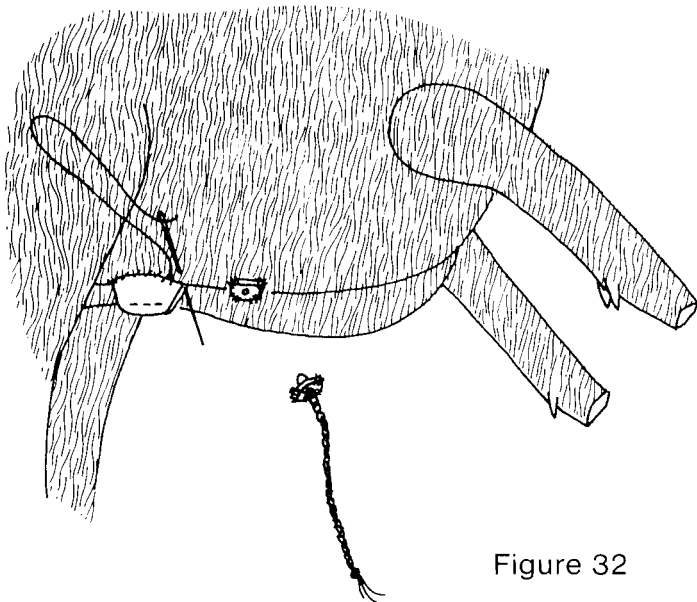


Figure 32

Umbilical Cord

1. Using yarn or heavy crochet thread, twist or crochet an umbilical cord 5 inches long.
2. Sew half of snap to cord.
3. Sew other half of snap directly onto seamline P, two inches in front of scrotum. Figure 32.

Hooves



Figure 33a



Figure 33b

1. Fold upper hoof (pattern piece 19) in half with right sides together, matching small dots. Stitch seamline S from small dots to lower edge of hoof piece. Figure 33a. Open seam. Figure 33b.



Figure 34

2. With right sides together, matching small dots and notches; pin hoof pad (pattern piece 20) to upper hoof. Figure 34. For easier stitching, machine stitch with pad side down.



Figure 35

3. Turn right side out. Stuff lightly. Figure 35.

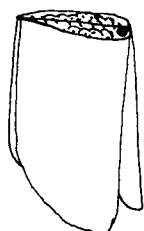


Figure 36

4. Repeat steps 1-3 for second part of hoof; then repeat steps 1-4 until all 8 hoofs are completed.
5. Matching back seams of two hoof parts, join inside top edges of hoof parts from back seams to medium dots. By hand, whipstitch inside top edges together from back seam to medium dots, being careful not to catch in outer edges of hoof parts. Figure 36.



Figure 37

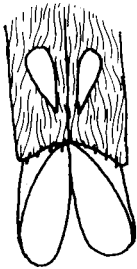


Figure 38

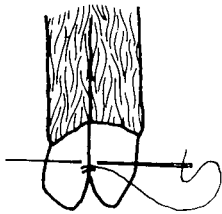


Figure 39

Attaching Hoof to Leg

1. Turn bottom edge of leg to inside; baste. Figure 37.
2. Insert hoof assembly into leg tube so that hoof pads meet at rear leg seamline, as shown in figure 38. Whipstitch in place by hand with matching thread. Remove basting thread.
3. If hoof parts splay excessively, tack together in one spot with matching thread. Figure 39.
4. Repeat for remaining three legs.

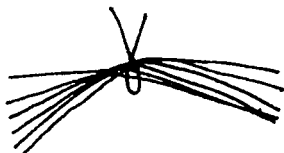


Figure 40

Finishing

1. Turn end of tail to inside as for legs, above. Figure 37.
2. Make a bundle of yarn pieces about 7" long; secure in the middle. Figure 40.
3. Insert secured end of bundle into tail opening, whipstitch in place. See finished calf, figure 41.

