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Amt 2405-3
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Inv. 27381

Set-in Sleeves

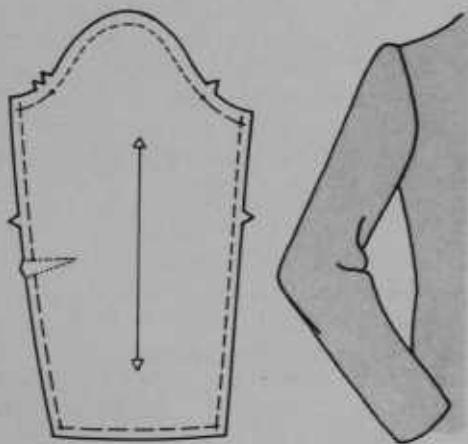
When sleeves are attached to a garment's armhole with a seam, they are called "set-in sleeves." Design variations may change the size and shape of the top of the sleeve or both.

The armhole, or armhole, may vary in shape from the standard round to the large, deep cut for a dolman sleeve. The shape of the top edge of the sleeve, or sleeve cap, can be high and very rounded for closely fitted garments or short and barely rounded for sportswear and men's wear. The length of the sleeve cap may vary from little or no fabric for ease (men's wear and coats), through normal amounts of fabric (some blouses, shirts, and dresses), to excess fabric for fully gathered puff sleeves. The sleeve length usually does not affect how the sleeves are set into the armhole.

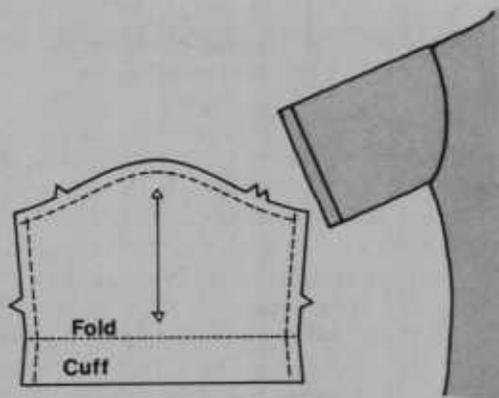
The standard round armhole and normally eased sleeve should fit with a smooth curve over the top of the shoulder. There should be no puckers or wrinkles when viewed from the side. When seen from the front, the seam should follow a straight line from the top of the shoulder to the side when the arm is hanging down naturally. Underarm sleeve seams and garment side seams usually are matched under the arm. On the garment inside, the seam allowance of the lower one-third should be trimmed close to the reinforcement stitching. The seam allowance should be finished if the fabric will ravel.

There are several options in preparing the sleeve, attaching it into the armhole, and stitching and finishing the seam. When deciding what to do, consider fabric stability or stretchability, the shape and length of the sleeve cap, your sewing machine, and your knowledge and skill.

First decide if you need to use the *set-in method* or the *flat method*. The set-in method is used for a variety of fabrics and styles, but is most often used when the sleeve cap is high and rounded. Sometimes it is better to use the flat method when there is less sleeve cap height and less ease such as in men's shirts, children's wear, some sportswear, and some patterns "for knits only."



Normal closely fitted set-in sleeve

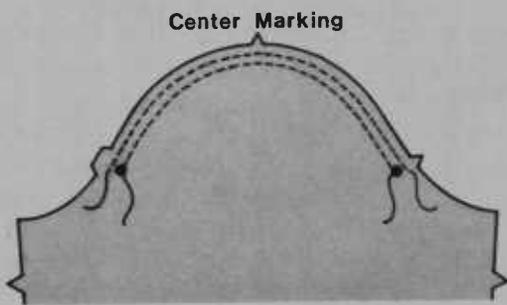


Shirt sleeve suitable for flat method construction

Preparing the sleeve for the set-in method

Use the flat method if the seams will be flat-felled for sportswear or if seam allowances are trimmed and overcast (as for knits). Sleeves sewn by the flat method do not fit as closely to the body as those attached by the set-in method. It is more difficult to check sleeve fit when the flat method is used, because the sleeve is attached to the armhole before the sleeve underarm seam and garment side seams are sewn.

