

SWISS MAGIC HOME STUDY COURSE

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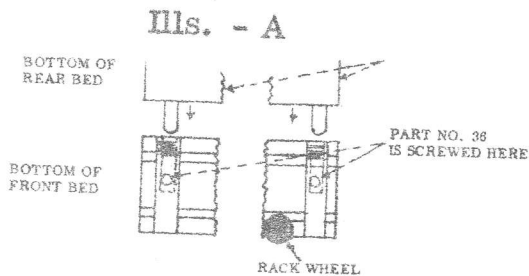
A Service of the American Knitting Machine Guild

Lesson 1 Page 1

This simplified Home Study Course is intended to be used in conjunction with the technical Instruction Book which accompanies your machine. **IMPORTANT:** Read pages 1 - 7 very thoroughly before operating your machine. On pages 3 and 4 you have a numbered photograph of the machine and parts. Read and study these two pages very thoroughly before even unpacking your machine because everything in the Instruction Book is always identified by the specific name of the part such as Slide, Needle Bed, etc. As a suggestion, don't try to accomplish everything in the manual in one day. Understand each step thoroughly as you progress and you will find you will have better results.

UNPACKING MACHINE

After unpacking your machine wipe the machine with a dry cloth to clean excess oil, etc. Clamp the machine on a secure table. You will notice Swiss Magic comes in two parts, front and rear beds. To prevent the machine from pulling apart, take Part 36, page 4 in the Instruction Book and screw in as shown in diagram below. Ills. A



FRONT NEEDLE BED (Page 3, Part 1)

REAR NEEDLE BED (Page 3, Part 2)

For the formation of stitches, the needles slide up and down in the needle channels.

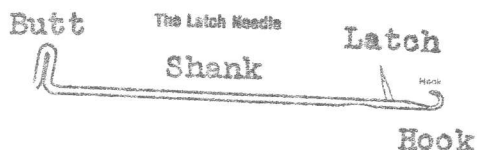
IDENTIFICATION OF PARTS

Your Swiss Magic has 400 needles, each needle representing a stitch. There are 200 needles on each bed. The fundamentals of knitting are knitting and purling, such as knit 1 purl 1, knit 2 purl 2. On the Swiss Magic the front bed is the knit side of your knitting, the rear bed is the purl side. Example: If you were to knit 1 purl 1, you would bring one needle into work position on the front bed and bring up an alternate needle on the rear bed which would be a purl stitch. You would bring up the amount of needles necessary in this combination in accordance with the pattern you are following. With 400 needle availability you should be able to knit any size garment you want.

NUMBERED SLIDE RAILS (Page 3, Part 6 and 7)

The slide is moved left and right on the slide rails when knitting. The numbers on the slide rails serve for counting the number of stitches. One graduation - one needle - one stitch.

LATCH NEEDLE



RACK WHEEL (Page 3, Part 9)

The rack wheel situated at the lower left hand corner of the machine is numbered from 1/2 to 7. Its purpose is to shift the front needle bed from left to right in making zigzag patterns. It is also used in casting on stitches for different combinations of needles. For example: To cast on every other needle, it must be set at 1/2. To cast on using every other needle, it must be set at 1. When casting on every third needle, as is the case with 4-ply worsted and other heavy yarns, it must be set at 1. Always be certain the rack wheel is set properly for the combination of needles set up.

ROW COUNTER (Page 4, Part 22)

The device on the rear slide which counts the rows automatically.

TRIPPER (Page 3, Part 10)

The triangular metal piece attached to the rear needle bed which trips the handle on the row counter to make it register.

WOOL FEEDER (Page 4, Part 25)

The wool or yarn feeder assures a perfectly even flow of yarn. Adjust the set screw (illustrated on page 3, part 27 of the Instruction Book) so that there is a slight tension on the yarn as it is pulled through the feed.

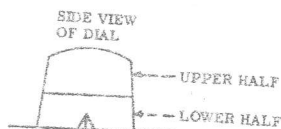
SLIDE - TOP VIEW (Rear Slide - Page 3, Part 13)
(Front Slide - Page 3, Part 12)

The purpose of the slide is to move the needles up and down in the channels according to the pattern you have selected.

DIALS (Page 4, Parts 20 and 21)

Both the front and rear slides have their own identical single central dials, which control the slides completely. Because each half of the slide has its own separate dial control, it is possible to produce a wide variety of pattern stitches. The dials on each slide are identical, but they need not have the same setting at all times. Different settings produce different patterns.

Each dial is divided into an upper and lower half (Illustration B). The upper half of each dial controls the pattern. It's five different possible settings produce a particular movement of the needles.



Ills. B

THE DIALS OF YOUR MACHINE

The upper half of the dial has just five positions -

- N - Normal knitting (Ribbing)
- P - Patent stitch (a built in Fisherman's Rib)

- White R - Use in circular knitting
- Black R - or semi-circle

- O - Open or free move. Use if necessary to move slide from one side to the other without knitting.

