

MY KNITTING INSTRUCTION BOOK

NEW EDITION
GEARHART KNITTING MACHINE CO.
GLEARFIELD, PA.



1924

New Instruction Manual

FOR

Gearhart's Knitting Machine

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OFFICE AND FACTORY OF GEARHART KNITTING MACHINE CO.

CLEARFIELD, PENNSYLVANIA

An Interesting Story of How Home Knitting is Done with the Gearhart Knitting Machine.

By E. J. GEARHART

The Gearhart Knitting Machine Company wishes to make this Instruction Book an interesting story about Gearhart Home Knitting; to tell the story briefly, yet in detail, in such a way that the reader may easily interpret and apply accurately every part to the Knitting Machine operation which it is intended for.

For a clear understanding, detailed instructions are given with certain vital points emphasized to tell you just what to do and what not to do to gain your success. To get the best results, the beginner must study carefully and apply accurately each point and part, obtaining a clear and definite understanding of each portion of the knitting before advancing to the next stage or step in the process of knitting.

Our Company has the interest of its thousands of workers at heart and sincerely requests any new beginner who might possibly experience any difficulties to write a detailed letter describing as clearly as possible where they think their trouble is, addressing the letter to the Service Department of the

Gearhart Knitting Machine Company.

Before application for new instruction is made, we desire the beginner to again carefully read and apply the instructions, one paragraph at a time, right back from the start. Be sure that there was not some point or points overlooked or not observed which should have been carried out differently. The Gearhart Knitter has been manufactured to be used in the home and operated by anyone of ordinary intelligence even though they have not learned to run or operate successfully any kind of a machine, or had any previous knitting experience whatever.

These instructions cover briefly, yet fully all the details neccessary for complete success. The Gearhart Knitting Machine is strong and durable and if operated with care, it will last for many years of service. Within a few hours, when you master completely its operation, you will be proud and delighted

to know that now you too can produce hosiery of superior quality.

The Gearhart Knitting Machine Co. welcomes new ideas and suggestions for greater service, both from experienced operators and new beginners. Also the Company would appreciate receiving samples of knitted garments other than those which are taught in this instruction book together with instructions for their knitting. By our interchanging these ideas among our thousands of interested home earners, we are enabled to give our greatest service.

Start Here to Learn

The purpose of this instruction is to give the beginner a complete and clear picture of knitting the **Gearhart** way. Each step is detailed on separate pages right from the beginning and placed in this Instruction Book in the order of its importance. If the beginner will carry this working plan through carefully one part at a time and be sure to master that part before proceeding to the next part, success is assured.

Make up your mind definitely that this is going to be good fun and that you will not allow anyone, not even one of your family, to confuse or disturb you while you are learning. This Instruction Book is your teacher and tells you everything by picture and story that you need to know. Let us repeat that—Do not let any person be with you offering advice and suggestions while you are learning. After a while you can show your first hose and tell them you knit it all by yourself. You can't expect to do this in a few minutes or even a few hours if you will not follow our advice—we have taught thousands and thousands of people in the thirty five years of our success and you can master the Gearhart Knitter the Gearhart way as quickly as the best.

All There Is To It

- 1. How to carefully unpack the Knitting Machine Outfit.
- 2. The importance of learning the names of all the parts as they are unpacked.
- 3. Fastening the Machine to the Portable Stand or a table to prepare for knitting.
- 4. Assembling the Knitting Machine and connecting the yarn for knitting.
- 5. Important things to know before turning the Crank.
- 6. How to proceed with the knitting.

Please

DON'T RE-ADJUST SCREWS UNLESS YOU ARE SURE.

DON'T TRY TO LEARN IT ALL AT ONCE.

DON'T TRY TO DO THINGS IN A HURRY.

