

NEEDLES

Bent latches are caused by the yarn carrier striking them, which most frequently happens if the handle is turned quickly when there are no stitches on the needles. If a latch gets bent, it will work stiff and cause the yarn to gather around the needle, or cut holes in the webbing. The latch must be straightened so that it will work free and easy, and that the spoon will work and fit on the point of the hook. This can be done with the fingers or with a pair of light pincers. If impossible to straighten and get working freely, then insert new needle.

REMOVING NEEDLES

To remove a needle from the machine, lift the needle that you wish to take out, as high as it will raise in the cylinder, then turn the top outward and downward until it will release itself from the wire cylinder band. To replace them, place the end of the butt of the needle down behind the cylinder band, then turn it up straight in the cylinder and push down as far as it will go. Always remove or replace needles opposite the yarn carrier or away from the cam action, for you cannot raise a needle when it is in the cams. Fig. 9 will show you needles lowered and in a position to either remove or replace in the cylinder.

OILING THE MACHINE

Very little oil is needed, but it should be of good quality. Sewing machine oil or good lard oil will be best. Put a few drops in the hole in the hand wheel shaft hub, and also in the hole on the cam ring plate. It is important that you place a little oil on the face of the cams, and also in the slots of the needle cylinder, below the spring band. The gears can best be oiled with a small piece of oily waste, as this will distribute the oil evenly on the wheels and at the same time prevent it from dropping on the floor. Use little oil, and oil about twice a day, or in proportion to the amount of work you do. Never oil the latches of the needles or the cylinder at the top.

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BOBBIN WINDING

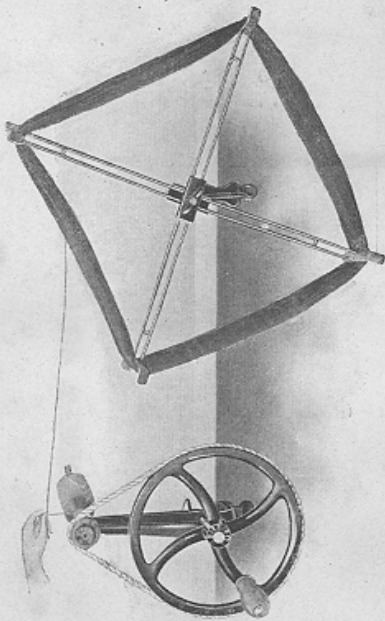


FIG 5

It is very important that you learn to make a good bobbin, for if your bobbin is not properly wound, or wound that the yarn will not run off even and freely, then you cannot expect your knitting machine to do good work.

You will see, Fig. 5, how to put together and arrange the winder and swift. Fasten them firmly to a table by means of the thumb screws. Stretch the skein over the hands in such a manner that the strands will loosen themselves so as to run free from the swift, then place over the wire extensions of the swift. Run out the four extensions as far as they will go, and fasten the thumb screw holding them, so that they will remain firm. Be sure and do not have the skein of yarn twisted on the extensions, otherwise it will not run off freely.

Press the wooden bobbin on the tapered spindle of the winder and commence winding the yarn at the bottom of the bobbin, filling the bottom first and gradually filling toward the top, keeping the yarn running up and down at even slant, each time nearing the top of the bobbin. Be sure to make the bobbin same size all the way to the top, and also so that the yarn does not run off from the sides instead of the end. The bobbin in Fig. 6 is an example of good winding.

Cotton yarn can be wound on the bobbin tight, but wool and worsted yarn must be wound loose. A little experience in winding will teach you that each different grade of yarn will require a little different tension, so as to have a firm bobbin and yet not have the yarn drag. The tension of the yarn is regulated with the fingers while the yarn is running through the left hand to the bobbin. If the yarn drags while knitting, then rewind the bobbin over again.