The lower half of the dial, numbered from one through ten, controls the size of the stitch or tension. It may be compared to ten different sizes of knitting needles built into the machine. The numbers do not, however, compare exactly with sizes one through ten of hand knitting needles. One is the smallest stitch size, ten the largest. The size of stitch to be used depends on the weight of yarn and stitch gauge desired.

THE FOUR NEEDLE POSITIONS (Page 5)

1. Rest Position - Abbreviation RP. The needle butts are at the bottom of the lower slide rail. They are resting in this position when not in operation.
2. Working Position - Abbreviation WP. The needles are in this position normally during knitting.
3. Upper Working Position - Abbreviation UWP. The needles are in this position when working various special patterns, such as fair-isle knitting and during certain shaping operations.
4. Holding Position - Abbreviation HP. In this position, the needles are raised and the needle butts are just below the upper slide rail. The needles are not operated, but when knitting a row the thread is laid over these non-working needles. This position is required for various special knitting effects such as heels, shortened rows, etc.

THE FORMATION OF THE STITCH (Page 7)

COMB (Page 4, Part 33)

The cast on comb forms the cast on edge and also acts as weight. The weight is essential for a good knitting operation as it pulls the knitting down evenly and prevents dropping stitches. The comb consists of two halves which are the same width as the needle bed when joined.

The comb is hung into the cast on stitches immediately after the first row. It is raised between the stitches and the wire threaded through the eyelets of the comb.

SIDE WEIGHTS (Page 4, Part 34)

These should be used when the side stitches require some additional tension. They should always be used when only every other needle is in operation for circular, semi-circular, or single bed knitting.

TOOLS (Page 4, Parts 41)

The Green Tool - The single transfer eyelet on the tool is used for decreasing single stitches at the edge of the knitting, for certain patterns, for transferring stitches from one needle to another, and for binding off. The double transfer eyelet is used to transfer two stitches at once. It is used in certain patterns and other knitting operations.

The Yellow Tool - The hook of the yellow tool is valuable in picking up dropped stitches. The latch needle of the yellow tool is used in picking up stitches which have been dropped several rows and in binding off.

MULTIPLE TRANSFER TOOLS (Page 4, Part 42)

These are used when several stitches are to be transferred to other needles.

STOCKING STITCH BAR (Page 4, Part 43)

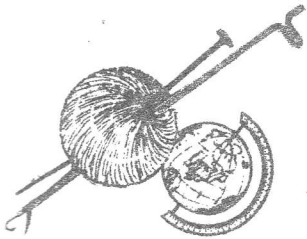
This is used when knitting on the single bed. It prevents the stitches from riding up on needle shank.

CHANGING NEEDLES

Bent needles and needles with bent latches must be replaced. To do this remove both end pieces and slide rail fasteners. The rails can then be pushed to the right. Needles can be removed and replaced.

YARN WINDER

When winding yarn onto cone, let yarn run through fingers. This keeps a tension on yarn so it doesn't wind loose on cone. CAUTION - Only wind on lower half of cone.



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Lesson 2 Page 1

ABBREVIATIONS

RB - Rear Bed	UWP - Upper Work Position
FB - Front Bed	K - Knit
RW - Rack Wheel	P - Purl
WP - Work Position	Sts. - Stitches
HP - Hold Position	Welt Rows - First row of cast on sts. plus the next 2 rows with dials set on "R"

Hereafter these abbreviations will be used.

CASTING ON

First wind yarn on a cone with cone winder. Use a Sport Weight yarn. Set RW on 1/2. With Green Needle Selector bring 15 needles into WP on the RB in the center of the machine. With Green Needle Selector bring out 15 needles into WP on the FB in this combination as illustrated.

. 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1 .	- REAR BED
1 . 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1 .	- FRONT BED

Move the Slide to the left side and back, to line up the needles. Set cone of yarn on cone holder. Thread yarn through Tension Spring and Yarn Takeup. Drop yarn between the two beds. Holding yarn in left hand underneath and right hand above, guide yarn into slot of the Slide, Part 14a, page 3. Set both dial controls to "N" and both tensions to "6". (RB N6 / FB N6) Holding the end of yarn underneath the needle bed, with left hand, move Slide to the left thereby forming a row of cast on sts. into which the small comb with one bar weight is hung. Be sure to center the comb. Set Dials to RB R6 / FB R6 (Black R). Knit 2 rows. These give your welt selvage edge. Set dials to RB N6 / FB N6 / Set row counter to "0". Knit 15 rows. You just knitted 15 rows in combination of K I P1.

PURL MESH

Set RB dial to "P". (RB P6 / FB N6) Knit 20 rows. You will notice on the RB the yarn is placed in the hooks of the needles without knitting, while the FB is knitting as usual. On the next row both beds will knit. The RB carries the yarn on one row and knits it off on the next row, forming a Purl Mesh Pattern.