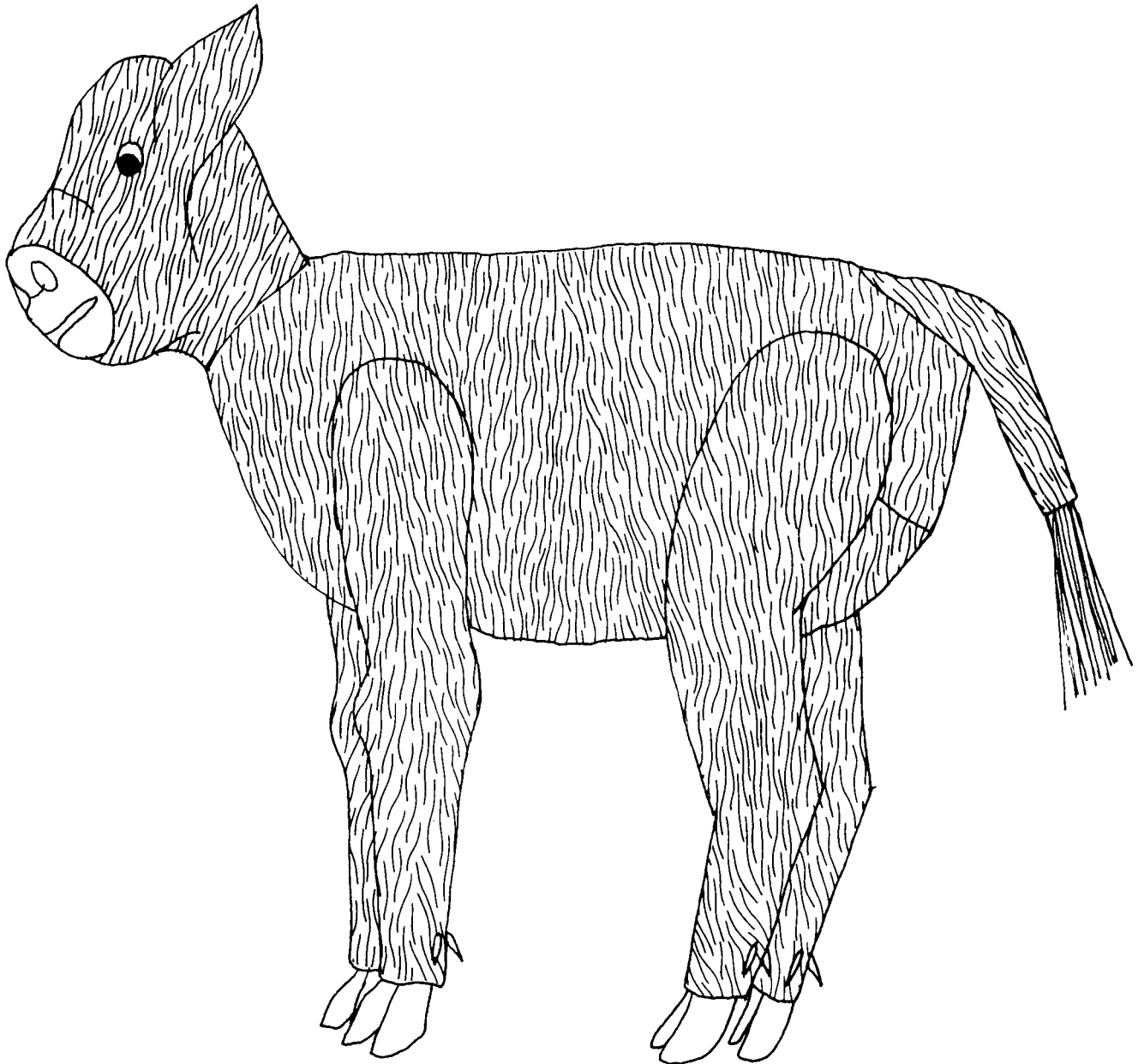


Figure 41

Attaching Hoof to Leg

Figure 37

1. Turn bottom edge of leg

2. Insert hoof carefully into hole made at top of leg. Turn leg about 90 degrees so that hoof is directed forward.

