

INSTRUCTION BOOK



The Imperia Knitter

IMPERIA

Flat Knitting Machines

FOR DRESSES
AND GARMENTS

Needle Space . . . 10 to 36 inches

Full Particulars and Prices on application.

Easy Terms of Payment arranged
to approved buyers.

IMPORTANT.

- DO NOT** use yarn that is too thick for the needles. We supply suitable wool, silk and artificial silk yarn at wholesale prices.
- DO NOT** destroy the Packing Case, it will serve as a Cupboard in which to store the Knitter when not in use, protecting it from dust and damage.
- DO NOT** turn the machine handle backwards (or towards you) unless you are making heel or toe or flat web, otherwise you will let down stitches.
- DO NOT** allow the machine to be made into a "plaything" by turning the handle when machine is empty, as this may break the latches off the needles. Treat with reasonable care, and keep well oiled.

SOLD ONLY BY . . .

The Imperia Hosiery Manufacturing Co., Ltd.

97 GRAYS INN ROAD

LONDON, W.C.1

NEAR HOLBORN HALL

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THE Imperia Knitting Machine

THIS Instruction Book has been compiled so that the reader can master the IMPERIA Knitting Machine without personal instruction.

By the careful perusal of same, it is possible for the reader to become an expert machine knitter without further aid.

We give, daily, at our parlours, Free Instruction to purchasers on the working of the machine. For those who can conveniently call, undoubtedly personal tuition is helpful.

Our Postal Tuition Service is Free, and is intended for those who find any point of difficulty that needs further explanation, and in such cases we gladly give personal advice by letter.

THE IMPERIA HOSIERY MANUFACTURING COMPANY, LTD.
97 Gray's Inn Road, LONDON, W.C.1

Business Hours	-	-	10 to 6
Saturdays	-	-	10 to 4

THE Imperia Knitting Machine

WHEN RECEIVING THE MACHINE.

When the case containing the machine is received by you from the railway company, or carrier, observe its condition. If apparently all right, sign for same, but please write the word **unexamined**.

If it appears to have been crushed by other goods or cases or the wood is smashed, sign for same as you will be requested by the carman, but you must also write the word **damaged**.

If upon unpacking the machine you find breakages of any part or parts of the machine write us fully, also the carriers, requesting that they should come and examine the broken parts. After the examination, they will probably say you must return the broken parts to us to be replaced, which please do at once (giving your name inside the parcel or box) in order that we may have the carriers see what damage has been done and make claim accordingly. We will have new parts sent to replace those returned to us.

NOTE WELL.

To make careful examination of all parts especially if you have found anything broken.

CORRECT WAY TO UNPACK THE MACHINE.

The lid of the case marked "Bottom Lid" is the first to be removed. Take out the loose accessories, after which turn over the case and remove "Top Lid." Take out the remainder of accessories, and you will then be able to remove the machine from the case by unscrewing the thumb screws on the machine which secure same to the shelf in the case. So as not to damage any needles it will be necessary to remove the wooden pieces that keep the Winder, etc., in position. Fix up the machine as illustrated in page 5.

Our engineer has left a piece of knitted web in the machine and you can practice knitting on to this with new wool or preferably waste yarn so that you get familiar with the machine and with the working parts. You will in a short time find how simple it is to knit and realise how beautifully and automatically the machine makes the stitches.

NOTE.—For practice purposes be careful not to knit with a yarn too thick.

A three or four ply wool can be used on the 84 Cylinder, and two ply on the 108 Cylinder and a four ply on the 72 Cylinder.

NAMES OF PARTS OF MACHINES.

- 1.—Ribber tappet plate.
- 2.—Driving pin.
- 3.—Lever for Selvege for putting Ribber needles out of action.
- 4.—Ribber dial adjuster.
- 5.—Tension Screw for Ribber.
- 8.—Ribber needle dial.
- 14.—Ribber arm.
- 6.—Tension pointer and screw.
- 9.—Wing screws for clamping machine to table.
- 10.—Cog driving wheel with handle.
- 11.—Dial for counting rows.
- 12.—Cam shell.
- 13.—Cylinder for long needles.
- 7.—Yarn guide and feed.
- 15.—Work buckle for adding weights.
- 16.—Wool bobbin.
- 17.—Rod for holding Yarn Stand top.
- 18.—Yarn stand top for threading up yarn (a) with heel spring; (b) and take up lock.

Each machine sent out should include the following:

2 Bobbins.	Heel hook.
One setter up.	Extra needles.
2 Sets weights.	Crescent needle raiser.
Oil can and oil bottle.	Tray and screw for spare needles.
Bobbin winder.	Screwdriver.
Swift and holder.	Buckle.
Work hook.	

With the Triplex machine 2 sets of needles are given. Fine needles for the 108 and the coarser for the 84 and 72. Care should be taken not to mix these.

HOW TO WIND YARN ON THE BOBBIN.

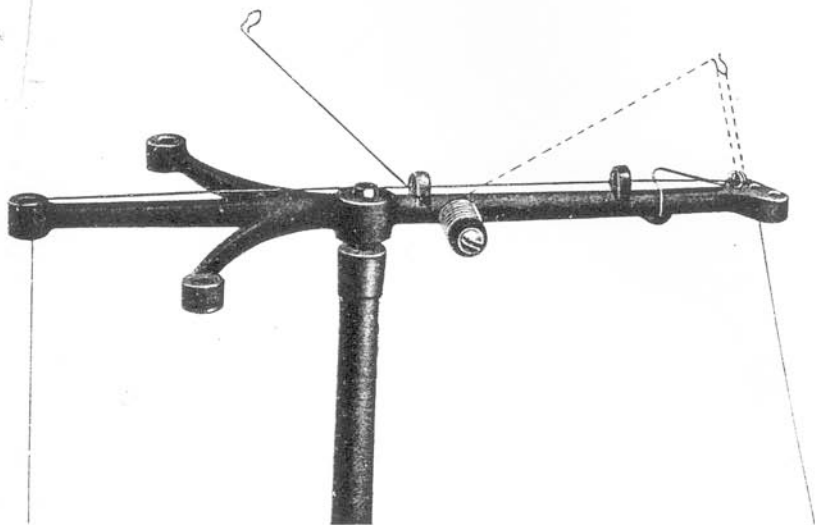
You will find with the machine an expanding wooden frame, named the Swift, which should be opened out and fixed to the table. Place a hank of yarn round the Swift, and after fixing the Bobbin to the spindle of the Winder tie a strand of wool to the bobbin, as per illustration given on page 12.

NOTE.—You will notice in the illustration how the wool is wound cone shape on the bobbin.

A practice which is made by many is to pass the wool through a piece of wax (or wax candle) which is held in the left hand whilst winding the wool on to the bobbin. In the case of dark wools a little oil on rag can be used. This enables the wool to be worked more easily.