FISHERMAN'S RIB

Set FB dial to "P". (RB P6 / FB P6) Knit 20 rows. On one row the RB will carry the yarn while the FB will knit the row. On the next row the RB will knit the row while the FB will carry the yarn. This forms a Fisherman s Rib Pattern. Row Counter - 55. Set dials to RB N6 / FB N6. Knit 4 rows.

INCREASING

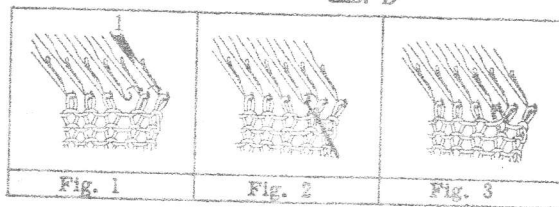
Regular Increase - Using every other needle, bring out one extra needle into WP on each bed on the side the slide is on. Move the slide across, and the two new sts. will be cast on automatically. Hang the side weight in these new sts. You have done a regular increase. Regular increasing must always be done on the side the yarn is on and one st. from front and rear bed must always be increased at the same time. That is, 2 sts. must be increased at once on the double bed.

Mass Increase - Now bring up 3 new sts. into WP on each bed on the side the slide is on, using every other needle. Move the slide across. Six new sts. have automatically been cast on. Hang the side weight in these new sts. An increase of more than 2 sts. on the double bed is called a mass increase. It must always be done on the side the slide is on. If you wish to increase more sts. than can be weighted down by the side weight, it is necessary to rehang the cast on comb.

FASHION INCREASING

Using every other needle, bring out one extra needle on each end of each bed into WP (Ills. D). With single transfer tool move the 2 outside sts. (Fig. 1) on both beds to the 2 empty needles you just moved into WP. With yellow transfer tool pick up a st. from the 2nd sts. needle (Fig. 2) from the row below, and place it on the needle just emptied.

Ills. D



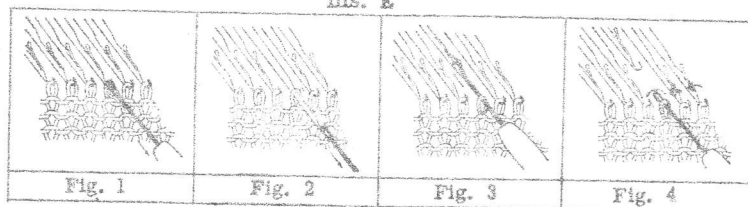
DECREASING

Single Stitch Decrease - This is fully explained on page 11 in the Instruction Book.

FASHION DECREASING

Move the 2nd sts. from each end of each bed to the 3rd needle from each end of each bed. Move the 1st sts. of each end of each bed to the 2nd needle which was just emptied.

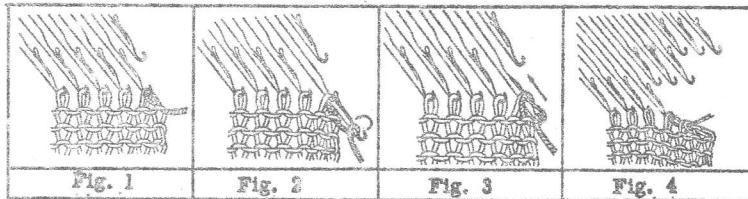
Ills. E



DECREASING MORE THAN ONE STITCH Ills. F

Use the following method to shape armholes, etc. Slide should be on same side of decrease. Use green tool. Transfer end st. to next needle (Fig. 1). Manually push needle up (push on heel of needle) till both sts. are behind latch. Rap yarn around needle (Fig. 2). Pull needle down manually (Fig. 3) till new st. is formed (Fig. 4). Continue this procedure as many times as pattern calls for.

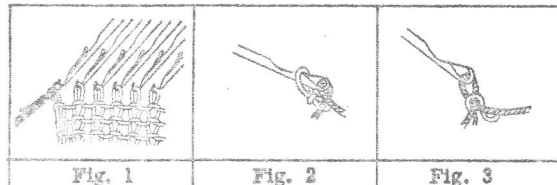
Ills. F



BINDING OFF

This method is particularly suitable for binding off at the neckline, inasmuch as it produces an elastic bound off edge, which looks as if it were bound off by hand. The slide must be on the same side you are binding off. Hook latch tool into hook of the 1st needle on the RB, yarn toward FB; with left hand pull needle up and down until st. slides onto tool. (Fig. 1) Now with yarn toward RB, hook tool into next st. on FB, and place this st. on tool so that both sts. are behind the latch. Place yarn into hook of tool (Fig. 2), pull yarn through sts. on tool (Fig. 3). Now with yarn toward FB, place next st. on RB on latch tool and draw yarn through both sts. on tool. Repeat this procedure until required number of sts. have been bound off.