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SETTING UP THE WORK

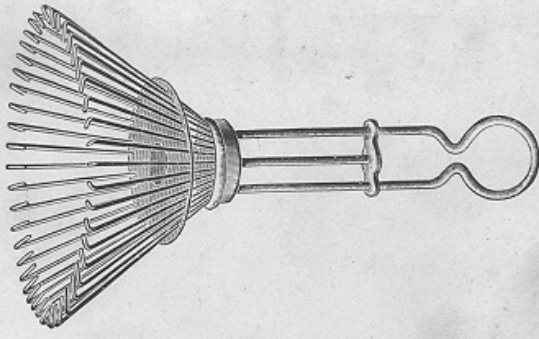


FIG. 7

Turn the handle so that the yarn carrier will be on the front of the machine. See that all the latches of the needles are open and down.

Expand the set-up, Fig. 7, in the inside of the needle cylinder as seen in Fig. 6. The hooks should be held a little from the upper edge, and against the inside of the cylinder. Draw about a yard of yarn through the yarn carrier, or enough to set up the first row of stitches. Take the yarn close to the yarn carrier and put on one of the hooks of the set-up, then bring it up and around one of the needles in the machine that is nearest to the hook on which you have the yarn. Always bring the yarn around the needle from the right hand side to the left, and down under the next hook of the set-up, and so on until around each needle of the machine, and under a hook of the set-up, until you have come to the needles which are down into the cams. Now hook the weights in the ring of the set-up and turn the machine slowly to the right until the needles which are down in the cams are brought up on a full level with the other needles. Continue to set up these needles as before, running over two or three of those first set up, so as to fasten in the end of the yarn. Should you have had too much yarn drawn through, then break off the end.

You will notice that bringing the yarn around the needle from the right to the left always forms a crossing of the yarn on the inside of the needle, between it and the hook of the set-up, as shown in Fig. 8. It is very important that the hooks of the set-up should be held in place a little below the edge of the needle cylinder, else you are liable to break the yarn in the first round and spoil the selvage. If there are more needles in the machine than there are hooks in the set-up, catch under the same hook twice, you will readily see how this should be done by keeping the hooks and the needles along even with each other.