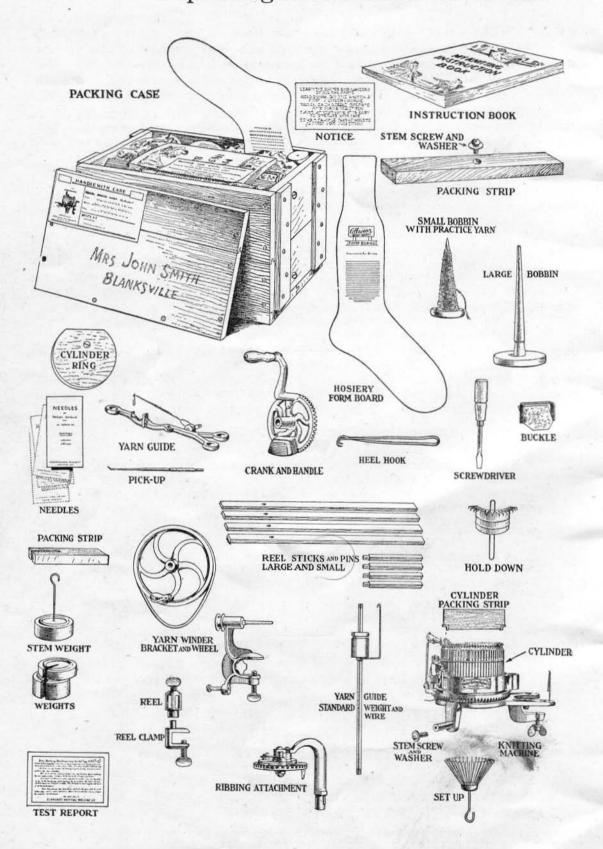
DON'T TURN CRANK WHEN MACHINE IS EMPTY.

DON'T ALLOW OTHERS TO PLAY WITH YOUR MACHINE.

DON'T APPLY FORCE ON THE CRANK IF SOMETHING STICKS.

DON'T CALL IN NEIGHBORS OR VILLAGE MECHANIC.

PICTURE 1 Unpacking the Machine and Outfit



OTHER ARTICLES MAY BE SENT WITH THIS OUTFIT WHICH ARE NOT PICTURED HERE

Unpacking the Machine and Outfit

- READ THIS. Complete success depends upon a very careful unpacking. Follow these instructions one step at a time, looking at the picture on opposite page. Learn the name of each part and what it is for just as it is taken from the packing box, unwrapped and laid upon a convenient table.
- Step 1. Secure the Screw Driver which was placed in a corner of the box for you.
- Step 2. Unscrew and remove the Stem Screw and Washer.

 Save these to fasten the Crank on later.
- Step 3. Remove the three screws from the ends of box.

 These screws release the Packing Strips in the box.
- Step 4. Lift out the long Packing Strip which holds the Machine.

 Replace again the Stem Screw and Washer
- Step 5. Take out of box all packages, carefully unwrap them and learn their names by referring to the Picture.
- Step 6. Unloosen the Machine Thumb Screw down in the bottom of box which holds the Machine to box brace. If it cannot be unturned with fingers, use the slot in the small weight as a wrench.
- Step 7. Lift the Machine from the box and lay it down carefully or clamp it securely to a table or the Stand. Remove set-up from inside of Machine. Don't try to knit yet or allow anyone to touch it.
- Step 8. The Stem Weight can be lifted out of the box if you have taken the screw out of end of box holding its Packing Strip.
- Step 9. Remove the screw holding the Cylinder Ring to the bottom of the box and slide the Cylinder out from under the cross brace in the corner.
- Step 10. Replace in the box all Packing Strips and wrapping paper.

IMPORTANT

If any parts are found damaged or broken they must be immediately returned to the factory, plainly marked with your return address and assigned working number on the outside of package and a plain letter written telling the circumstances. The repairs or replacements are made immediately at the Company's expense.

The Gearhart Company insists upon their Machines and Outfits being received in perfect working condition and these detailed, carefully illustrated instructions strictly followed.

The Machines are correctly set up when shipped; their regular knitting left on the Machine and a rigid inspection made. The Company will insist upon the learner following every step of these instructions just as given, which insures a clear understanding and correct operation. Otherwise the Company cannot be held responsible.

Part Two shows how to put the Machine together. Be sure you are right then go ahead.

No packages containing machines, yarn or hosiery are accepted by us unless bearing the label issued by us to identify same. Hosiery Labels and Hosiery Return Envelopes supplied to you must be used for returning Hosiery only.