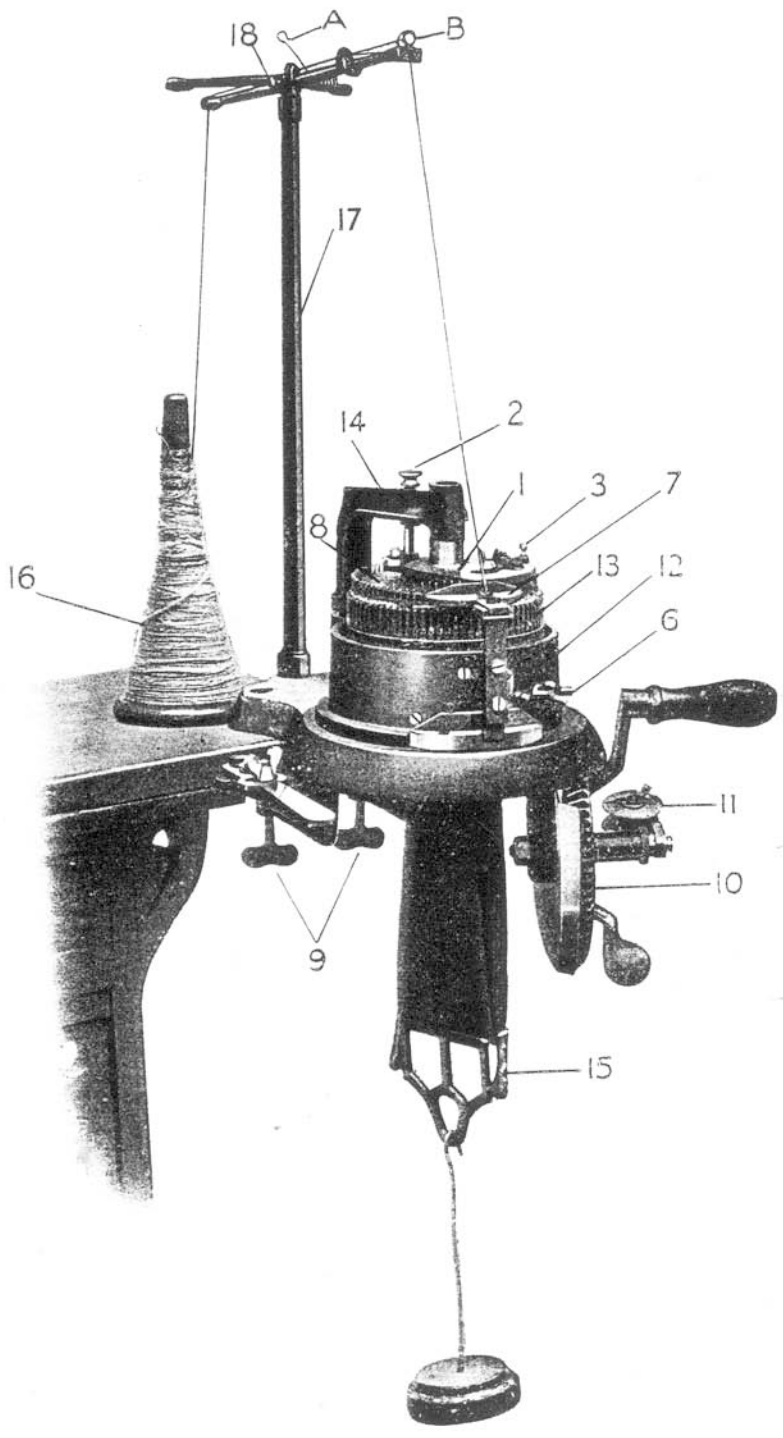
WHEN THREADING THE MACHINE.

Take the end of the yarn from the Bobbin and thread through the eye of any one of the three short arms of the Yarn Stand Top and pass the yarn through the two eyes on the long arm of the Yarn Stand Top, under the bridge of the wire Take Up 18B and through eye of same, then down through centre eye at the end. The illustration shows the correct way of threading.



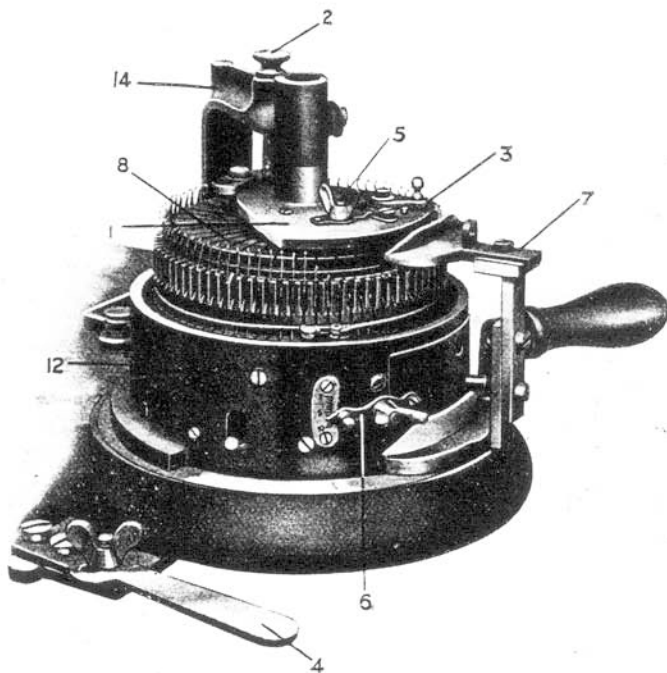
Before turning handle attach the buckle and the set of weights to the work which has been left in the machine as this is essential to keep the work well down. Assistance with the left hand may be necessary.

NOTE.—Remember when joining wool to do so with as small a knot as possible. Before turning the handle see that all needles have their latches down. The use of the three arms is in case you require to use two or three fine yarns instead of a thick yarn, or when splicing is required.



COMMENCE KNITTING.

The above instructions having been carried out you are now able to commence knitting, and by turning the handle slowly you will be able to watch the stitches form, taking care that each needle is making its stitch and that the work is being held well down in the machine. You have now knitted plain web which is best for practice, and if you now feel inclined to commence the heel the following instructions should be carefully carried out.



HOW TO MAKE THE HEEL.

See that the yarn guide is in front of the cylinder. You will find two parts of the posts of the needle groove filed down, one on the right and one on the left of the cylinder, which are the half-way-marks

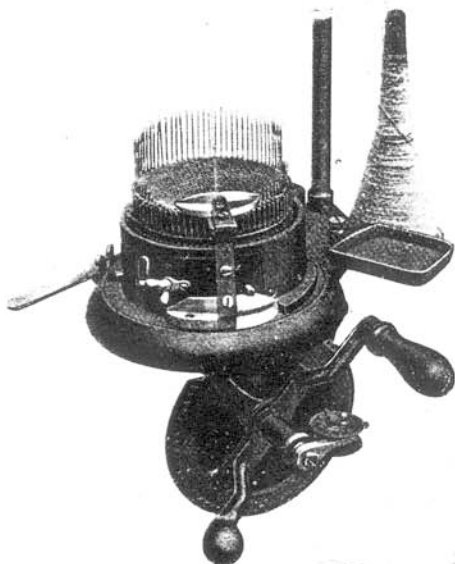
Now raise up the needles in the back half of cylinder as per illustration, page 7. Loop wool into the spring which you will find on the yarn stand top, now turn the handle half way round to the right until the yarn guide is at the back of the cylinder, raise up last needle that is down on the right hand side, in the front half of the cylinder. Reverse handle thus bringing the yarn guide to the left, thus making a row of stitches this way, leaving the yarn guide again at the back of machine. Pull up the first needle on the left side of the cylinder, turn handle forward, thus making a row of stitches to the right and leaving the yarn guide at the back of machine, pull up the needle next to the one already raised, reverse handle and do likewise on the left as before. When doing this part of the heel, take care to keep work well down with the thumb and finger of the left hand.