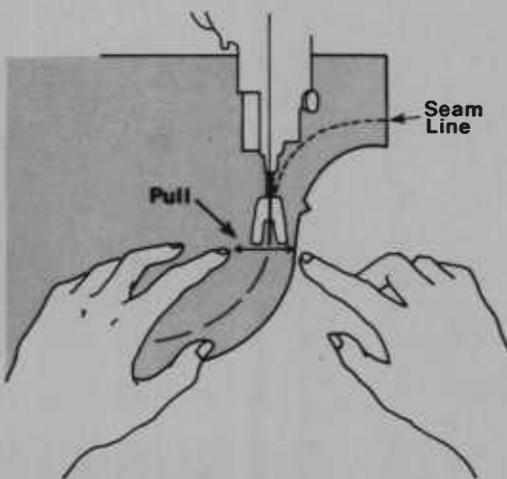
First check that you have accurately transferred all sleeve and armhole markings from the pattern to the fabric. Control the ease over the sleeve cap by one of the following methods: double stitched ease, pulled bias ease, or pulled bias strip. Then stitch, finish and press open the underarm seam. If the sleeve length is correct, complete the lower edge hem or cuff before setting in the sleeve.



Double stitched ease

Double stitched ease. Use this basic method when the fabric is stable, when the sleeve cap has a normal curve or extra fullness for gathers, or when you want more control with a difficult-to-handle fabric. It is the best method to use if you are learning to set in sleeves.

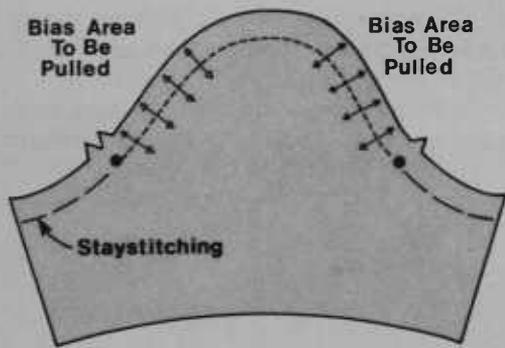
Sew two rows of ease stitching within the seam allowance. The stitch size should be slightly larger than for seams, but not as large as a basting stitch. The main row of ease stitching should be a thread's width inside the seam line in the seam allowance. The second row of ease stitching should be about 1/4 inch (6 mm) from the main row, also in the seam allowance. Leave long thread ends for adjusting the ease stitches later.



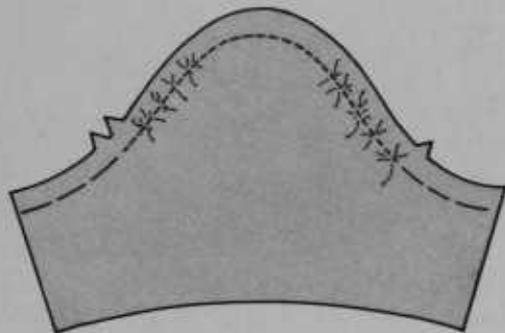
Finger position for pulled bias ease

Pulled bias ease. This is a quicker method for smooth sleeve cap styles that require only one line of stitching. Use it for moderately stretchable knit fabrics or loosely woven fabrics without a firm, durable press finish. Use this method only if you have a good understanding of the bias and if you can work with and against the fabric yarn directions. You may wish to practice this method on a sample.

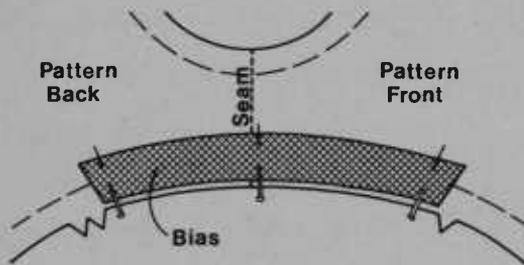
Staystitch with regular length stitches, 10 to 12 per inch (5 per cm), from the underarm seam to the first notch. Stop, but do not cut, the thread; do not remove the sleeve from the machine. Place your forefingers or two lead pencil erasers opposite each other on either side of the presser foot, slightly in front of the needle. Pull the fabric off grain by pulling the fingers or pencils away from each other. Take four or five stitches while pulling. Stop the machine. Replace the fingers or pencils slightly in front of the needle, pull, and stitch.



