HOW TO OPERATE THE "LEGARÉ" KNITTING MACHINE

LA COMPGANIE

LEGARÉ

LIMITÉE

1200 AMHERST STREET

MONTREAL, P.Q.

WHEN ORDERING REPAIR PARTS BE SURE TO GIVE THE NUMBER AND NAME OF PART TOGETHER WITH THE NUMBER OF THE MACHINE, WHICH YOU WILL FIND STAMPED ON THE CRANK WHEEL OR ON THE BED PLATE.

General Instructions

These instructions are for the one who has never seen a knitting machine, who knows nothing about knitting and who understands little about machinery of any kind. It has, therefore been our aim by simple language and illustrations to make your task easy so that by a little careful study and effort you may readily learn to operate this Home Knitting Machine.

First learn the names and uses of the various parts of the machine and how they work, paying particular attention to the action of the needles. Get thoroughly acquainted with the machine, follow the direction carefully, and you should soon become a proficient operator.

HOW TO UNPACK YOUR MACHINE

Remove the lid carefully. Take out all packing and remove the various loose parts of the machine with care and lay them aside. The machine is fastened by its clamp screws to a wooden shelf in the box. Take the machine out and fasten it by means of these clamp screws to a table, being particularly careful not to damage the needles. Clean off all paper and oil used to protect the machine from damage and rust while in transit.

As the machine has been tested and adjusted before leaving our factory, it will not be necessary for you to make any adjustments until you have become thoroughly acquainted with the machine and its parts.

There are no extra features to buy with our machine, as it is delivered complete to make plain and ribbed work.

IMPORTANT

When you understand the working principles of the Knitting Machine, as explained in this book, these directions carefully studied will enable you to master its operation. Remember that going slowly and learning thoroughly as you go will save you much time and help to make it easy; speed comes with practice.

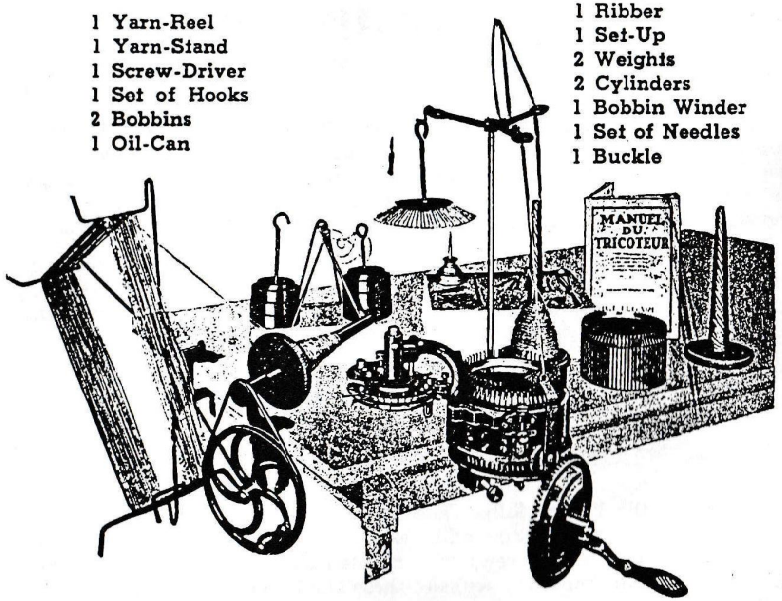
DO NOT try to use any part of the equipment until you have read directions carefully and are sure you know its use.

Our Machine is Complete

The photograph below shows the complete knitting outfit that you get with this machine. The outfit can be easily set on any table and put together for work in a few minutes. You will receive the machine complete as follow:

1 Yarn-Reel
1 Yarn-Stand
1 Screw-Driver
1 Set of Hooks
2 Bobbins
1 Oil-Can

1 Ribber
1 Set-Up
2 Weights
2 Cylinders
1 Bobbin Winder
1 Set of Needles
1 Buckle



HOW TO WIND BOBBIN

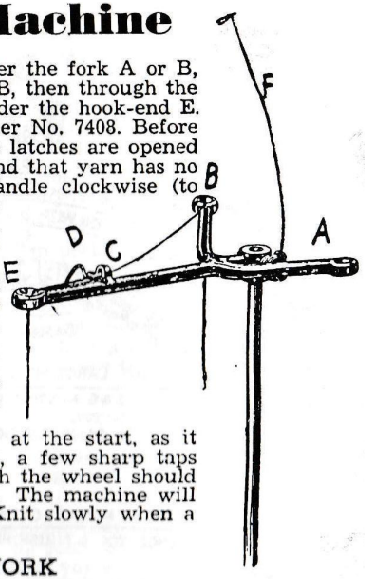
It is very important to learn to wind a good bobbin because the machine operates best when the yarn runs off freely and evenly.