Complete the operation of needles up on either side until 16 needles are left down in the cylinder (17 when making rib) which will be the first part of the heel.

Before commencing the second part of heel use the Heel Hook and put it up between the cylinder and the work, and place the two hooks into the work evenly near the top of the cylinder and hang on weights at bottom or this can be done with the left hand thus dispensing with the Heel Hook, but be sure that the work is well held down firmly in the machine.

Turn the handle forward and you bring yarn guide round to the right (to the back of the machine) and you have now made a row of stitches to the right.

Press down into action the last needle pulled up in the right half of cylinder, put the yarn behind the back of this needle, see that its latch is down, reverse handle, thus making a row of stitches to the left leaving the yarn guide at the back of the machine as before. Press into action the last needle that was raised in the left side of the cylinder, put yarn behind this needle, see latch is open, turn handle forward round to right as before. Repeat process needle down. Yarn behind needle, Latch open, until you come to the last two needles in front half of cylinder on right hand side. Press down into



WORK HOOK

action both these needles. Put yarn behind both. See latches are open, raise up again the last needle only. Repeat this operation on left hand side. Then bring yarn guide to front of machine.

The object of pressing down the two needles on either side and raising one is to prevent a hole appearing at the side of the heel.



HEEL HOOK

Push down now all needles that are raised (out of action), take wool out of heel spring, then you are ready to begin the foot.

When making heel and toe on the 72 cylinder, leave ten needles down in front of cylinder for plain hose and eleven needles when making rib hose.

When making heel and toe on the 108 cylinder, leave 20 needles down in front of cylinder for plain hose and 21 needles when making rib hose.

IMPORTANT.—See illustration for the correct way of placing the yarn into the heel spring. Assistance in keeping the first part of the heel down in the machine can also be got by placing the ribber on the machine.

HOW YOU COMMENCE THE FOOT.

Turn handle round slowly at the beginning and note that the needles are making their stitches correctly and continue for the length required.

Instructions for the toe are the same as for the heel, but remember to put yarn again into heel spring. Raise the needles in back half of cylinder. Knit to right, raise out of action last needle in front half of cylinder, reverse handle, knit to the left, bring yarn guide round to the back of the machine. Raise needle in the front half of cylinder on left hand side. Turn handle forward and repeat process as before.

We have now completed a plain sock as far as the machine is concerned.

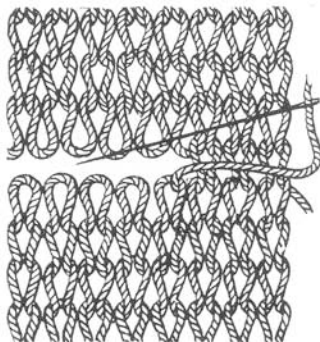
Having finished the toe, put all needles into action. Take out yarn from heel spring and knit a couple of rounds, now break off yarn and join on waste wool or cotton and knit a few rounds. You are now ready to commence another sock. You will see it is not necessary to take a single sock or stocking off the machine as it is finished but you can continue to any number knitting waste wool in between each.

CLOSING THE TOE.

Sever the sock or stocking by cutting through the waste, before unravelling the waste from the sock, press same with hot iron and damp cloth; this will make the stitches hold firm and outstanding.

Now unravel down to where the stitches start to turn back, it will be at the finish of the toe. Now with a darning needle and yarn, close the toe, as per illustration.

You will see that each stitch has the yarn passed through it twice and where a ribbed stitch is concerned, this is taken up also at the same time.



HOW TO PROCEED WHEN MACHINE IS EMPTY.

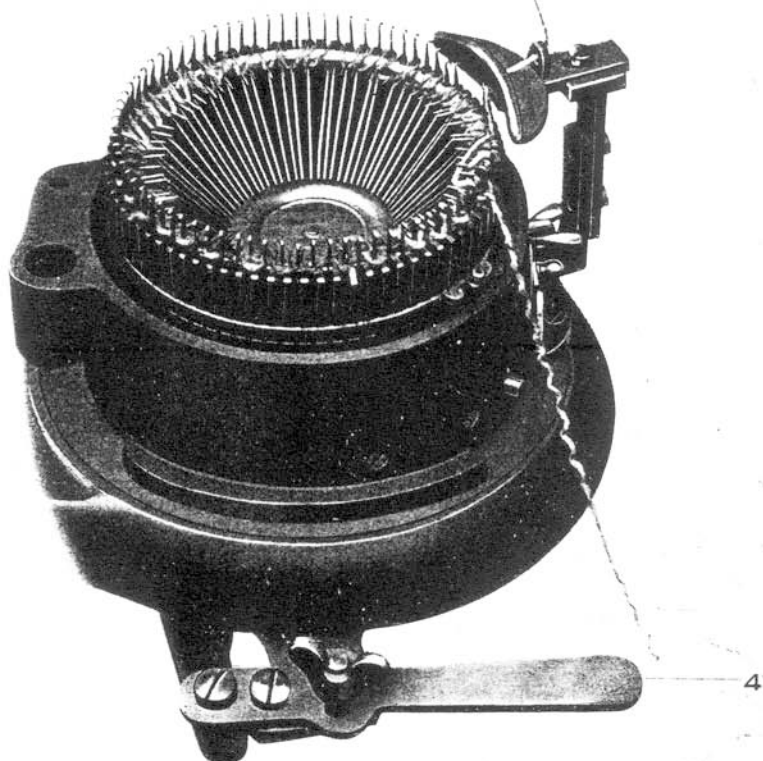
Suppose you have taken the work out of the machine and left it empty. To set up again you require the Setter-up (see illustration, page 9). You will find this included with the accessories. It is in the form of a small inverted umbrella frame, and has a number of hooks. Hold this with the left hand down in the cylinder, and opening out the hooks, see that these are near to the top of the cylinder. Now thread up machine as illustrated on page 9. Draw through about one yard and half of yarn, take the yarn close to the yarn carrier with thumb and finger of the right hand and place same round the nearest hook then round the nearest needle on right of yarn guide till you come to the part where the needles are depressed into the cylinder. Now hold the Set-up firmly down in the machine and turn handle forward which will allow the needles which are depressed to rise up thus enabling you to finish the threading up of the machine. On arriving at the last needle place the yarn round this twice, the remaining yarn can be placed inside the setter up.

NOTE.—As you will find more needles than hooks, one hook will serve several needles. A simplified plan is to set up with every other needle in the cylinder.

Before turning the handle see that all latches of needles are down so as to receive the yarn, turn slowly and watch each needle make its stitch. If a needle misses its stitch use the work hook and place the dropped stitch on to the needle, at the next turn of the handle the needle will now knit.