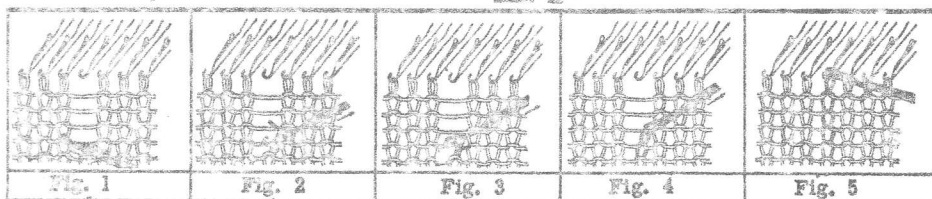
Ills. G



PICKING UP DROPPED STITCHES

The method shown in Ills. H. is for single bed knitting. Insert hook of latch tool into st. below the dropped st. from back of work (Fig. 1). Push latch tool toward you so the loop of the st. is behind latch. Cock upward so hook grasps the horizontal yarn in row above (Fig. 2). Pull latch tool away from you (Fig. 3) till you form st. (Fig. 4). Repeat till you have all sts. picked up then hook last st. to needle on machine.

Ills. H



SWISS MAGIC HOME STUDY COURSE

Lesson 2

Page 4

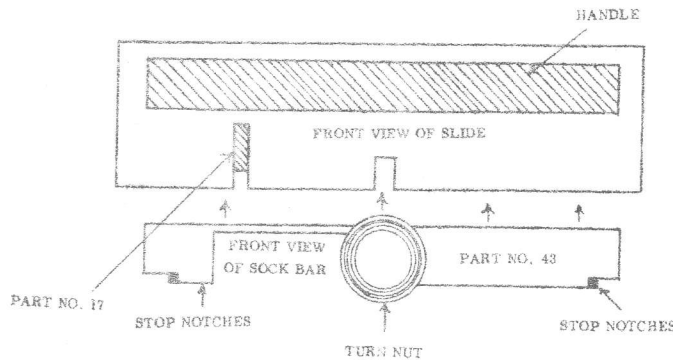
PICKING UP DROPPED STITCHES ON DOUBLE BED

When working on the double bed, and you drop a st. near the beginning of the work, it probably would require less time to start from scratch than to attempt to pick up the st. However, if you have completed quite a bit of knitting, you should attempt to pick up the st. you have dropped. If you are using every other or every 3rd needle, transfer all FB sts. to empty needles on RB, remove the FB completely. You will now be able to see exactly where the dropped st. is and will be able to pick it up more easily. Using the Yellow Latch Tool, crochet the st. back up (Ills. G). If it is a knit st. insert tool from the side facing you; if it is a purl st. insert tool from the other side. You will find Fisherman's Rib or half Fisherman's Rib more difficult to pick up than plain knit and purl, but this can be done by simply examining the other sts. and experimenting a little until the st. is picked up properly. If every needle is being used on the double bed, it is necessary to rip back until you reach the row where the st. has been dropped (Page 9 in pink Instruction Book).

If an entire row of sts. is dropped from the machine or part of a row, the best method to pick them up is as follows: Remove all sts. from the machine. Carefully rip down a few rows until you have reached a point where the loops of all sts. are clearly visible. Using a hand knitting needle, pick up the entire row on the needle (Ills. 12, Page 12 Pink Instruction Book). Then transfer the sts. from the needle onto the machine. This method is also of value when working in a complicated pattern st.

PREPARING MACHINE TO BE USED AS A SINGLE BED KNITTING MACHINE

Remove both slides from machine. Now remove front bed from machine. Return rear slide to machine. Below you will see front view of slide. Attach stocking bar or sock bar to front of slide as illustrated in diagram below. Loosen turn nut first. After you put stocking bar, Part 43 against slide, tighten turn nut.



CASTING ON

To cast on the single bed, put desired number of needles into HP. Thread yarn through yarn feed and slide, pulling through enough yarn to cast on manually. Make a slip knot in the yarn and put the knot on the 1st needle on the right. Loop yarn around each needle in a counter clockwise fashion. The cast on sts. should be behind the latches. After casting on, pull excess yarn back through the yarn feeder to take up the slack. Hang the comb behind the sts. with the wire resting on the shanks of the needles. Holding comb up slightly to release it from resting on the shanks, knit one row. Knit a second row. Attach stocking bar and continue to knit.

TRANSFER OF STITCHES FROM DOUBLE BED TO SINGLE BED

When knitting with every other needle on the double bed, or in such combinations as K 2 P 2, K 3 P 3, the sts. may easily be transferred to the single bed. Transfer the front bed sts. to the empty needles on the rear bed. Remove the front bed completely. Attach the stocking bar and knit.

TO MAKE A HEMMED BAND IN STOCKINETTE STITCH

A sweater pattern which calls for a stockinette st. hem rather than ribbing at the bottom may be made as follows: Using every needle, cast on twice the number of sts. called for in the pattern. For example: If pattern calls for 100 sts. cast on 100 on each bed, 200 in all. Then knit round for the length of the hem required. Transfer front bed sts. to adjacent needles on rear bed so there are 2 sts. on each rear bed needle. Continue knitting in stockinette st. on single bed.