Clamp the bobbin winder on one corner of the table and the swift holder on the other corner. Slide swift wires into holder and tighten the screw to hold them in place. These wires should be balanced so that when the yarn is unwound the swift will turn steadily and not in jerks. Stretch the skein of yarn on the wires evenly, so that it will unwind freely without crossing or twisting.

Press the bobbin on to the tapered spindle of the winder. Turn the handle a few revolutions to see that the leather belt is properly fixed and that the bobbin does not wobble on the spindle. Tie the yarn to the bottom at the bottom where you should commence winding. Fill the bottom gradually, filling toward the top. Wind in the form of a cone with a medium even slope.

The best bobbin is made by moving the left hand sideways back and forth with a movement of about three inches as the hand guides the thread on to the bobbin. This movement should be made quickly.

Treading the Machine

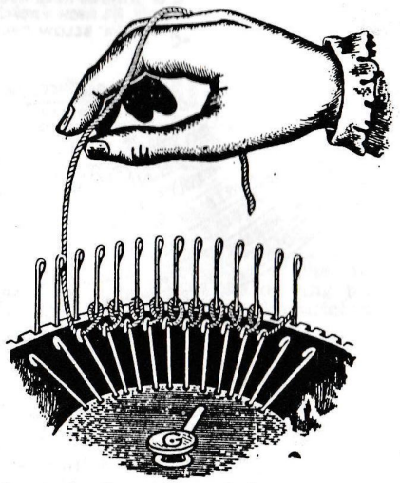


Set a bobbin of yarn directly under the fork A or B, pass the yarn through back eye A or B, then through the middle eye C. and overlock D now under the hook-end E. Finally through the eye of Yarn-Carrier No. 7408. Before turning the handle, see that all needle latches are opened and pointing down, not straigth out, and that yarn has no slack and feeds evenly. Turn the handle clockwise (to the right) slowly at first, until you see that everything is working properly. Do not fail to have sufficient weights to hold the work down properly.

Study every movement of the needles, and learn how the stitches are formed. It is very important that you make yourself familiar with the working of the needles, cams, name of parts and the method of forming the stitch. You may now knit any length of plain work.

If the wheel should stick slightly at the start, as it may do sometimes after lying unused, a few sharp taps on the handle in the direction in which the wheel should move will generally put matters right. The machine will work much easier after a little use. Knit slowly when a knot reaches a needle.