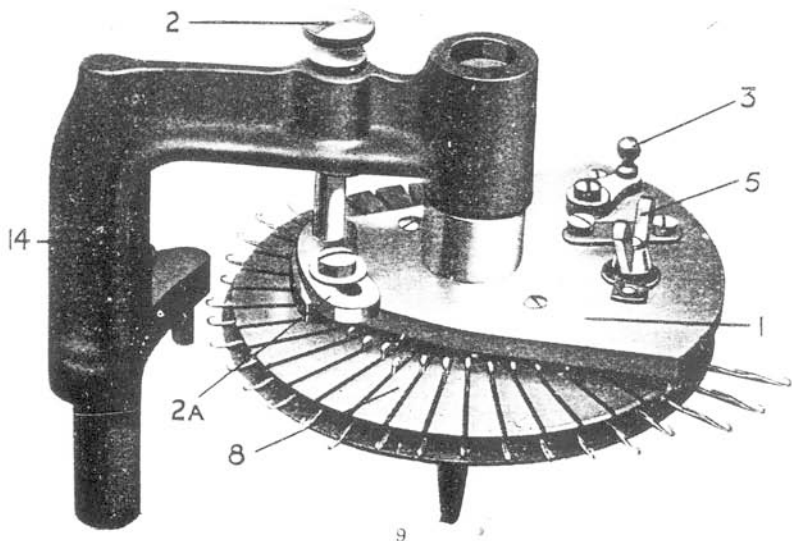
Continue for several rows, see that all needles are working perfectly and your work weighted so as to keep it from coming to the top of the needles. Now you are ready to commence proper work. Setting up can be avoided by working waste wool at the end of each article. When the work is sufficiently long you can unhook the stitches from the setter-up. Attach buckle and weights which will hold work more securely down in the machine.

Illustration shewing use of Setter-up



USES OF THE RIBBER.

The part called the ribber is for the forming of ribbed stitches. Attached to this is a dial called the ribber dial and the grooves in same which number half of those of the corresponding cylinder are for receiving the small needles called the ribber needles. Above the dial is the tappet plate No. 1 (see below)

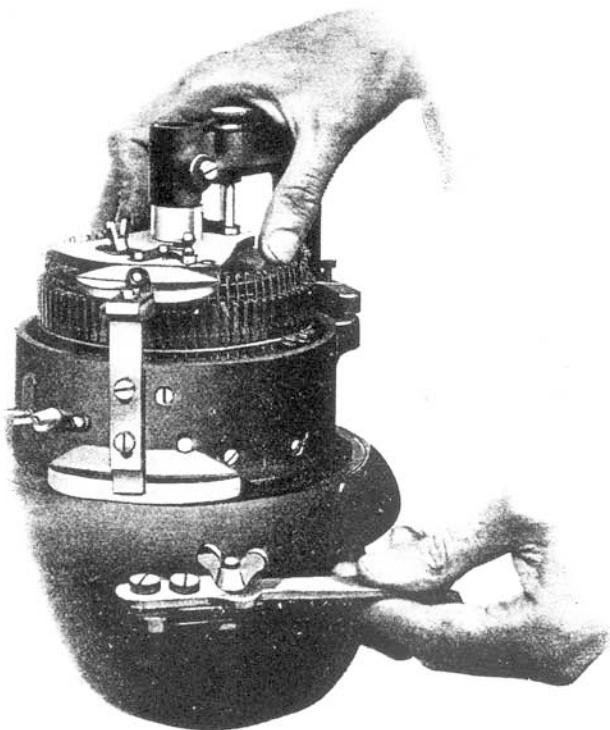


which governs the ribber needles and the lever on the tappet plate is for making the selvedge of a ribbed stocking or sock and puts needles in and out of action, and the winged screw and pointer No. 5 are for regulating the stitches of the ribber. At the back of the tappet plate No. 1 is a crescent shaped piece 2A which is for timing the ribber needles. Attached also to the ribber arm is a pin No. 2 called the ribber driving pin, the bottom of which fits into the hole of the crescent shaped timing piece. This ensures the tappet plate being carried round by the ribber, thus operating the ribber needles.

Illustration of the action of the Tappet Plate is given on Page 11.

TO WORK RIBBER.

Before placing the ribber attachment into the machine, you will notice that under the ribber dial is a lug and inside the cylinder at the back is a post called the ribber post, which is adjusted by the lever No. 4, which is at the left hand side of the machine. Having placed the ribber on to the machine turn the dial from left to right till the lug comes up tight against the ribber post so that when turning the handle the dial is stationary. Care must be taken that the grooves in the ribber dial are opposite to the corresponding grooves in the cylinder. The purpose of the lever No. 4 is for adjusting the ribber post, thus bringing the dial grooves into position with those of the cylinder. To start knitting we have now to place the small needles in the ribber dial. Before doing so take off band round the cylinder and remove every other needle from the cylinder and transfer the stitches on to the ribber needles and so giving one plain and one purl which is usual when making stocking or socks. To transfer the stitches take hold of the foot of the ribber needle with the thumb and finger of the left hand and engage its hook with the hook of the corresponding cylinder



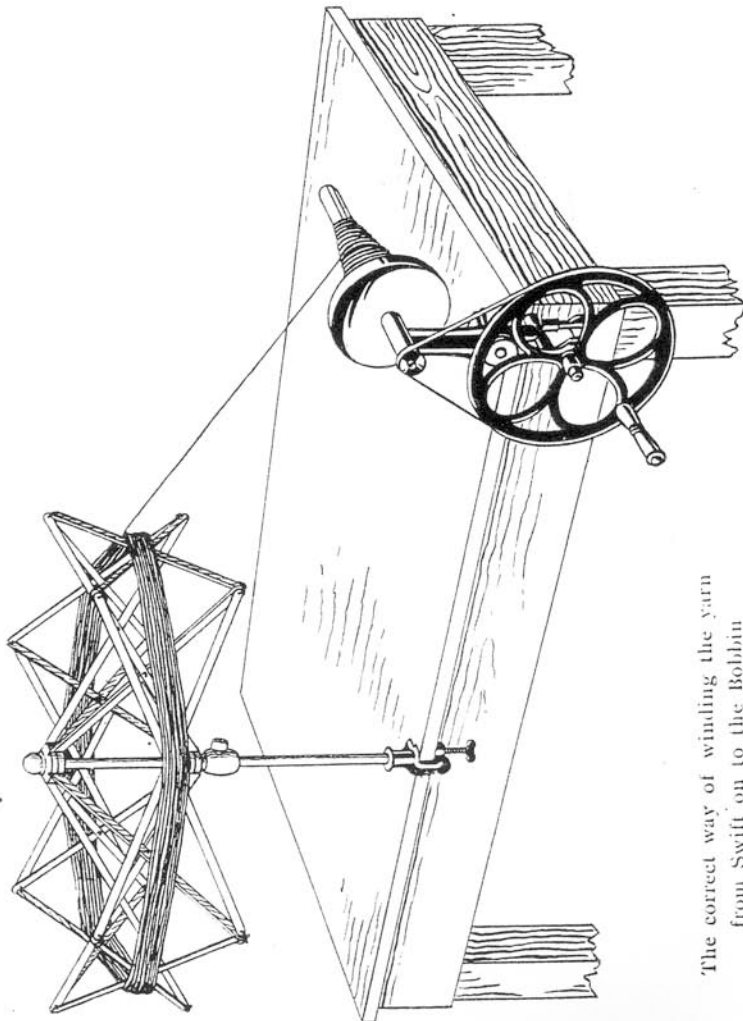
Illustrating fixing of Ribber Dial

A hole will be found in the back of the machine to hold ribber when not in use.