VARIOUS SINGLE BED PATTERNS

1. Multicolored Patterns - There are several ways of knitting multicolored patterns.
 - a. Stripes: Replace the wool in yarn feed with contrast color. If only a few rows of each color are to be knitted, do not thread the yarn feed, but thread contrast only through feeding eyelet and slant yarn back so it does not slip out of eyelet.

- b. FAIR ISLE DESIGNS: Turn pattern dial to 0, so that only needles in UWP will knit. *Select needles for main color and put these needles in UWP, making sure latches are open. Knit with main color. Now remove main color from feeding eyelet (not from tension spring or yarn take-up). Move slide to other side. Select needles for contrast color, put these needles in UWP and knit with contrast yarn threaded only through feeding eyelet (hold onto yarn by hand). Repeat from * for each row of knitting.
- c. Holding Position Patterns: These are illustrated in the Pink Instruction Book, Page 31.

2. Lacy Patterns - These are made by transferring sts. onto the adjacent needles and leaving the empty needles in WP.
3. Holding Position Patterns - One Color - Bring certain needles into HP, knit so many rows, and return needles to UWP. By varying the needles pushed into HP it is possible to knit a great variety of embossed patterns.

USE OF CONTRAST YARN AS A STITCH HOLDER

Whenever it is necessary to remove sts. from machine and replace them later, they may be held by means of knitted st. holder consisting of several rows of a contrasting color of scrap yarn. To demonstrate this procedure, cast on 30 sts. on single bed. Knit 20 rows. Now thread contrast color of yarn through yarn feed. Knit 6 rows with contrast yarn and remove from machine. Looking at purl side of knitting you will notice the last row of main color is held in place by the contrast. The uses of such a knitted st. holder are as follows:

1. To decrease several sts. within a row using the single yellow transfer tool, hang the sts. of main color back on the needles. Hang 1st st. on needle, then 2 sts. on 2nd needle. The 2 sts. on one needle represent a decrease of 1 st. within the row. Repeat this decrease until all sts. are hung back on machine. Now rip out contrast yarn and the decrease row is completed.
2. To increase several sts. within a row make another swatch and knitted st. holder and remove from machine. Hang sts. back on needle as follows: Place 1st 3 sts. on 1st 3 needles. Pick up a loop from the row below on the 3rd st. and place on 4th needle. Repeat across the row. Rip out contrast yarn.
3. Whenever a pattern calls for removing sts. on a st. holder.'

POCKETS

There are two types of pockets that may be done on Swiss Magic - The knit-in pocket and the set-in pocket. The knit-in pocket is made in one piece with the garment. The set-in pocket has a lining which is knit separately. The following directions will demonstrate how each is done.

Knit-in Pocket - Cast on 40 sts. and work 40 rows. End with yarn on right. Put 10 needles at left into HP. Knit the row. Put 10 needles at right into HP. Knit the row. Place side weights on each side of 20 remaining needles and rehang side weights every 5 rows. Work 40 rows on 20 sts. End with yarn on right. Put the

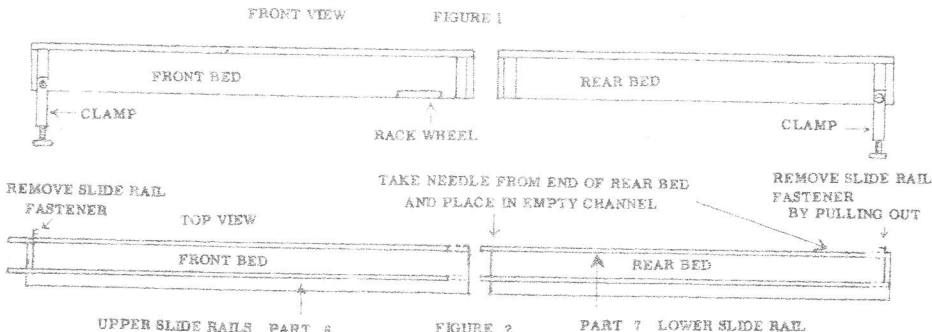
10 needles at left back into UWP. Knit the row. Put the 10 needles at right into UWP. Knit the row. Continue to knit.

Set-In Pocket - First make the pocket lining. Cast on 20 sts. on single bed, work 40 rows and remove on scrap yarn. Cast on 40 sts., work 40 rows ending with yarn on right. Put 10 needles at left and 10 needles at right into HP. On center 20 sts. knit several rows with scrap yarn and remove from machine. Now hang the 20 sts. of pocket lining onto the 20 empty center needles. Be sure to place side weights on pocket lining. Return all needles to work and continue to knit. After piece is finished, hang the 20 sts. taken off on contrast yarn back onto the machine for pocket hem and knit for 1 inch in K 1 P 1, or any pattern desired. Bind off and sew pocket.