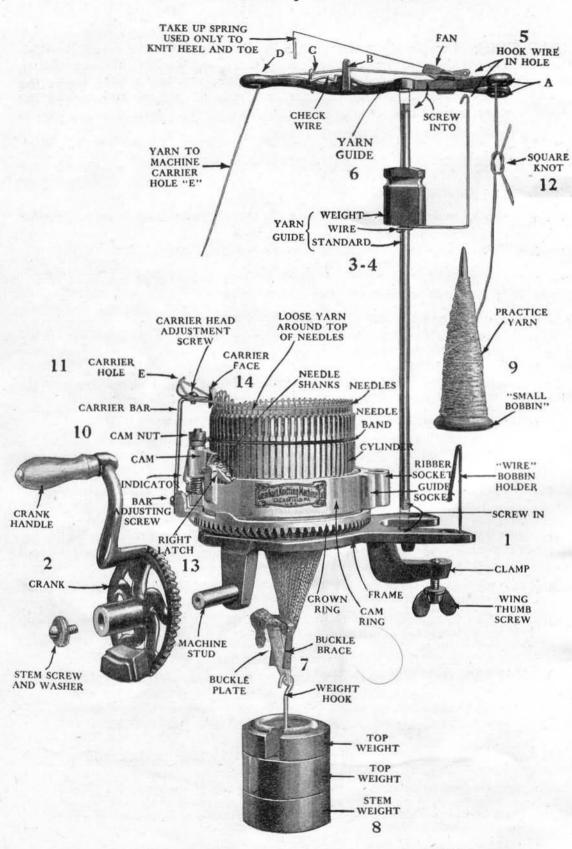
All other labels are issued only as circumstances require.

We will not be responsible for loss, damage, etc., to packages sent us without our label authorizing their acceptance by us.

To avoid loss and assure prompt service please observe this rule carefully, and do not send packages without previously obtaining our label for that purpose.

PICTURE 2

Assembly of Machine



"ALWAYS BE SURE YOU ARE RIGHT THEN GO AHEAD."

Assembly of Machine

- READ THIS. Great care must be given to get the Machine together accurately. Carefully study Picture 2 and apply the following instructions in the order given Step after Step, referring to the picture where the Steps are numbered and every action is named. When you get through with this page you should Know the name of every part of the Machine, then the rest is easy.
- Step 1. Clamp the Machine securely, with the Wing Thumb Screw, to a suitable table (an ordinary kitchen table is fine) or to the steel Stand (Instructions for stand assembly are found in its packing case.)
- Step 2. Push Crank on over Machine Stud and fasten on with Stem Screw and Washer Screw it up very tight.
- Step 3. Screw Yarn Guide Standard into Machine Frame.
- Step 4. Put Standard Wire on first, then the Weight.
- Step 5. Hook the Wire into hole in Fan of Yarn Guide.
- Step 6. Screw the Yarn Guide firmly onto the Standard.
- Step 7. Secure the Buckle on to the section of knitting under the Machine. (If not enough knitting extends below machine securely fasten the heel hook in the knitting.)
- Step 8. Hang the Stem Weight onto the Buckle or Heel Hook together with both the Top Weights. Look at the Picture again.
- Step 9. Place Small Bobbin of Practice Yarn down on Wire Bobbin Holder.
- Step 10. Carefully unwrap the few feet of setting up yarn wound loosely around the Cam Nut and Needles in the Cylinder If this yarn is broken at any place, tie it together.
- Step 11. Take the end of the setting up yarn as it comes from the Yarn Carrier hole "E" and thread it up through "D" under the Check Wire loop at "C" through the hole at "B" and down through one of the Guide Holes at "A".
- Step 12. Tie onto Practice Yarn with a Square Knot (if you cannot tie a square knot, use any other knot but it must be tight and not a slip knot). Leave the ends hang loose to be knitted in.
- Step 13. Look at the Right Latch. Be sure it is fixed so the Needle Shanks will go up over it like the picture shows.
- Step 14. Look at Carrier Face. Make sure it has been adjusted by Adjustment Screw to be as close as possible to the Needles but not to touch them.