Remember to see that all latches of the needles are open and that the work is held well down in the machine.

SPECIAL POINT. The machine is not restricted to 1 plain and 1 purl, but any variety of ribbing can be done by arranging the needles accordingly. For instance we have explained how to knit 1 and 1. To do 2 and 1, have all cylinder and dial needles in so that the dial needles work in between the cylinder needles.

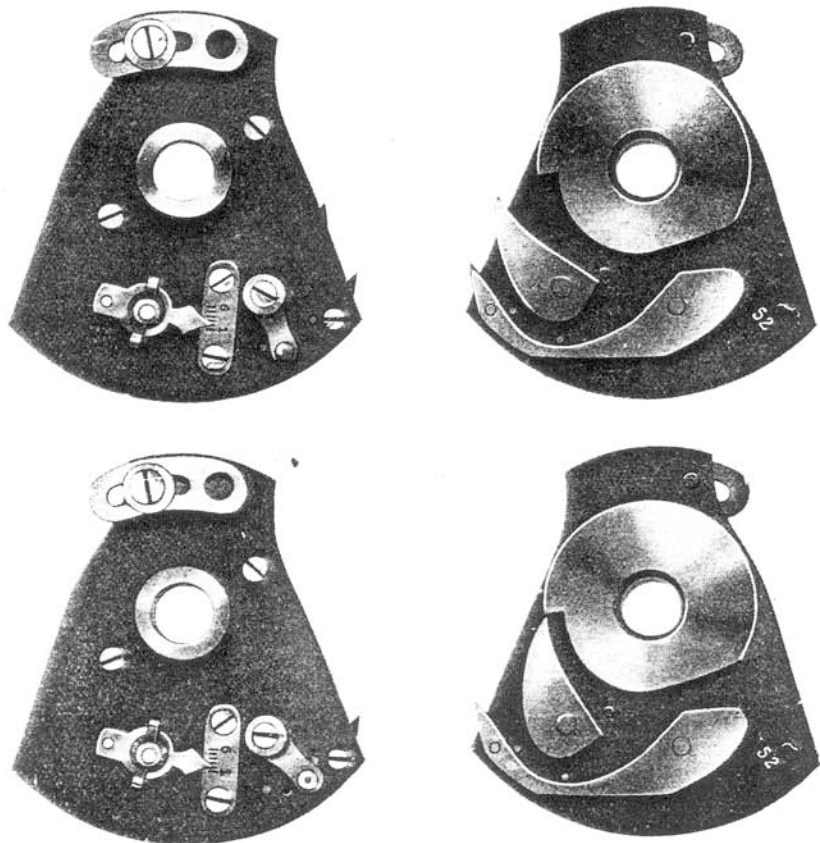
For 3 and 1 rib. It means every 4th groove in cylinder is empty and the corresponding grooves in the ribber will have its ribber needle in. This would mean that every other groove in the dial is empty. When 4 and 1 is required it will necessarily mean that all needles will be in the cylinder and the ribber arranged with every alternate groove in the dial empty and the dial needles arranged as 2 and 1.



The correct way of winding the yarn from Swift on to the Bobbin

needle. Now with the two needles engaged pull slowly upwards so that you are able to take hold of the foot of the cylinder needle. Now pull downwards slowly and you will notice as you do so the yarn will close the latch of the cylinder needle and ride over and slip into the hook of the ribber needle. Care must be exercised in seeing that the stitch does not go behind the latch of the small needle otherwise you will get a slipped stitch. Now unhook the needles, put the small needle in its groove in the dial as far as it will go, flat side downwards, hook outwards and put aside the cylinder needle from which the stitch has been transferred. Continue this changing round the machine, and this will give 1 plain and 1 purl. If the tappet plate obstructs the putting in of the ribber needles, turn the handle forward and allow a clear space for the needle to be put in its groove. Having done this replace band and then turning the handle you are knitting plain and purl.

Illustrations of Tappet Plate

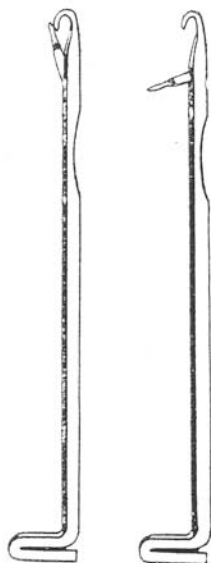


Changing from purl knitting to plain. Transfer the stitches in this manner. Take hold of the cylinder needle with the finger and thumb of the right hand and engage its hook with the hook of its corresponding ribber needle, draw the two needles slightly downwards so that the stitch goes behind the latch of the ribber needle. Now pull upwards the ribber needle with the two hooks still engaged till you see the stitch slip over on to the cylinder needle. Place this needle in the cylinder and take away the ribber needle and continue the same process all round the machine. You are now ready to knit plain work and if you require to see your work you can lift off the ribber.

POINTS THAT ARE USEFUL AND WORTH KNOWING.

Needles.—If a needle is not working—not making a stitch—look to the latch. This may be bent or stiff. If stiff a little oil will remedy it. If bent it can be straightened with the finger providing it is not too strained.

If the needle is still unworkable replace with a fresh needle. Do not damage good work for the sake of a needle. Illustration showing the automatic rise and fall of the needle is shown on this page.



Tension No. 6.—Each machine is correctly adjusted for knitting before leaving, and should not be tampered with till one becomes familiar with the machine. The object of the tension is to give loose and close knitting by shortening or lengthening the stitch. If your work rises to the top of the needles with weights attached, your knitting is too close. Remedy: Lower tension slightly. If work is proving too loose or stocking too big tighten stitch by raising tension. Assistance to keep the work down by the left hand is also helpful.

Yarn Guide.—The ribber needles should just be allowed to pass underneath the yarn-guide. This will only require alteration when the ribber dial is raised or lowered. Dropped stitches of the ribber and sometimes of the cylinder needles are often caused by the Yarn Carrier being too high.

Oiling.—It may be necessary to clean the grease off the machine, and we suggest that you use paraffin to do this. Oil all parts where friction occurs, such as ribber dial; ledge inside shell where feet of needles operate; also the Cams, Driving Wheel, and Axle.

What to do when work comes off Machine or in the case of Re-Footing.—Press work with hot iron and damp cloth, and you will find after unravelling a row or so the stitches stand firm. This will enable you to put the work easily on to the needles in the cylinder with the aid of the work hook.

It is necessary to have all needles in the cylinder in case of ribbed stitches, and these stitches should be transferred as required on to ribber needles afterwards.

WHAT TO DO WITH DROPPED STITCHES.

In this case weights should be taken off the work, which will allow the work to be lifted to the top of needles and thus enable you to replace the slipped stitches with work hook.