SETTING UP NEW WORK



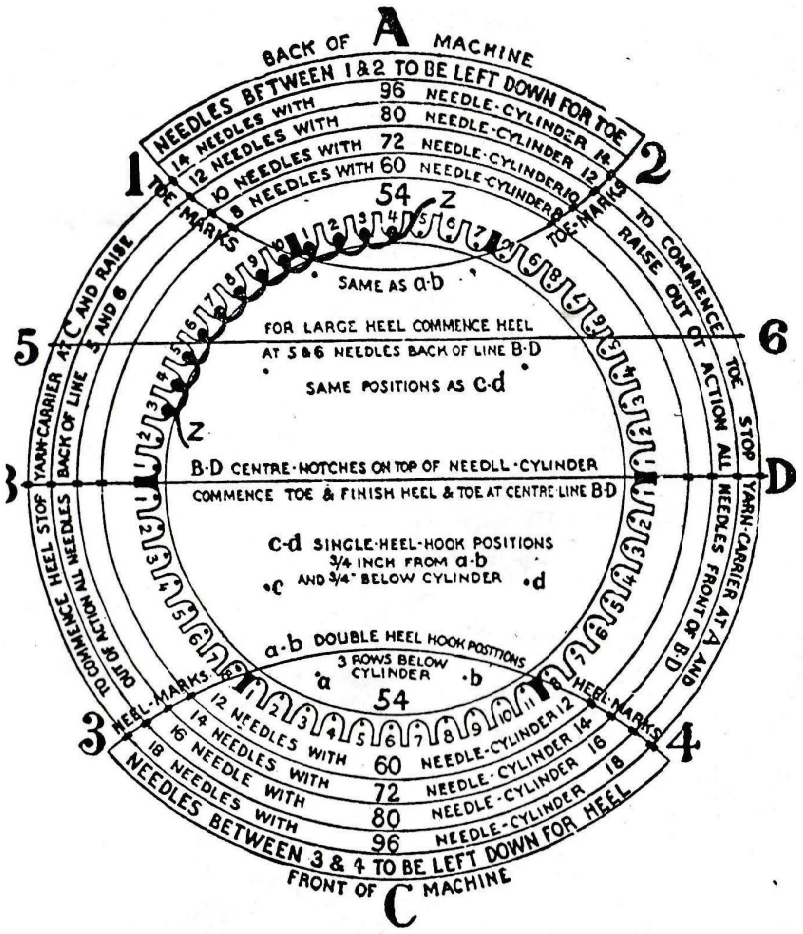
Turn crank forward. Stop the yarn carrier at A or back of machine. With left hand, hold set-up as shown in cut with set-up ⅛ of an inch below the top of needle cylinder. Commence setting up at A or back of machine. Set up right to left by placing the yarn around each needle and around any corresponding hook of set-up. Cross the yarn from right to left between each and every needle. Place yarn around set up hooks twice when necessary to even up and prevent set up hooks from being drawn side ways out. Wind yarn twice around the set-up nut to complete the setting up.

Never try to knit with bad needles which have bent hooks or bent latches.

Hold the work down so the stitches will rest on or close to the top of the needle cylinder. Placing and removing the yarn from take-up spring or regulating the spring tension before and after the heel and toe is made, is usually forgotten.

When two-thirds of the setting up is finished, draw back through yarn carrier all slack yarn. Hold the work well down by means of set-up with left hand so it will be impossible for the stitches to rise on the needles. Knit forward in the direction of A.B.C. and stop yarn carrier on the left at 3 or 6.

CYLINDER - CHART



Study Chart Carefully, especially the wording on sides and center lines as well as figures on front and back of chart. The inside circle represents the top of a 54 needle-cylinder, the small black dots represent the 54 needles, the black heavy curved lines around the black dots on the left represent the manner of setting-up or connecting the yarn with needle and set-up.

Bear In Mind. A indicates back of machine; C the front side; B left side, D right side; BD cylinder, center marks; 1-2 toe-line or cylinder marks; 3-4 Heel-line or cylinder marks; 5-6 line indicating position for commencing large heel.

Essential Points:—Learning to be a first Class Operator is comparatively easy if Operator will only learn and remember the three things most essential and necessary: — The bobbin must be well and evenly wound, the tension or length of stitch must be regulated, the work or stitches must be well held down.

How to Do Ribbed Work

The ribber is the most valuable part of the machine, as it is more than double the range of work when fully understood and properly worked, and enable the operator to make large and small rib-stocking.

To place the ribbing attachment in position, have the yarn carrier at the back of the machine. Pick up the ribber attachment, holding it by the arch in the ribber arm and place it in the machine. The ribber arm height regulating screw should rest on the cam cylinder and the dial should rest above the cylinder with just space enough between them to allow the knitting to pass between. The parts will fit snug to begin with and many have to be tapped into position, but as you use the machine they will slide in with a nice working fit.

The correct position for dial slots is directly opposite cylinder needles. Move the dial forward with your hand till it presses against the upright. If the slots are not exactly opposite cylinder needles, adjust the upright lock forward, and to the right for adjustment forward pressing dial forward at the same time.

When the ribber arm is pressed, the dial should be high enough to allow the web sufficient clearance to pass freely off the needles down between the cylinder and dial. Varying yarns may necessitate alteration in the height of the dial. Turn ribber arm height regulating screw to the right to raise dial, and to the left to lower it, then lock in place by tightening nut.

Putting Ribber Needles in Dial

Ribber needles slide into the slots of the dial, heel first, and lie on their backs with butts up. They should be pushed in as far as they will go, so that the butt touches the rim of the center cam.