HOW TO USE SWISS MAGIC AS A 400 NEEDLE SINGLE BED

First you must have a table or surface to hold your Swiss Magic. If building a table it must be at least 6 ft. long. We suggest a piece of plywood 1 in. thick, 2 ft. wide and 6 ft. long. You can get easy to attach legs in whatever height you desire at any building supply store. Remove both slides and lay beds on table - don't clamp. Remove plastic ends. Remove L-shaped screws Part No. 36. Watch that you don't bend row tripper. Lay beds side by side as shown in Illustration, Fig. 1. Leave a space between the two beds at this time. Arrange clamps as shown. Pull lever down. That releases slide rails, Parts 6 and 7 on both front and rear bed to allow slide rails as shown in diagram to be pushed to left about 2 in. In getting slide rail started, take a block of wood and tap edge of rail. Do not use a hammer on rails. Remove end needle from FB - that is the needle on right side and place it in channel between two beds. Remove any extra needles at end that are not covered by rail. Butt ends together being careful to move them in evenly having rail from rear bed going into rail guide in front bed. Butt firmly and evenly. Tighten end clamps securely. You are now ready for single bed knitting.

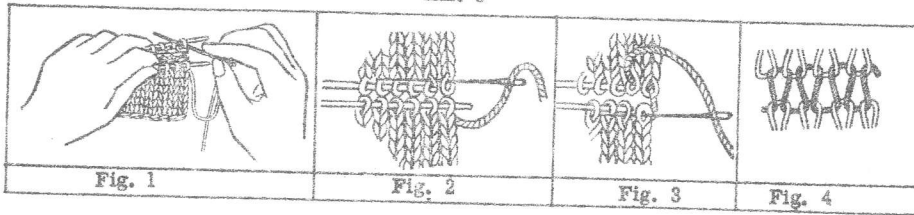
USING SWISS MAGIC AS A 400 NEEDLE SINGLE BED MACHINE
ARRANGE CLAMPS AS SHOWN IN FIGURE FRONT VIEW



YOU ARE FACING FRONT OF MACHINE
PUSH SIDE RAILS ON BOTH BEDS IN LEFT DIRECTION

FINISHING OF GARMENT - WEAVING

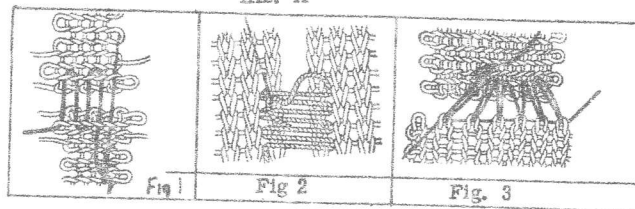
Ils. J



This is the method used to weave toes of socks. Take the sts. off of the machine onto 2 hand knitting needles (Ils. J, Fig. 1), the RB sts. on one needle, FB sts. on the other. Leave a length of yarn about 3 times the width of the work. Thread tapestry needle. With wrong sides together (on inside) holding work with left hand place left forefinger between the 2 pieces on the side opposite to that which you have threaded tapestry needle. Insert tapestry needle into 1st st. from outside to inside (from right side to wrong side) remove st. from knitting needle. Take next st. on same knitting needle and insert tapestry needle from inside to outside (Fig. 2) (from wrong side to right side), leave this st. on the knitting needle. Bring tapestry needle to other side (front knitting needle); insert it in first st. from outside to inside and remove sts. from needle (Fig. 3). Insert needle in next st. from inside to outside and leave on knitting needle. Continue this process all the way across the row (Fig. 4). Take care not to pull yarn too tight or too loose keeping sts. even.

HOW TO WEAVE SEAMS

Ils. K



Method 1 (Ils. K, Fig 1) - Thread tapestry needle. With wrong sides together insert needle in 1st st. on right from inside to outside and pull yarn through. Now pull tapestry needle through next st. on same side from outside to inside and pull yarn through. Do the same on left side and repeat process throughout. Do not pull yarn too tight or too loose. This method is useful in seaming sides of garment.

Method 2 (Ils. K, Fig. 3) - This is used to put together 2 pieces of knitting running in different directions as shown in illustration. Put all sts. of one piece onto a knitting needle, with wrong sides together holding the sts. on knitting needle against the side seam of the other piece. Insert left forefinger between the 2 pieces. Thread tapestry needle. Bring tapestry needle over to the side with 1 knitting needle.

1. Pick up one cross bar between 1st and 2nd row. Pull tapestry needle through. Bring tapestry needle over to other side.

2. Pick up 1st st. on knitting needle from outside to inside (as if to knit), remove from knitting needle. Take next st. from inside to outside (as if to purl), leave it on knitting needle. Repeat 1 and 2 once more. Bring tapestry needle over to other side.
3. Pick up 2 cross bars at a time, then take 1st and 2nd sts. on knitting needle in the same manner as before.