In case of dropped stitch take a cylinder needle and knit up the stitch that has dropped and replace same on to its needle. In the case of plain work this is done from the outside of the work. In the case of the ribbed stitch it will be necessary to take out the dial needles from the ribber, which will leave the needles and their stitches hanging loose outside and so allow you to take off ribber. We have found it just as easy in the case of one or two dropped stitches to pick this up after the sock or stocking is finished.

THE TYING OF KNOTS.

When tying up yarn do so with as small a knot as possible. A reef or sailor's knot is the most correct.

Do not cut off ends. These work in and are not seen or noticed in the finished work. Turn handle slowly when a knot is passing through machine.

WHEN CHANGING FROM ONE CYLINDER TO ANOTHER.

Take off ribber from the machine. See that needles are out of the cylinder. Take off top of yarn guide. Unloosen the two screws that hold the cylinder in machine. These will be found under the base of cylinders. Remove cylinder and replace with the one required.

THE DIAL.

The dial is changed by loosening the screw in the dial pin attached to the ribber arm. That will allow the dial and tappet plate to be detached. Take off tappet plate and place dial corresponding to cylinder.

Note: See that there is no play between the bottom of post and the dial; also that the tappet plate is free.

WHEN SENDING WORK TO US.

It is better for all concerned to send us a sample pair of stockings or socks for inspection before completing the bulk. We will then send comments or suggestions for improvement. This avoids all possibilities of knitting other than to our requirements. We keep one for reference. Only grafting need be pressed by you. We do the rest.

TO MAKE SELVEDGE OF STOCKING OR SOCK.

This is done by the use of the Tappet plate No. 1, and is for the starting of the Sock or the Stocking. It will be necessary to push the lever No. 3 forward. After having arranged needles for 1 and 1 rib knit 4 rounds. You now will notice that the ribber needles are out of action. Reverse the lever on Tappet plate, and on turning the handle this will give you one plain and one purl.

If you find you cannot push home the lever it is possible that a needle has been caught in the cams. Remedy: Turn handle slightly forward and push home lever.

TO MAKE SELVEDGE FOR FLAT WEB.

Arrange needles for flat web. This can be done on about two-thirds of the needles in the cylinder. Set up by knitting waste wool. To make selvege for the article you require it is necessary to raise out of action all needles that are not engaged in the cams of the shell. Knit forward till your cams are free of the working needles. Break off the yarn a matter of a few inches. Place this inside the cylinder. Now thread up machine, pulling through a length of yarn. By forming a loop on the end of same it will be easy to drop this over the end needle.



Take this yarn to the back of needles and loop it round each needle, making sure that your work is being held well down on the needles. Press down into action gradually all needles.

Turn the handle slowly, backwards and forwards, and continue making your flat web. Illustration showing how to arrange your yarn for flat web selvege is given here.

Various Classes of Work

OUR BOYS' TURNOVER RIBBED STOCKING.

To do this arrange needles for 1 plain and 1 purl. See page 10. Start with 4 rows of Selvege—which is done by putting lever forward. After knitting 4 rounds push back lever against stop and continue to turn the handle, thus knitting 1 plain and 1 purl for about 12 rounds. Stop with yarn-guide in front of machine. Break off wool, tie on coloured wool, and

do about 7 rounds. Stop with yarn-guide to the front. Break off coloured wool and join on stocking wool. Do about 12 rounds. Stop again. Break off and join on colour and knit another 7 rounds. Break off and join on stocking wool and do 16 rounds.

Stop with yarn-guide at back of cylinder. Change needles to 3 plain and 1 purl (see page 12). Start from the left half mark and continue round to the right. This will give you every other needle in the dial and every fourth out of the cylinder. Continue to knit length of leg required. Before turning heel, transfer front half of ribber stitches to additional cylinder needles, then knit 10 rounds with tension half point tighter for ankle. Stop yarn-guide in front of cylinder. Take out driving pin to stop ribber needles from knitting. Raise out of action the needles in back half of cylinder. When raising out of action the cylinder needles for the heel of a ribbed stocking or sock you require to raise all cylinder needles from the one before the ribber needle on the left side and the one after the ribber needle on the right side. This should be remembered when doing the toe. Put yarn into heel spring and knit backwards and forwards as previously explained on page 6. How to make the heel: When you have finished heel bring yarn-guide to the front of the cylinder. Put into action the cylinder needles out of action and put in driving pin. Make sure it is well home. Take yarn out of heel spring, loosen tension half point and knit foot length required. Do the toe same as heel, and remember to tighten tension half point before commencing and loosen again half point after finishing.

Put all needles into action; take yarn out of heel spring, etc. and knit a couple of rounds. Break off wool and tie on waste. Do a few rounds and stop yarn carrier at back of machine. Change needles to 1 and 1 rib and commence the next stocking.

Note.—When changing stitches from one needle to the other remember to take off Clasp Band and replace same after transfer.

The particulars for the turnover, which we give above, should make the size of the turnover four inches, and this is the length which is required when knitting stockings with the following measurements:—

- 9½" foot, leg length excluding turnover 16" (full).
- 9" foot, leg length excluding turnover 15½" (full).
- 8½" foot, leg length excluding turnover 15" (full).
- 8" foot, leg length excluding turnover 14½" (full).

The size of the turnover, however, should only be 3½" when knitting stocking with the following measurements:—

- 7½" foot, leg length excluding turnover 14" (full).
- 7" foot, leg length excluding turnover 13½"

To obtain the following sizes the number of rounds are, 15 rounds less or more in the leg, also 5 rounds difference in length of foot. For example, a 9½" foot may require 155 rounds in length of leg, and a 9" foot would therefore require 140 rounds for length of leg; and the foot 65 rounds for 9½". For a 9" it would be 60 rounds.

Special Note.—Remember when socks or stockings are pressed they will necessarily stretch slightly. This fact must be taken into consideration when making.

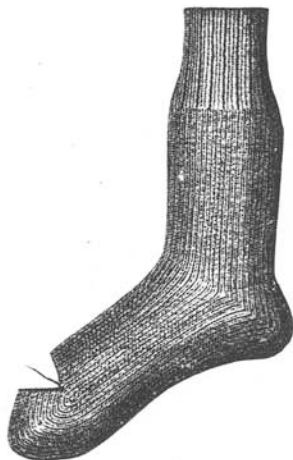
The tension used for a 8½, 9, and 9½ stocking is practically the same, but in the case of 7, 7½, and 8 the tension should be tightened about a point.

MEN'S RIBBED SOCK ON 84 CYLINDER.