The needles can be placed in slots on any part of the dial with the exception of that part which is covered by cams of cam plate. Slide in the ribber needles, commencing at the left side and working around toward the right. See that the cam lever switch No. 7231 it at the "in" position, as far in to the center as it will go, and that the driving pin is in place. Have all needle latches open so that needles can take stitches.

A Variety of Ribbed Stitches

For a 1 and 1 rib, all the ribber needles must be on the dial, but only every alternate needle on the cylinder. The dial must be adjusted so that the ribber needles are opposite the empty cylinder slots.

For a 2 and 1 rib, all the needles must be on both cylinder (54 or 72) and 36 on dial and the dial must be adjusted so that the ribber needles are exactly central between the cylinder needles.

For a 3 and 1 rib, every fourth is left out of the cylinder, and every alternate needle out of the dial; adjustment as in 1 and 1 rib.

For a 4 and 1 rib, all needles are on the cylinder and every alternate needles on dial; adjustment as for 2 and 1 rib.

Oil the butts of the rib needles before starting rib-knitting. A good grade of light sewing machine oil is the best for use on all parts of your knitting machine. Be careful not to flood the machine with oil, a few drops where required is all that is necessary.

For transferring stitches from the cylinder to dial, have your spring band holder which is a flange on the cam cylinder, at the front of machine and extend spring band over it with work hook. You will find that this releases about four needles. Take hold of cylinder needle farthest to the left as you are working toward the right and draw it up its stitch until the stitch is below the latch. Then place the hook of the cylinder needle into the hook of the ribber needle immediately above it, which must have its latch open. Slide stitch from the cylinder needle over its closing latch onto the ribber needle with its open latch. Transfer in this manner necessary cylinder needles until you have your machine set for the desired rib.

Turn the crank slowly to move the cam plate forward and clear the way for the remainder of the needles, not forgetting to hold the work down so that the cylinder stitches will continue to knit properly. When you have finished transferring stitches slip spring band back.

It will be found that when the ribber is in use, it is necessary to pull the work down as strongly as in plain knitting. In fact, the left hand has to do little more than rest on the work, but the pull must be steady, and in a vertical direction. If the pull be to one side, or unsteady or even to strong, it may cause the ribber needles to drop their stitches.

1 And 1 Rib

If you have a needle in every slot on the dial and a needle in every other slot on the cylinder, that is, one rib needle to one cylinder needle, you are ready to knit 1 and 1 rib. See that all your needle latches are open and that your yarn is feeding properly, and then proceed to knit. Watch carefully the operation of the dial needles and how they work. You will notice in 1 and 1 rib that the dial needle works in exact time with the cylinder needle just ahead of it, and that they take their stitches at just the same time. If this is not true, then your ribber needs timing.

Dial Back to Cylinder

Put in cylinder needle where rib stitch is to be transferred. With work hook or your finger, draw out the ribber needle until its stitch is behind the latch. Now hook it into hook of the cylinder needle and slide the stitch over the closing latch of ribber needle into the cylinder needle with open latch. Transfer in this manner as many rib stitches as are desired for next pattern, turning the crank wheel slightly as required to release needle engaged in the cams.

Measuring Works

In order that all parts of the sock shall be of the proper length and in the right proportion to each other, it is necessary for you to measure the web as it is made. Remember in measuring that the web is naturally stretched somewhat when the weights are on, and you must allow for this.

A sure method of measuring work is by means of a foot rule. Hold the rule up inside the cylinder so that it presses against the dial, and measure from the dial down. If the ribber is not on the machine measure from the top of the cylinder.

Measurements are sometimes taken by counting the number of rows made, although using the rule is more accurate method. However, if you are using the same weight yarn and the same tension you may find counting rows helpful. Remember however that different weights of yarn and different tensions effect the length of the work.

Heel -- First Half

Watch the cylinder chart (Page No. 4) as you read these directions and all should be clear to you. Commence heel by stopping the yarn carrier at A or back of machine. Remove all dial needles in front of half cylinder marks (Page No. 4) and transfer their stitches to the cylinder needles which place in the empty slots. Turn yarn carrier to C or front of machine. Remove driving pin to prevent rib needles knitting. Note that your machine is now set for 3-1 rib at back and plain work at front. Raise out of action all needles back of center line B-D or at cylinder marks 1-2. Needles are raised out of action simply by pulling them up until their butts rest against the spring band holding them in the slots. They will stay there until pushed down again into action.