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SETTING UP WORK

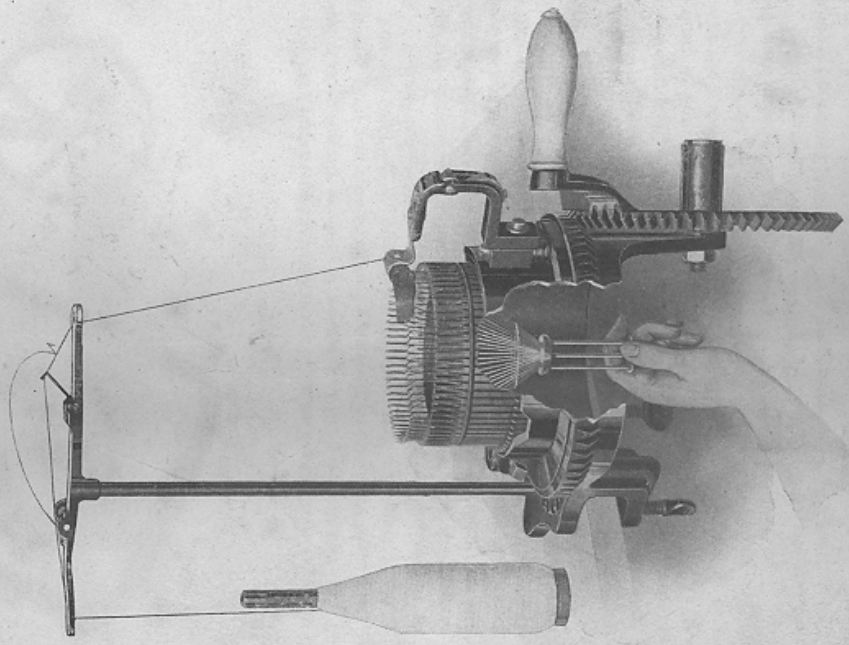


FIG. 6

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MAKING A MOCK RIB

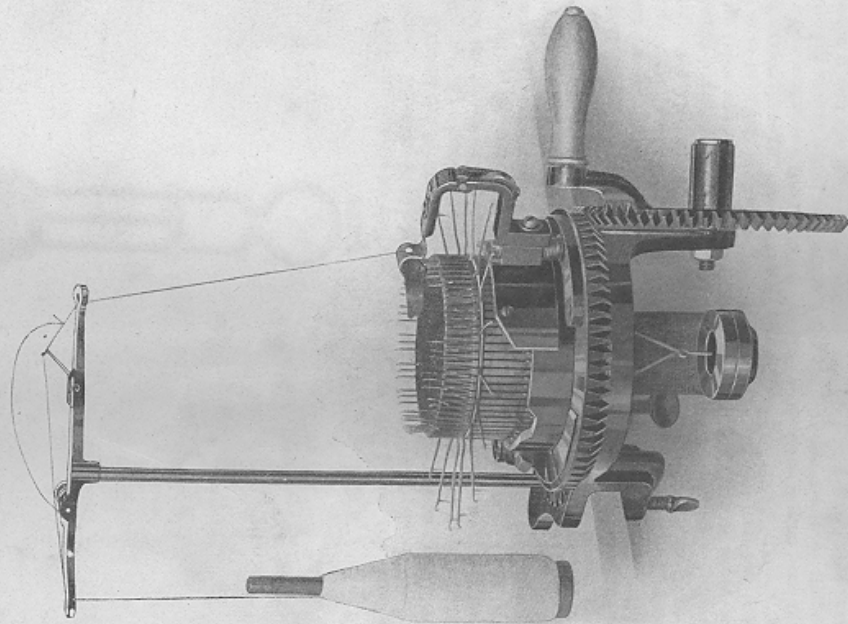


FIG. 9

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MAKING A MOCK RIB

A very good mock rib can be made by taking every third needle out of the cylinder. Lift up before setting up the work, every third needle, and tip it over in the cylinder as shown in Fig. 9. The yarn carrier arm will pass the needles that are tipped over without operating them. Set up the work as directed in "Setting up the work" and proceed to knit the top. When you have a top of sufficient length, then tip up the needles that have been layed over and push them down in the cylinder, on a line with the other needles, so that the cams will operate them. In doing this, set the back half of the needles first, and when you have these in position, then turn the yarn carrier to the back, and set the front half. Needles directly in front of the yarn carrier cannot be removed, raised or lowered, as they are locked in the camming device, and the yarn carrier must be turned to a different position to release the needles.

TO KNIT A HEEL OR TOE

Turn the crank so that the yarn carrier will be on the front of the machine. You will see two marks on the top edge of the needle cylinder, one on the right and the other on the left side, dividing the needles in the cylinder in half. The front half will have two more marks again, dividing this half into three parts. These marks are filed in the top outside edge of the cylinder, and you will carefully locate the four of them, as they are the only means (with the exception of counting) you have of gauging the size of heel and toe.

Lift the needles in the back half of the cylinder as far up as they will come, or so that the butts of the needles will rest against the spring band on the cylinder and out of the cam action, Fig. 10. Put the yarn in the take-up spring on the top of the yarn guide. Turn the crank forward so that the yarn carrier will be at the back of the machine, or so that the cam action will be under the raised needles. Lift up with the work hook, one needle on the side that the yarn lies on and next to the ones already lifted up.