Areas to pull in bias direction



Sleeve with pulled bias ease



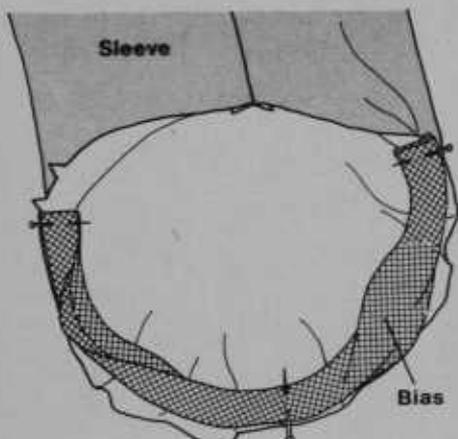
Measure bias strip by length of garment armhole

Repeat this process across the top of the cap until you reach the second notch. Stitch from the second notch to the underarm of the sleeve without pulling the fabric off grain.

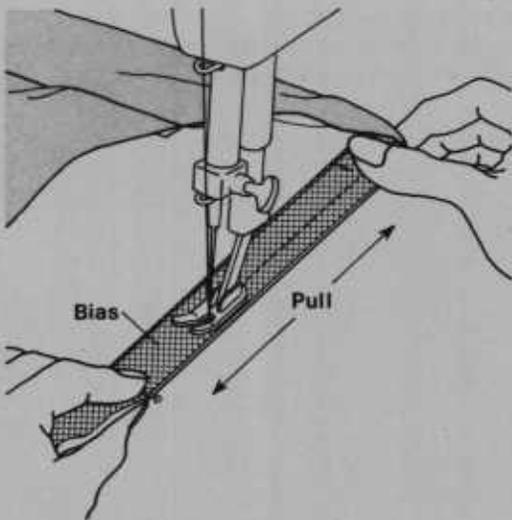
Pulled bias strip. Attempt this method only if you have experience and skill in handling a variety of materials. Use it with synthetic leathers, suedes, and firmly woven fabrics where no ease or a very limited amount of ease is possible, and where the garment will be lined.

Prepare a strip of lightweight flannel, lamb's wool interlining, or polyester tie interfacing on true bias, 1 1/2 inches (3.7 cm) wide, and the length of the garment armhole above the notches. Mark the major matching points from the garment armhole pattern. Place the bias strip on the wrong side of the sleeve with the cut edges matched.

Pin the bias strip to the sleeve cap matching major points and distribute the ease on the front and back of the sleeve cap.



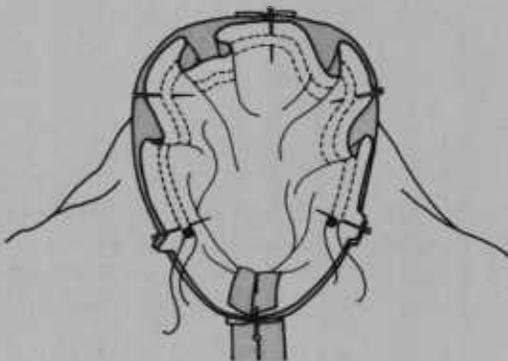
Pin bias strip to sleeve cap



Stitch and stretch bias strip

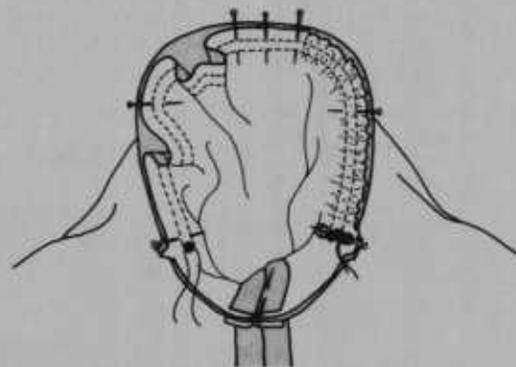
Start stitching at either the front or back notch. Stitch through the bias strip and sleeve just inside the seam allowance. Stretch the bias strip ahead of the stitching in the direction that the machine stitches; the feed dogs will do the work on leather or heavy fabric. When finished, the bias will relax and provide a small amount of ease and support for the sleeve cap.