Pass yarn over take-up and see that it is properly regulated to take up all slack yarn caused by reversing the machine. Hold down the work well at the front half of machine so that stitches cannot rise on the needles. At the same time turn the crank forward to knit in the direction of C-D-A. Stop the arm carrier at A or back of machine.

Raise needle No. 1 out of action on the same side you have knit, or at D. Hold the work down firmly at C or front of machine. Turn crank backward to knit in the direction of D-C-B. Stop the yarn carrier at A or back of machine. Raise needle No 1 out of action on the left at point B which your yarn carrier has just passed. Holding down your work well at front of machine, turn crank forward and knit in the direction of B-C-D again. Stop yarn carrier at A. Raise one needle out of action, the last one to make a stitch, that is, needle No. 2 on the right at D. Hold the work well down at C and continue raising one needle (the last needle operated) out of action, alternately on the left and right sides until all the needles are raised out of action on the front of machine up to the line 3-4. The last needle raised will have been on the left, and the yarn carrier should now be toward the back of the machine, between points B-A. Knit one course in the direction of B-C-D, and stop yarn carrier at A or back of machine. See chart for number of needles remaining down in front of cylinder according to the number of needles used in that cylinder.

Heel -- Second Half

The second half of the heel is knit in the same way, the needles previously raised being lowered one each row knit. The only needles now in action on the whole cylinder are those between point 3 and 4. The heel hook is always used to hold down work when knitting the second part of the heel and is placed directly in the center of the heel web, hook inward, three rows of stitches down from the top of needle cylinder. Place one or more weights upon the heel hook and pull down on the heel hook by hand when the ordinary weight of heel hook is not sufficient to keep the stitches close down to the top of needle cylinder.

Put down one needle on the right at 3, and lift the yarn from front of this needle to back of it. Knit in the direction of C-B-A, and stop yarn carrier at A or back of machine. Put down one needle on the left at 4; place the yarn behind it, and knit by turning crank in the direction of C-D-A. Put down one needle alternately on the right and left side, on the same side as the yarn carrier each row knit, always placing the yarn behind the needle. Hold the work well down at C or front of machine. Keep stitches well down one the side needles by hand or with the buckle and weights, and pay close attention to this. Leave one needle up in front of each B and D, which will be the one first raised on each side. Knit the last row forward in the direction of B-C, and stop yarn carrier at front of machine. Put down all needles, put in driving pin, and proceed to the foot.

To Knit Foot

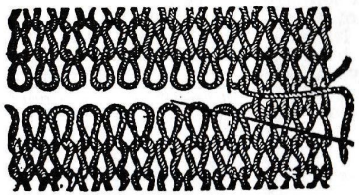
If the cylinder needle latches will not stay down, raise the needles slightly. Now remove the yarn from the take-up, so as to remove all strain from the yarn while knitting the foot. Knit the foot as many inches long as desired, measuring with rule from the dial downward. The top of the foot will be 3-1 rib, and the bottom plain.

Knitting the Toe

The toe is made exactly the same as the heel, except that in the second half all needles are put down to line B-D, including the needle first raised. Knit the last half row of the toe forward in the direction of B-C, and stop yarn carrier at front of machine. Put down all needles remaining up. Remove yarn from take-up. Knit two or three rounds for hand closing of toe. The sock is now finished but do not remove it from the machine. Start the next sock by running in dividing cotton and continuing another sock.

Closing the Toe

When the sock is taken out of the machine, the toe must be laid flat and pressed under a damp cloth with a hot iron. This makes the stitches flat and firm, and prevents their unravelling. Now unravel exactly the number of extra rounds knitted. It will be observed that a small hole appear in the knitting at each side of the toe where the actual finish took place. This is the point to which you should unravel. Then join up the stitches by hand with a dull pointed ordinary darning needle.



Begin on one side of the toe, and pass the needle down through, up through, back through, into loop, down through, into loop, up through into loop, continuing this procedure until you have completed closing the toe, being careful each time to draw the stitch, so that it will be the same length as the knitting.