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Notice that the stitch regulator is set, so that the stitches are formed freely on the needles, and keep the left hand on the webbing, so as to assist the weights, if necessary. After you have this portion knit, then raise the back half of the needles up out of action, and make heel as directed on page 15. After the heel is knit lower the needles into the cam action and knit the foot. As the foot is being knit, the weights are on the front of the webbing, and it will be necessary to keep the left hand on the fabric so as to hold down the back part of the webbing. After the foot is knit the proper length, raise the back half of the needles and knit toe same as heel, and as directed on page 15. After the toe is knit, lower the needles back into the cam action and knit two rounds. Break the yarn near the yarn carrier, and set the yarn carrier up out of action and away from the needles. Remove the weights, hold down the fabric lightly with the left hand, and turn the stocking out of the machine. Close the toe as directed on page 20, and finish.

TO KNIT A PLAIN LADIES' STOCKING

Set up and attach weights as directed on page 13. Turn the stitch regulator screw down about one turn, as this will knit a looser stitch and make the top of stocking wider. Knit the length of leg desired, turn back the stitch regulator screw one turn and knit ankle. After you have the ankle knit, which completes the leg portion of the stocking, raise the needles in the back half of the cylinder, and knit heel as directed on page 15. After the heel is knit, lower the needles back into the cam action and knit the foot. As the foot is being knit, the weights are on the front of the webbing, and it will be necessary to keep the left hand on the fabric, so as to hold down the back part of the webbing as it is being knit. After the foot is knit the proper length, raise the back half of the needles, same as heel, and as directed on page 15. After the toe is knit, lower the needles back into the cam action, and knit two rounds. Break the yarn close to the yarn carrier, and set the yarn carrier up out of action and away from the needles. Remove the weights, hold down the fabric lightly with the left hand and turn the stocking out of the machine. Close the toe as directed on page 20, and finish.

LADIES' MOCK RIB STOCKING

Ladies' rib stockings are knit same as half hose, with the exception that the mock rib is knit the full length of the leg portion, and the needles that have been lowered to make this mock rib are set back in the cam action just before making heel. The mock rib can be made on the front of the stocking or it can be made all around.

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DIFFERENT SIZES

There are four things that change the size of a stocking: 1. The diameter of the machine. 2. The number of needles in the cylinder.

3. The length of stitch. 4. The size of yarn.

In the making of ladies' and gents' hosiery, the sizes can, as a rule, be made on the same machine. In the making of children's sizes, the difference varies more, and the best results are had on the different size machines.

The coarser the yarn, the larger will be the web with any given number of needles; and the finer the yarn, the smaller the web. The coarse cylinder will make a small stocking, with fine yarn and a short stitch, but the fine cylinder will not knit a coarse yarn. Seamed work is always smaller than where a full set of needles is used. With every other needle out of the cylinder, you can knit a small web.

MENDING BROKEN STITCHES

This is done with one of the needles of the machine, either in the machine or after the work is out. The knitting-needle is used as a crochet-needle. You hook it in the dropped stitch and push it far enough through to bring the stitch below the latch; then draw it back, catching the next cross thread above in the hook above the latch; continue to draw the needle back until a new stitch is formed; proceed in this way until all the dropped stitches are knit in. If the mending is done out of the machine, you will tie the dropped stitch with a short piece of yarn and draw the ends inside of the web.

REFOOTING STOCKINGS

New feet can oftentimes be knit in old stockings that otherwise would be worthless. Cut off the foot portion of the stocking to be refooted, just above the heel. Raise the yarn carrier away from the needles; see that all the latches are open and down; run the leg portion on the needles; ravel off the selvage, knit heel, and finish as instructed for the making of a regular stocking. In running knit fabric on the needles, always place the stitches on the needles that are round and exposed at the top; also run on one round, as otherwise the stitches will not ravel clean. If the old portion contains more stitches than there are needles in the machine, then the extra stitches must be divided equally around the cylinder and placed on the nearest needle. Some of the needles will then have two stitches on them, but this will knit all right providing you add a little extra weight until these stitches are away from the needles.