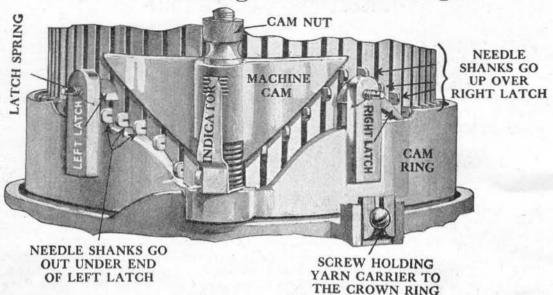
IMPORTANT NOTICE on Bent or Damaged Needles and Dropped Stitches.

Carefully examine every **needle** in the Machine. Look at Picture 6 on next page. If a hook is found bent or damaged or the **Latch** will not swing up and down freely to open and close against the point of the **Hook** and if it cannot be straightened easily with the fingers, the needle must be replaced with a new needle. Extra ones will be found in one of the needle envelopes—be sure you get the same kind and size. Needles are changed in the Cylinder by first transferring its stitch to an adjoining needle then lift the needle up as high as possible, swing it out at the top away from the Machine and lift it up and out from back of the Cylinder Band. Reverse this operation to replace and transfer its stitch back on.

Dropped stitches should be replaced on the needles immediately when discovered, by using one of the extra Cylinder Long Needles found in the Extra Needle Envelope as a hook to lift the stitch or loop up over and onto the empty needle in the cylinder.

PICTURE 3

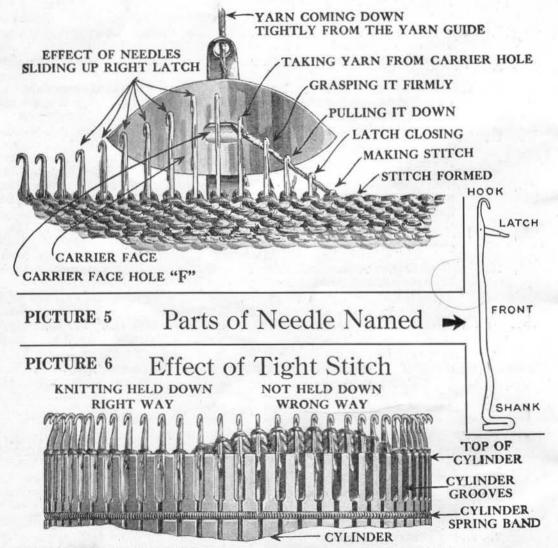
Setting Cam for Knitting



WHEN KNITTING FORWARD

PICTURE 4

Setting Carrier for Knitting



WHEN STITCHES RISE UP WITH NEEDLES MAKE A LOOSER STITCH

Knitting Plain Work and Learning Ordinary Adjustments

DON'T TURN THE CRANK HANDLE YET

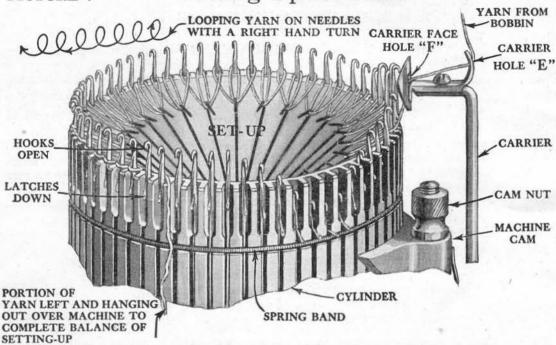
- First. Study the front of your machine carefully and compare it with Picture 3. Needle Shanks go up over Right Latch. Look at Picture 5 for Parts of Needles named. Machine Cam pulls them down. They go out under end of Left Latch with the point of Left Latch riding on top of the Shanks when later you turn the Crank forward. Don't turn the Crank yet.
- Second. The Machine Cam is lowered by turning the Cam Nut to the right or clockwise which forces the Needle Shanks down lower to make a longer and looser stitch of knitting. Turn it down one half round to see the effect, but turn it back up again to its first position. When the Nut is unturned the Cam raises up which will make a tighter stitch of knitting. Be sure you understand this clearly as it is very important.
- Third. The Indicator on the Machine enables the person knitting to write down on a piece of paper the exact position of the Cam which controls the size of the stitch of knitting and the width of the finished garment made.
- Fourth. Before the Crank is turned and knitting started at all times look carefully at the machine to make sure the Needle Shanks are exactly as Picture 3 illustrates. With the Shanks at the Left Latch pushed down on top of the Cam Ring making sure the Shanks will pass under this Latch that the Machine will not lock or cause damage when the Crank is turned.
- Fifth. Look at Picture 4. Setting Yarn Carrier for Knitting. This is the way the knitting looks if you stand back of the Machine. Be sure the Carrier Head is in position to run as close as possible to the needles without touching them. (See Picture 2 for the Carrier Head Adjustment Screw that the first needle takes the yarn as it comes through the hole in the Carrier Face); and the other needles carry the Yarn down to make the stitch, as illustrated.
- Sixth. Believing that you have done everything as instructed on the preceeding pages you are now ready to do your first knitting. You now have a fine working knowledge of the Knitting Machine, understand the principles of knitting, have learned the names of all the fundamental parts. There remains no reason why you will not easily understand everything which now follows:
- Seventh. Knitting—Be sure all needle Latches are hanging down leaving the Needle Hooks open to take the yarn from Carrier Face Hole "F". See that Cylinder Spring Band is tight around the Cylinder to hold all the Needles securely, that yarn will come freely through the Yarn Guide holes from the Bobbin. With the Stem Weight and two Top Weights hung onto the knitting underneath, you are to steady the knitting with your left hand resting on top of Weights under the Machine.
- Eighth. See Picture 6 showing some stitches raising up with the Needles wrong way.