To arrange this have all ribbers in dial and alternate needles in cylinder making 1 plain and 1 purl. To commence top of sock do 4 rounds selvedge, which is done by pushing lever in tappet plate forward, thus putting out of action ribber needles. Push back lever and continue to turn handle for about 50 rounds or according to scale. The top of sock is now finished. Stop yarn guide at the back of machine and arrange needles for 3 plain and 1 purl.



and then knit about 75 rounds (7½ inches). Stop yarn guide back of machine. Transfer stitches of front half of ribber needles to additional cylinder needles, which will thus give you 3 plain and 1 purl for the back half and all plain in the front half of machine. Tighten tension half a point. Knit 10 rounds. Bring yarn carrier to the front of machine. Raise out of action all needles in back half of cylinder. Take out driving pin. Put yarn in heel spring and now commence to make the heel. Full details of this operation are given on pages 6 and 7. When heel is finished press down into action back half of cylinder needles, put in driving pin, take yarn from heel spring, alter tension half point that was tightened. Now commence to knit foot. Knit about 70 rows for 10¼" foot. Stop Yarn carrier in front of machine and continue the same operation throughout as for the beginning of the heel. When finished put into action all needles. Put in driving pin, alter tension, take yarn from heel spring, knit a couple of rounds. This is the finish of sock. Break off yarn, add on waste and knit a few rounds. Arrange needles for 1 and 1 and so commence another sock.

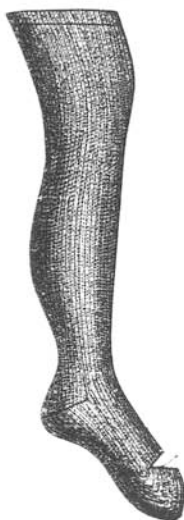


FOR PLAIN GENT.'S SOCK.

Arrange needles as stated for top of ribbed sock. But instead of changing to 3 plain and 1 purl transfer all rib stitches on to additional cylinder needles thus you will be making the all plain leg and continue to finish sock as Pages 7 and 8.

LADIES' STOCKING PLAIN HOSE WITH HEM TOP.

Instructions for 84 cylinder. This can be made also on the 108 cylinder with 2 ply wool or artificial silk. Knit a few rounds of waste wool with all needles in the cylinder. Break off waste, tie on your stocking wool or silk. Knit about 40 rounds according to length required. Take off weights and buckle. Raise up work inside cylinder. Now with the work hook put back on to the needles the first round knitted with the stocking wool that can be easily seen if waste of another colour is used.



Care should be exercised in putting back on to the needles the stitch which is in a direct line with the one already on the needle. This gives you now 2 stitches on one needle. Hold work down in the machine. Turn the handle and the binding of the turnover has taken place and continue now to knit the length of leg required.

SHAPING.

To get a nice shape to the stocking it is necessary to work with a loose tension at the beginning and tighten gradually down to the ankle, and a pressing board (which we can supply) will assist you in getting the required shape.

For the operation of heel, foot and toe see pages 7 & 8. The stocking can be knitted also in flat web from the calf and narrowing made, but as this is rather a long process we do not advocate this. It is only in the case of the very small child's sock that we recommend the making of the article on the flat web principle.

HOW TO KNIT A CHILD'S SOCK. FLAT WEB.

Set up for flat knitting with a number of needles according to size of sock required. Commence with selvedge as explained for flat web on Page 14. Then place yarn in heel spring and knit backwards and forwards until you have knitted a length sufficient for the leg, ending leg by knitting to the left.

You make the heel by knitting half each side. Pull up needles out of action all but 14 on the left side, work to the right and raise last needle that was knitted.

Now work once to right and once to left then pull up another needle. Continue to work backwards and forwards, raising needle at end of each second row until you have about 5 needles left. Now start putting the needles into action again as if you were making an ordinary heel, putting the wool behind the needle, push down in the usual way. Do this until you have about 13 needles knitting, you may then push all your needles into action.

Knit one row and then repeat for other half of heel. To finish sock it will necessarily have to be joined up in the usual way.

A child's sock done circular should be made on 72 cylinder with a tight tension.

METHOD OF FASHIONING FOR LADIES HOSE, GOLF HOSE, FOOTBALL AND CYCLING STOCKINGS.

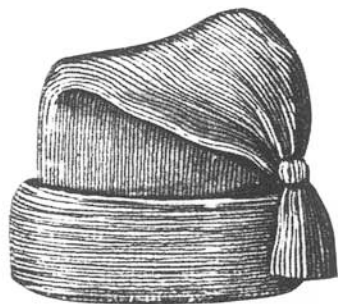
Having knitted the top part of stocking, arrange needles for 4 and 1 rib as Page 12.

Knit required number of rounds till you come to the part that requires fashioning. This is done first of all by taking the ribber needle nearest to the front of ribber dial as your centre needle. Take the half way marks on cylinder as your guide. The needle is the one nearest the centre of these marks. Now take out the second cylinder needle at the LEFT of this dial needle, transfer its loop on to the third cylinder needle removing the first cylinder needle into the empty groove (second), knit 5 rounds. Adjust dial needles so that the ribber needles almost work over the cylinder grooves. Now take out and transfer the loop from the fifth to the sixth cylinder needle (counting the needles that are at the left of the centre ribber needle). Remove the fourth needle into the empty groove, which will be the fifth. Then for the right side, take out the third cylinder needle from the front empty cylinder groove.

Transfer the loop on to the second cylinder needle. Remove the fourth needle into the empty groove (which is the third), knit 5 rounds. Repeat this decreasing in like manner on both sides, then knit 5 rounds until all the needles are changed to 3 plain and one puri. Now adjust dial forwards so that the dial needles will work over the empty grooves in cylinder. Replace band, knit about 50 rounds for the ankle, stop yarn carrier at back of machine. Do heel, foot, toe, as previously instructed.

CHILD'S TOQUE.

As this is worked with a hem top, no selvedge is necessary. Knit with a loose tension. The number of rounds required for the hem will be about 65. After placing this back upon the needles to form the hem, knit a further 25 rows. If the cap is being worked in colours add a few rounds with a slightly tighter tension. Break off colour that is being used for the stripe, tie on original wool again. Knit about ten rounds with tension still slightly tighter. Add a further few rows of stripe, again tightening tension. Break off and join on again.



Knit the desired length, pass thread through the stitches, and draw up, and finish off with tassie as pattern.

LADIES' RIBBED VEST.



Ladies vest 4 and 1 rib. Worked in 84 cylinder. Set machine up for 4 and 1 rib at lowest possible working tension, allowing about 8 to 10 rounds of knitting to the inch. Knit length required for back and front (circular web which is cut up and joined after pressing with hot iron and damp cloth). Sleeves: two circular pieces about 50 rounds in each, sewn in the ordinary way and the edge finished off in crochet stitch. Cut out neck (after pressing with hot iron and damp cloth) to shape required and crochet round with double crochet and slots for ribbon. Bottom of vest is also finished with double crochet.

MOTOR SCARF.

This is made by knitting with all cylinder needles in, then releasing the stitch from every other needle. After making the required length, these dropped stitches will run down to the bottom of the work. Two lengths are required. Press with hot iron and damp cloth. Join up. Finish with fringe or tassel as desired.

LADIES' JUMPER ON 72 CYLINDER.

The Jumper illustrated has been made on flat web as follows. Set up machine on about two-thirds of cylinder needles. Knit backwards or forwards (yarn or silk in heel spring) for length required.