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CLOSING THE TOE

After the sock or stocking is run out of the machine, take a flat or sad iron and damp cloth and press the toe so that the stitches will lay out straight and smooth as Fig. 10. Ravel one round until the yarn is brought to the corner, as shown in Fig. 10. Thread the loose yarn in a darning-needle and pass the needle through the first stitch from the upper side and through the opposite stitch from the under side, as seen in Fig. 11. Draw the yarn through the stitches, pass the needle down through the first stitch and up through the next one to it, as seen in Fig. 11; then on the opposite side take the stitch through which the yarn has already passed and the next in front of it, and so on, each alternate side, take the last stitch in which the yarn was drawn and next in front until the toe is closed. This can be done very rapidly and neatly, so that it cannot be distinguished from the other knitting. The damp cloth and hot iron will prevent the stitches from raveling back easily.

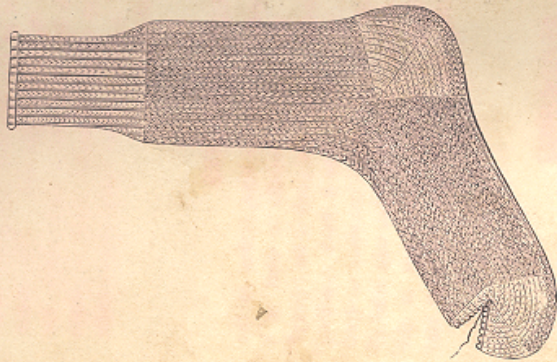


FIG. 10

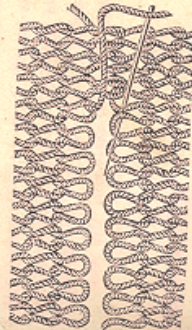


FIG. 11

KNITTING FLAT WEB

Take about twenty needles out at the back of the needle cylinder; turn the handle so that the cams or yarn carrier will be at the back where there are no needles; set up the work on the remaining needles as instructed on page 13; knit backwards and forwards, as in making heel and toe, but change the turn when the cams or yarn carrier will be where you have taken out the needles, as otherwise the reverse cam cannot drop and the machine will not knit. The webbing can be narrowed or widened by either removing or replacing needles in the cylinder, although enough needles must always be left out of the cylinder so as to allow for the reverse of the cams.

FINISHING KNIT GOODS

The best method of finishing woollen hosiery is to draw them on a wooden form after they have been washed. Allow them to thoroughly dry while on the form, and press with a hot iron. This gives them a perfect shape and prevents shrinking.

Cotton hosiery should be slightly dampened and drawn on a wooden form. Press with a hot iron while on the form. Knit goods and specialties should be laid out flat on a table or board; then, a wet cloth having been laid upon them, they should be pressed with a hot iron.

TO KNIT A MITTEN

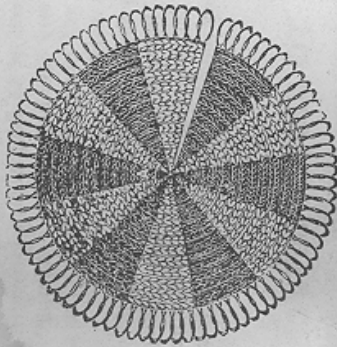
Take out every fourth needle, as in knitting rib top of sock. Set up and knit the length wanted for wrist; put in the needle taken out and lift the stitches over these needles, so as to close the hole that is left if they are allowed to set their own stitches; knit 14 round plain when you are ready to knit the thumb; now lift up the needles as you do in knitting the heel of a sock, leaving 24 down in operation; on these knit the thumb; knit back and forth 45 times; close off the end of thumb by lifting up six needles on each side; then proceed as in heel of sock; push all of the 24 needles down and run the thumb out, leaving the yarn-carrier on the left; take the selvage stitches on each side of the thumb thus knit, beginning close at the bottom, and put them over the empty needles, 12 from each selvage; put the yarn in the yarn-carrier; push all the needles down, and proceed to knit round and round for the hand. It takes from 40 to 50 rounds for the hand. Close off just as in the toe of a sock. Holding down the strip, while knitting for the thumb, is the only difficult part of this operation, which must be done with heel hooks or with the left hand.