Setting the sleeve into the armhole



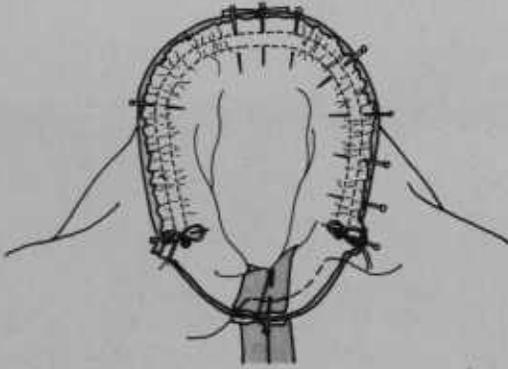
Set-in method of matching and pinning at underarm seam, top of sleeve cap, notches, marking points

Set-in method. Turn the garment wrong side out and the sleeves right side out so that right sides of the fabric are together. Place the sleeve into the armhole. Match and pin the underarm seam, the top of the sleeve cap, the notches, and any marking points, especially those between the notches and the top of the sleeve cap.



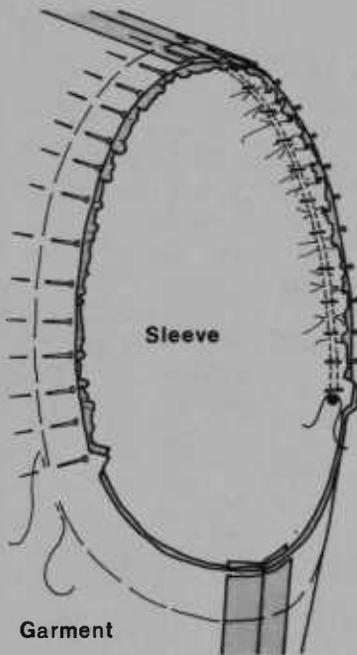
Pull bobbin threads until sleeve fits armhole

If the sleeve nearly fits into the armhole, place the pins on the garment side. If the sleeve cap has a large amount of ease or gathers to control, place the pins on the sleeve side. You may wish to read **Stitching the armhole seam for the set-in method** before you completely pin in the sleeve.



Pin together sleeve and armhole

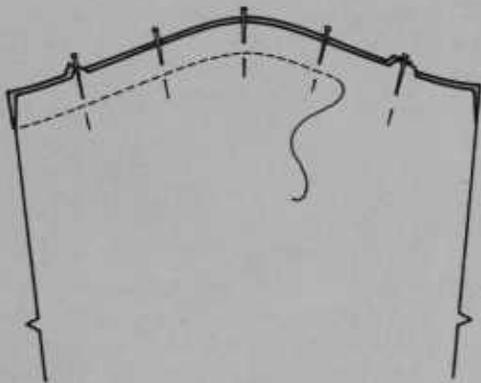
If you double stitched the sleeve to control the ease, pull the bobbin threads from both stitching lines until the sleeve hole matches the armhole. Evenly distribute the ease along the cap seam line. Pin frequently to hold the sleeve in position on the armhole seam and to prevent the ease from shifting. The pins should catch just a few threads of both layers of fabric.



Pins on garment side when there is little or no ease

Flat method. Use the flat method when the cap is not highly curved and there is little difference between the armhole measurement and the sleeve cap measurement between the front and back notches. This method works best when there is little or no ease.

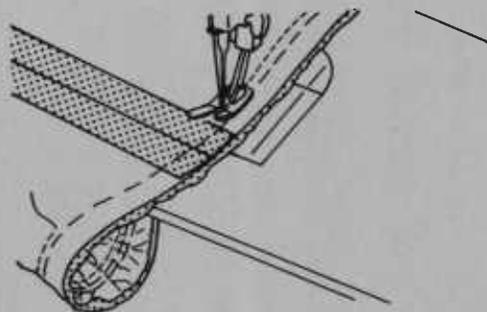
Begin by pinning the sleeve to the armhole (right sides together) matching underarm seam edges, notches, and shoulder markings. Use pins as needed to hold edges together and distribute any ease.