Repeat this whole process 1 to 3 until you are finished. Pull yarn tight enough so that seams will be invisible. You should take fewer sts. on knitting needle to correspond to number of cross bars because there are more cross bars than sts. This method is also useful when setting in sleeves. However, sts. on sleeve would have bound off edge rather than be placed on hand knitting needle.

HOW TO SEW

Ills. L

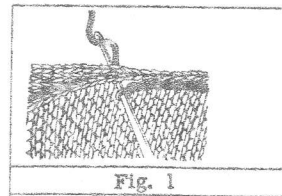


Fig. 1

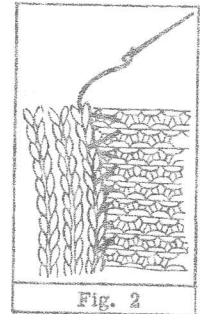


Fig. 2

Method 1 (Ills. L, Fig. 1) - With right sides together put crochet hook into both pieces. Bring yarn behind work. Catch yarn inside the hook and pull it through to the other side. Do not pull yarn too tight or too loose. Insert hook into next st. and work in same manner as if to chain. This method is useful in setting in sleeves and in sewing top and skirt of garments together.

Method 2 (Ills L, Fig 2) - Fold hem or desired length of work toward wrong side. With threaded tapestry needle pick up the edge st. on hem from back to front (over-cast st. or whipping st.), pull it through. Bring tapestry needle over to wrong side of work and pick up one loop of the hem line. Repeat this process. This method is used in sewing hem, facing or pocket in place.

PROBLEMS AND HOW TO SOLVE THEM

The Slide moves heavy - This may be caused by any of the following:

1. Wool tension too tight - Loosen the tension screw slightly.
2. St. size too small or large for weight of yarn being used - Adjust the st. size dial.
3. The machine is running dry - Oil it.
4. Incorrect combination of needles.

Jammed Slide - This may be caused by:

1. Incorrect line up of needles
2. Careless handling or forcing of rack wheel
3. Control knobs not engaged in proper position.
4. Bent latch on needle or bent needle.
5. A knot in the yarn which is tangled in the yarn feed.

To unjam the slide, turn both controls to 0 and unthread. If slide still cannot be moved, turn controls one complete turn and back to 0. If this does not help, remove slide rail as when exchanging needles, explained in Lesson 1.

End Stitches drop or do not knit - This may be caused by:

1. The slide has been moved too far over the end needle. Pull the wool by hand to restore adequate tension. The slide need be moved only an inch or two over the end sts.
2. Wool tension is too loose - Tighten the tension screw.
3. The weighted comb is not hung evenly, so that only one side is weighted.
4. Side weights are not being used.
5. The bristles of the brushes are broken, bent or some bristles are out of line. Cut straight if necessary.
6. The comb is caught on the table top - This often happens after the first few rows of knitting.
7. The st. size is too loose for the weight of yarn being used.

Other sts. may drop if needles and latches are bent or broken. Check latches to make sure they open and close freely. Run needle manually up and down the channel. If they stick, replace. Order them from your authorized dealer or send directly to The House of Banda, Inc., 5926 W. North Avenue, Milwaukee, Wis.

Irregular texture may be caused by:

1. The pattern dial is not exactly engaged in its chosen pattern
2. Incorrect use of the rack wheel.
3. Wrong positioning of the rack wheel when not in use.

PREPARING MACHINE FOR DIFFERENT NEEDLE COMBINATIONS

For casting on sts., the yarn must always zigzag from one needle on one bed to one needle on the other. In any pattern in which the needle arrangement has two

or more needles together on either bed without a needle coming between them on the opposite bed, such as K 3 P 1, or K 4 P 4, etc., it is necessary to cast on in K 1 P 1 rib over every or every other needle and rearrange the sts. after the welt row. This is known as indirect cast on.

The single exception to this rule is K 2 P 2. To cast on K 2 P 2, set RW to 1/2 to select needles. After needles have been selected, set RW to 2. As you can see, the front needles are actually crossing the rear needles so that you actually have K 1 P 1. Cast on and hang the comb. Knit 2 welt rows at R. Now set RW back to 1/2 and continue knitting.

MISCELLANEOUS HINTS

When transferring sts. from a pattern such as Fisherman's Rib or half-Fisherman's Rib, and returning needles to WP, place sts. back into the hooks of the needles with single transfer tool instead of simply putting them in UWP. This will prevent a faulty row.

Taking Care of your Swiss Magic - After knitting with dark colored yarn we suggest vacuuming the bed of your machine using the upholstery brush attachment. Wipe machine down with a soft cloth removing excess oil and dirt. After you are through knitting, we recommend waiting 1/2 hour before cleaning as the needle bed is porous and will absorb oil back in casting. Always keep machine covered when not in use.