The stitches must not be twisted or crossed, and the tension of the joining stitch should be the same as that of the knitting itself, neither tighter or slacker. The number of rows unravelled should be exactly the extra number knitted, if fewer, a lump will be caused at each end of the

joining up. Toeing up should be done with great care, and when properly done, the closing will not be discernible.

The best method of finishing woollen hosiery is to draw sock on board, press each side with hot iron, using a damp cloth to prevent scorching. Allow sock to thoroughly dry while on the board.

Care must be taken that the two socks or stockings in a pair are knitted at the same tension, and that they contain exactly the same number of rounds in each part, or they will not "pair".

Care of the Machine

The machine should be kept well oiled, and oil may be applied with advantage wherever two metal parts rub together in working. The special parts to oil are: The cylinder grooves with needles in; the dial and dial grooves with needles in; the cams inside the cam cylinder; the crank wheel teeth and stud on which it revolves; the winder and swift. Oil will do no harm where it is likely to get on the knitted work, but the machine should not be flooded with oil. Oiling is best done frequently and in small doses. The machine can then be kept neat and clean. All fluff from the wool should be regularly cleaned off.

Never run the machine fast when there is no work on the needle as it may damage the needle latches. If needle latches do not work, bend them carefully into line and back and forth if necessary until they work easily on their hinge. Bent latches are usually caused by the yarn carrier striking them.

When cleaning the machine or for other purposes it is sometimes desires to remove the cylinder from the machine. To do this, take out all cylinder needles, and unscrew the two cylinder screws on the under edge of cylinder, which hold it to the bed plate.

If the machine should block before making any adjustments, see that nothing has dropped between the cam cylinder and the needle cylinder.

If the machine is hard to operate, it may need oil. Never leave the machine in a damp place, and if the machine is not to be used for a while, remove the needles from the machine. Rusty needles will not do good work.

If the machine drops stitches, see that all your needle latches are open. Also see that no bent latches cutting the work and that there are no broken latches.

Never turn the crank wheel backwards with the ribber needles in action.

Never attempt to remove the ribber from the machine while the needles are on the dial. Remove the needles first.

LIST OF PARTS

70 Buckle
7108 Cam screw
7123 Up-throw cam, left
7124 Up-throw cam, right
7133 Ribber screw
7139 Heel and weight work
7140 Large weight
7142 Screw-driver
7143 Oil-Can
7144 Set-up
7148 Pick-up hook
7152 Yarn stand rod
7170 Cylinder needle
7171 Cylinder spring-band
7212 Ribber cam plate pointer
7216 Ribber switch cam
7217 Lever screw
7220 Cam screw
7221 Ribber tension screw
7222 Ribber needle dial
7224 Ribber dial axle
7225 Ribber dial screw
7231 Ribber switch cam lever
7232 Ribber switch cam plunger
7233 Ribber switch cam spring
7234 Ribber timing screw
7235 Ribber timing screw nut
7240 Ribber tension cam
7244 Ribber regulating screw head
7294 Swift clam screw
7299 Belt wheel
7301 Belt
7304 Clamp adjuster shaft
7306 Swift arm holder
7307 Swift arm holder nut
7308 Swift arm
7317 Needle cylinder screw
7321 Tension screw
7324 Tension screw nut
7325 Tension pointer
7328 V cam med. work
7330 Lower cam, left
7331 Lower cam, right
7400 Bed plate
7401 Cam cylinder
7402 Needle cylinder 54 or 72
7403 Crank wheel
7404 Crank wheel stud
7405 Cog ring
7406 Bed plate screw
7407 Rib needle
7408 Yarn carrier
7411 Bobbin winder pulley
7412 Bobbin winder rivet
7414 Bobbin winder spindle
7418 Ribber arm
7419 Ribber arm pin
7420 Ribber height reg. screw
7421 Ribber cylinder lever screw
7422 Single heel hook
7423 Double heel hook
7424 Ribber cam plate
7430 Yarn stand top
7431 Take-up spring
7432 Take-up lock
7433 Swift arm screw
7441 Bobbin winder clamp
7443 Swift clamp
7448 Needle cylinder lever
7449 Needle cylinder lever screw
7450 Bobbin