Flat method of matching and pinning at underarm seam, top of sleeve cap, notches, matching points

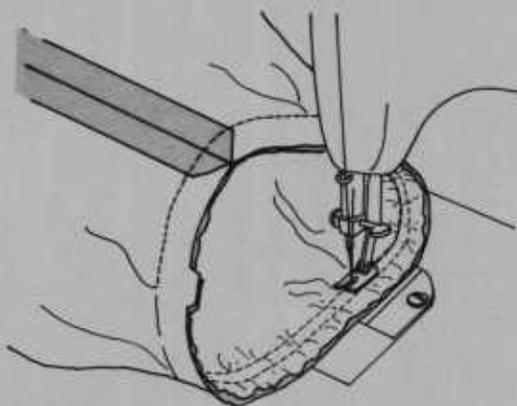
Stitching the armhole seam for the set-in method

You may wish to hand or machine baste the armhole seam before permanently stitching it. Baste the sleeve into the armhole so that you may try on the garment to check the fit and hang of the sleeve before permanently stitching it.



Sewing with garment side up

Garment side up. If the set-in sleeve has moderate or little ease and was pinned on the garment side, stitch the seam with the garment side up. The machine's feed dogs will work in small amounts of ease and make the seam smooth. The seam is easier to sew if you have a free arm sewing machine, but you can sew it on a flat bed machine.

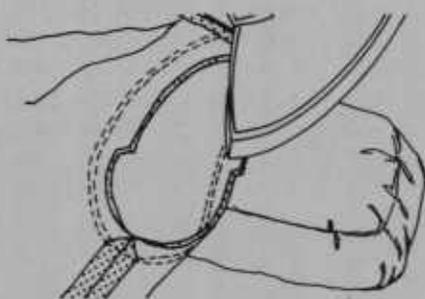


Sewing with sleeve side up

Sleeve side up. When the sleeve has a large amount of ease or if the sleeve cap is a gathered or darted style, stitch the armhole seam with the *sleeve side up*. You will be able to avoid tucks or folds and distribute gathers evenly. A large needle or a seam ripper also helps you evenly push the ease under the presser foot as you stitch it.

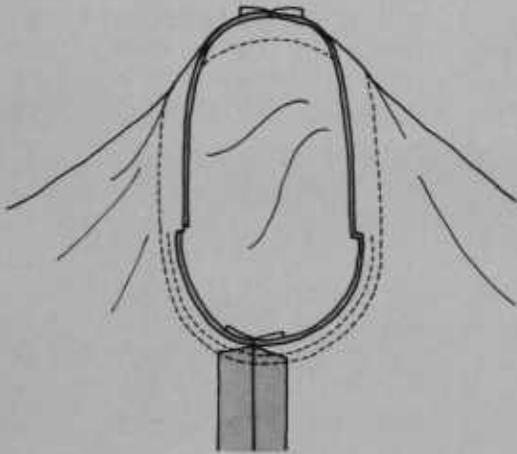
Sewing the seam. Start stitching at one notch, stitch around the lower armhole, past the second notch, and over the top of the sleeve cap. Continue stitching past the first notch and around to the second notch, about 1/8 inch (3 mm) *inside* the first stitching. This stitching procedure will both reinforce the lower armhole and help keep the lower armhole in a smooth curve.

Finishing the armhole seam for the set-in method



Press from sleeve side

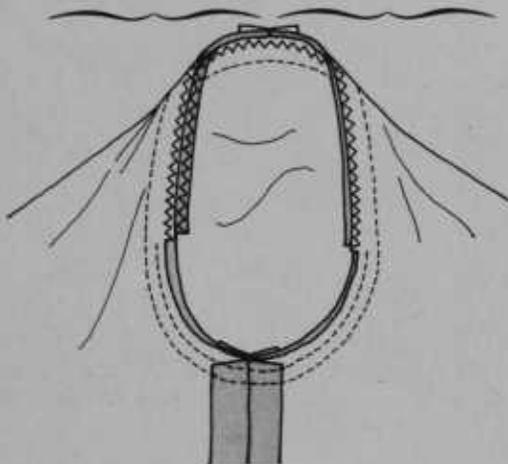
Press the armhole seam from the inside of the sleeve. Use the tip of the iron to smooth the ease over the cap. Touch the tip of the iron to the seam line, then stroke the iron smoothly out toward the cut edge of the seam allowance, and stroke again in toward the sleeve.



Trim seam allowance between notches

Sleeve Cap
Finished As Two
Separate Seams

Sleeve Cap
Finished
As One Seam



Finish seam if fabric ravel

Turn the armhole seam allowance toward the sleeve but *do not press*.