Cleaning Needle Bed - This is the method we recommend for giving your machine a thorough cleaning. Remove slide rails (Part 6, Page 3, pink Instruction Book). Remove all needles and coil springs underneath needles. Use a solution of 50% lighter fluid, 50% light sewing machine oil for cleaning. Clean needles, coil spring and bed itself. Take care not to stretch coil spring while so doing. Solution may be applied with a soft cloth. Dry needles thoroughly with a turkish towel before reinserting in machine, as well as all parts.

Knitting Circular - It is impossible to knit circular from the beginning of a garment inasmuch as the cast on edge of knitting must be closed. This may be remedied by casting on with scrap yarn. Set machine for circular knitting, set row counter to 0 and place good yarn in wool feed. After garment has been completed, rip out the selvage yarn to where the good yarn starts. Pick up and crochet off sts. for a neat edge.

Rehanging Comb - When knitting and the comb is just about ready to reach the floor, we suggest instead of rehanging comb which can sometimes cause losing a st., that you roll knitting in comb rolling upward. Then take long knitting needles or comb rod and insert to prevent knitting from rolling back down.

WEAVING

Because the Swiss Magic is a double bed machine, it is possible to lay yarn between the needle beds while knitting. This yarn is not actually knit into the garment, but anchored between the sts. This process makes many unusual and attractive combinations of colors and materials. It is particularly suitable for use in place mats, hot pads, rugs, stoles because the fabric produced has less elasticity than regular knitted fabric and is less easily stretched out of shape. To weave a swatch, cast on 30 sts. using every other needle. RB N6 / FB N6.

Knit 2 welt rows. Lay yarn between the beds of the machine. Pull the weaving yarn taut and keep it parallel by pulling it down between the ends of the needle beds. Move slide across. You have now woven a row. Repeat as often as pattern calls for. To repeat this process, separate the front and rear slides, using the lever on the rear slide (Page 3 of Instruction Book). Pass the weaving yarn across the needle bed to the other side and repeat procedure.

HINTS ON USE OF 4 PLY WORSTED

Casting On : Double Bed - Use every 3rd needle with RW on 1. Use both bar weights.

Single Bed - Use every other or every 3rd needle with both bar weights.

When knitting a sweater with 4 ply worsted which has a K 1 P 1 band and stockinette st. body, use the following procedure: Cast on with scrap yarn and knit the stockinette part of the sweater first. Then rehang the bottom of the sweater onto the needles for K 1 P 1 combination.

We do not recommend using the Redheart or American Thread Yarn which is Star brand. Don't misunderstand us, this is good quality yarn but does not have the elasticity to get smooth performance on your knitting machine.

WHEN DOING FASHION INCREASING AND USING NEEDLE SET UP

1 . . 1 . . 1 . . 1 . .
1 . . 1 . . 1 . . 1 . . 1

and using 4 ply worsted yarn you will find when trying to pick up st. below on farthest needle on rear bed and trying to transfer that below st. on the empty needle on FB, you will have to stretch and struggle to get st. to empty needle. To make transfer easier first set RW to 2. This will bring empty needle closer to end needles on RB. Now make transfer. After transfer is made return RW to 1 and continue knitting.

GAUGE AND USE OF NOVELTY YARNS

The most important point to remember in any knitting you ever do is that you must obtain the same gauge as called for in the pattern. BY "GAUGE" WE MEAN THE NUMBER OF ROWS AND STITCHES PER INCH. The numbers on the tension dial do not, as we have mentioned before, correspond with the sizes of hand knitting needles. However, the size of needle a hand knit pattern calls for or the tension setting a Swiss Magic pattern calls for are unimportant. You may use any size tension that will give you the gauge specified in the pattern.

When running off a swatch to determine gauge, always leave it lay over night to obtain true measurements. Do likewise when you knit a garment - let the pieces lay over night before assembling. After a garment has been removed from the machine, it will regain proper size in 6 - 12 hours.

Nowadays, with innumerable unusual novelty yarns available, it would be impossible to set down hints or rules for using them on Swiss Magic, or to give desired tension settings. Each yarn must be experimented with and tried at different tensions.

At one time the weight of the yarn could be judged by "ply", that is the number of strands twisted together. Fingering yarn or baby yarn used to be all 2-ply, heavy worsted, 4 ply. This is no longer true. A very fine yarn may be 4-ply, a heavy yarn 2-ply.

That is why the understanding of gauge is so important. If the pattern specifies a gauge of approximately 8 sts. per inch, you should know it requires a fingering weight yarn. A gauge of 4 sts. per inch would, of course, call for a heavier yarn at a larger setting. A gauge of 10 or 12 sts. per inch would require an extremely fine yarn at a small tension setting. The pattern being used also affects the gauge. A Fisherman's Rib will produce fewer sts. and more rows per inch than a plain K 1 P 1, so always keep these points in mind when gauging.

This is the end of your Home Study Course, but because of the continuous changes of new yarns and new methods of machine knitting, the American Knitting Machine Guild will keep you informed on the newest shortcuts and ideas.

Your comments will be appreciated so don't hesitate to write.