Two pieces are necessary, one for the front and back of left side and one piece for the front and back of right side. Now for the centre back and front, 2 pieces will be required. The back piece being one inch longer than the front piece. Sleeves. Two flat pieces required. One piece for each sleeve, length according to requirements. Putting together. Press with damp cloth and hot iron. Run through a thread of silk or wool, whatever is being used, through the bottom of each piece to secure the stitches. Now join the centre front to the side front with the aid of a crochet hook or could be sewn together in the ordinary way. Now join centre back to side backs in a similar way. For the sleeves, use a grafting stitch as used when joining for the toe of a sock and sew into body of jumper.

Finish edge of sleeve with crochet stitch or as desired.

Finish off neck and bottom with crochet edging. A nice finish can be got from knitting the centre panel with the lace work fancy stitch and the finish of the bottom of jumper also with this stitch, which would require 6 pieces, each piece being the width of each panel. A plain jumper could be made more effective by sewing on a transfer and beading either centre front or seams with a contrasting colour.

NOTE.—Tension as loose as possible when using artificial silk.



LADIES' SPORTS WOOLLIE COAT.

Made on 84 cylinder with loose tension. This is made with a 6 and 1 mock rib and this is arranged by leaving out every 7th needle in the cylinder. The body part is made in 5 circular pieces of about 250 rounds, and each piece commencing with hem of 20 rounds. Sleeves.—Commence with 1 and 1 rib doing selvedge in usual way and knit about 50 rounds. Change to 6 and 1 mock rib. That is transfer all stitches from ribber needles to additional cylinder needles. Now transfer the stitch from every seventh needle to the sixth cylinder needle. Now you have every seventh groove in the cylinder empty. Knit 150 rounds, or as required.

ROLL COLLAR.

This should be done after joining body of coat and inserting the sleeves so as to get the length required, which would be from the bottom of right side front, up and around neck and down the front to bottom of left hand side. This piece can be done in a circular way as usual. But a little tighter tension than that used for the body part of coat.

MAKING UP THE GARMENT.

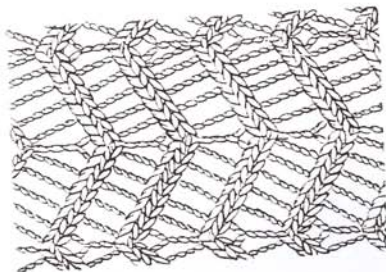
Press all pieces with damp cloth and hot iron. The five circular pieces that are for the body of the coat should be cut open after pressing and over-sewn together in the ordinary way. Now cut shoulder and arm holes just a little to shape, also neck. Secure stitches at bottom by running through a thread of wool, sew in sleeves in the usual way. You can now sew on the roll collar which can be turned back and made double if required.

Finish with girdle or cord. If by cord, work with 4 or 5 needles in front of cylinder and turning the handle circular as when knitting for a sock or stocking and afterwards adding tassels if required.



FANCY STITCHES

HERRING BONE PATTERN.



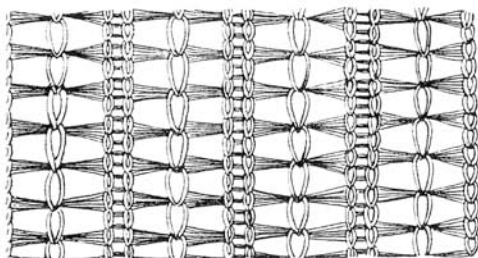
After setting up work for flat web to arrange this stitch transfer forwards every loop on the second needle to the next one and put back into the groove the empty needle. Knit a couple of rows. Repeat this operation a few times and then reverse the process by transferring backwards and repeating a few times. Continue to do same until you have the length required.

LACE PATTERN.

This is a very simple fancy pattern to make and to do same arrange needles thus: Set up as for flat web. Raise up out of action every third needle. knit three rows, press down into action the needles that were raised, knit one row. Raise same needles again, do another three rows, press down into action these needles and knit one row, continue this operation until you have the length required.

This pattern is also very effective for circular knitting.

Numerous patterns can be made by arrangement of needles and can be easily devised after a little practice.



Classes of Yarn for use upon The Imperia Knitting Machine

It is very important to work with the correct yarn. All our yarns are specially selected and, being machine yarns, are most suitable for all classes of work on any cylinder.

Being large buyers direct from the spinners, we are able to supply all yarns of special wearing qualities at low prices. Send for patterns and prices.



The Imperia Hosiery Manufacturing Co., Ltd.
97 GRAY'S INN ROAD,
LONDON, W.C.1

PRICE LIST

(Carriage not included)

Of parts of Machine with Accessories

No.				£	s.	d.	No.
1	...	Bed-Plate	...	1	15	0	1
39	...	Bobbins	...	0	0	6	39
40	...	Buckle	...	0	2	0	40
3	...	Cam Shell	...	1	15	0	3
31	...	Centre Pin for Ribber	...	0	1	6	31
13	...	Clamp Screw	...	0	0	9	13
21	...	Clasp Band	...	0	2	0	21
8	...	Crank Wheel	...	0	7	6	8
9	...	Counter	...	0	10	0	9
3A	...	Cylinder Cam	...	0	6	0	3A
30	...	Driving Pin for Ribber	...	0	1	0	30
7	...	72-Cylinder and Dial with Needles	...	3	0	0	7
7A	...	84-Cylinder and Dial with Needles	...	3	5	0	7A
7B	...	108-Cylinder and Dial with Needles	...	3	15	0	7B
2	...	Gear Ring	...	0	7	6	2
28/9	...	Handle for Machine	...	0	1	6	28/9
37	...	Heel Hook	...	0	2	0	37
19A	...	Heel Spring	...	0	1	6	19A
26	...	Leather Belt	...	0	1	0	26
50	...	Needles, per dozen	...	0	2	0	50
22	...	Needle Tray	...	0	1	0	22
4	...	Ribber Arm	...	0	13	6	4
48	...	Ribber Arm Screw	...	0	0	6	48
12	...	Ribber Post Adjuster	...	0	7	6	12
14	...	Setter-up	...	0	5	0	14
11	...	Set of Weights	...	0	5	6	11
45	...	Swift	...	0	5	0	45
6	...	Tappet Plate	...	0	15	0	6
17	...	Winder for Bobbins	...	0	10	0	17
38	...	Work Hook	...	0	1	0	38
46	...	Wing Screw	...	0	1	0	46
23/5	...	Yarn Guide or Carrier	...	0	7	6	23/5
19	...	Yarn Stand Top	...	0	6	0	19
20	...	Yarn Stand Rod	...	0	3	0	20
19B	...	Yarn Lock	...	0	1	6	19B

IN CASE OF BREAKAGES OR RENEWAL OF PARTS

the broken or worn parts should be sent to us. These parts can only be supplied by The Imperia Hosiery Manufacturing Co., Ltd.

When sending any part to us, please enclose name and address with same.

To ensure that your Stockings are the required size we supply Pressing Boards :

For Boy's T.O.T. Stockings	{ 7½-in., 8-in. and 8½-in.	...	at 2/- each
	{ 9-in. and 9½-in.	...	at 2/3 each
For Ladies' Hose	9½-in.	...	at 2/6 each
For Men's Half Hose	Standard size	...	at 1/9 each

Service Department

Write us for further information if there is anything you do not understand.

We are always at your service, and a letter may save you an hour's time.

Everything is easy when you know how it is done, and our experts can tell you