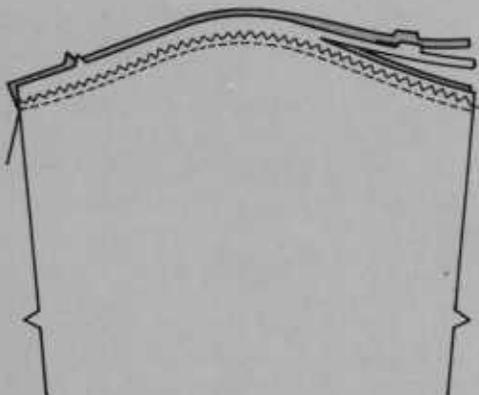
Trim the lower portion of the armhole between the notches. If the fabric does not ravel, trim away the seam allowance close to the second row of reinforcement stitching. For fabric that may ravel slightly, use a zigzag stitch close to the reinforcement stitching, and trim close to the zigzagging. If you do not have a zigzag stitch, trim, then hand overcast the seam allowance. If the fabric is stiff or may ravel badly, trim the seam allowance, leaving 1/4 inch (6 mm), and bind with bias binding.

Seam finishes for the upper portion of the armholes include straight stitching, hand overcasting, zigzag machine stitching or handstitching a mock French seam. Seam allowances of the garment and cap of the sleeve may be finished together or finished separately. If you finished them separately, finish the sleeve seam allowance slightly wider than the garment seam allowance.

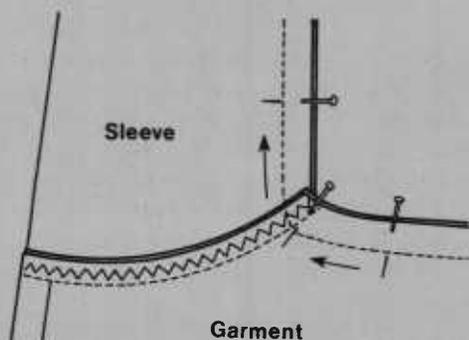
Stitching and finishing the armhole seam for the flat method

If you wish to fit the sleeve and garment, hand or machine baste both the armhole seam and the side-underarm seam before permanently stitching them. Try on the garment to check the fit. Remove the stitching from the side seam-underarm seam for several inches on both sides of the armhole seam so that you can stitch it.

Machine stitch with the sleeve side up. Diagonally trim seam allowances at the shoulder or yoke where they cross the armhole seam. Finish the armhole seam by constructing a flat-felled seam, using an appropriate seam finish, or using another row of straight or zigzag stitching 1/4 inch (6 mm) from the first row. If you use an additional row of stitching, trim the seam allowance close to the second row of stitching. Press the seam allowance toward the sleeve.

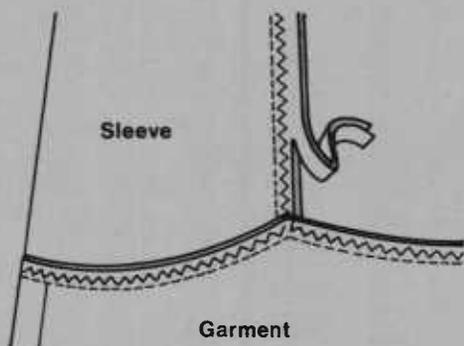


Machine stitch and finish sleeve-armhole seam



Match, pin, stitch side and underarm seam

Match notches and pin right sides of fabric together for the underarm seam from the side of the garment to the lower edge of the sleeve. Stitch a continuous side and underarm seam from bottom of garment to lower edge of sleeve. Diagonally trim arm-hole seam allowances where they cross the underarm-side seam.



Finish side and underarm seam

Finish the underarm-side seam by using a flat-felled seam, appropriate seam finishing, or another row of straight or zigzag stitching on the seam allowance.

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Oregon State University

Selected References

- Coats and Clark. *Coats & Clark Sewing Book: Newest Methods A to Z*. Western Publishing Company, Inc., 1976.
- Reader's Digest. *Complete Guide to Sewing*. The Readers Digest Association, Inc., 1976.
- Simplicity. *Simplicity Sewing Book*. Simplicity Pattern Co. Inc., 1975.