The number of rounds given above are approximate, and will vary according to the number of needles in your machine, number of yarn and size of mitten to be made.

WRISTLETS OR PULSE WARMERS

Use large sized yarn of a fine quality. Take out every other needle in coarse cylinder, set a loose stitch, so the yarn will knit free; knit the required length and run off; bind off very loosely, and you may fringe or tuft at the end. Fancy yarn may be used and ornamented in different ways. For double wristlet, knit double length, and join the ends together with a mending stitch.

MATS



A nice circular mat may be made by setting up flat web from 20 to 30 needles. Knit several times across with some refuse yarn, or long enough to hold with the hand. Take out the set-ups, and, having the yarn-carrier on the right-hand side, lift up a needle just as in the heel or toe of a stocking, run across and back; lift up another needle, run across and back; repeat this until all but six needles are lifted up; now push all the needles down at once, and run back to the right, and repeat the same operation over again, lifting up one needle each time on the right-hand side. Do this six times successively, and run out. Remove the refuse yarn used at the beginning and join the ends together with mending stitch, and it will form a perfect circle. Wash the mat thus knit in warm suds, and, when nearly dry, press on the wrong side, placing over it a piece of muslin to prevent scorching. Now, at the place where you joined the two ends together cut back six stitches, and proceed to ravel these six stitches all around the edge of the mat to form a fringe, the washing and pressing causing the ravelled edge to crumple nicely. You can knit each of the six parts of different colored yarn, or arrange the colors to suit your fancy.

CHILD'S AFGHAN

Select your yarn, say scarlet or white, or any colors that you may desire. Use the coarse cylinder, removing every other needle, making the stitch as long as possible. Set up for flat web as many needles as will work in the cylinder, and place the long strips at each cord. After knitting once or twice across, lift up three needles and leave three down alternately; the number of needles in the Cylinder being such as will divide evenly by three; now knit across three times, push down the three alternate needles lifted

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up, and lift up the alternate three that remained down; knit three times across, and again lift the first alternate three, and knit three times across and so on lift up, and push down each alternate three until about two yards of web is knit. Now knit the same length of another color, and join this to the edge of the first. Knit the number of widths required to make size to suit your taste, and after joining together, finish with fringe at each end.

BREAKFAST SHAWL

Knit same stitch as described in making CHILD'S AFGHAN. Knit the first strip blue, about $1\frac{1}{2}$ yards long, and finish at the end by lifting up one needle each time at the right-hand side, as in heel of sock, until all the needles are lifted up; push all the needles down and knit twice across plain and run out. This makes the slant or mitre to join at the centre of the back. Knit about four strips of chinchilla, each one shorter than the other, finishing at the end just as the one above described. When these are joined together they make one-half the shawl. Knit other strips just as these, only in narrowing off lift the needles on the left-hand side instead of the right; join together, and then join the two halves at the back with the mending stitch. In joining the strips together on each side, be sure to join the long side of each shorter side to the shorter side of the longer one, thus shortening it toward the neck; and when the two halves thus made are joined together along the ends, the joining will be perpendicular down the back of the shawl. The front edge is trimmed off and bound or hemmed so as not to ravel. Fringe is made by cutting colored yarn eight or nine inches long, and drawing four or six threads at a time through the meshes of the lower edge of the shawl and knotting together to suit taste.

HOODS

A nice hood may be knit by setting up flat web as wide as can be knit on a coarse cylinder, and knit the Afghan stitch. Knit the length of the front of the hood, and then knit a crown and join in the center of back, and down each side of front, down the selvedge, adding cape of some other fancy stitch. Any other fancy stitch will do for front and crown, or a plain stitch knit loose, trimmed with fancy stitch border, and cape to suit fancy of the operator.

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