 This is caused by too tight a stitch being made or the knitting not being held down hard enough under the Machine to keep these stitches always down on top of the Cylinder or the yarn being knit is too heavy and not intended for that cylinder.
- Ninth. Knit a long piece of straight plain knitting lowering and raising the Cam one-half turn at a time and watch the effect of the stitches being made by the needles, loose and tight. Be careful when knitting in knots to turn the Crank very slowly to be sure the yarn will not break. Watch the Bobbin. Stop knitting before the last bit of yarn comes off the Bobbin.
- Tenth. To run knitting off Machine—Break the yarn off at the Carrier, hold the weights and knitting under the machine with the left hand and slowly turn the Crank forward. The knitting will come off one stitch at a time and drop out of the Machine as you turn the Crank.
- IMPORTANT. Always have the Weights hanging on the knitting under the machine and lower Machine Cam sufficiently that the Weights will keep the stitches as formed from raising with the Needles or you will have trouble. When turning Crank always watch each Needle for first round knitting clear around the Machine. When you are sure all needles are knitting, you can knit as fast as you like, but always be careful of knots in the yarn going slowly while the knot is being knitted in. Turn to Page 10 and learn to set up New Stitch.



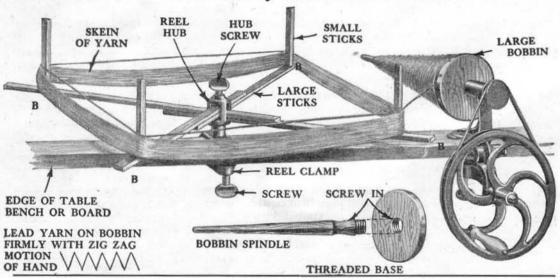
PICTURE 7

Setting Up for Plain

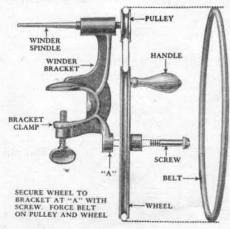


PICTURE 8

Assembly and Use of Reel



Winder PICTURE 9



INSTRUCTIONS

PLACE SMALL STICKS IN HOLES OF LARGE STICKS AT "B".
PLACE LARGE STICKS LAPPING OVER EACH OTHER INTO REEL HUB.

SCREW UP TIGHTLY HUB SCREW AND PLACE HUB ON REEL CLAMP SECURED TO A TABLE, BENCH OR BOARD AS PICTURE 8 SHOWS.

ALWAYS LEAD YARN ON BOBBIN FIRMLY WITH A ZIGZAG MOTION OF THE HAND. IF YARN BECOMES CROWDED ON THE BOBBIN AND BECOMES LOOSE AT THE 'END OF BOBBIN, REWIND IT CARE-FULLY. NEVER OVERWIND BOBBINS AS THE YARN MUST ALWAYS COME OFF OF BOBBINS IS DANGEROUS TO KNITTING.

ADJUSTMENT OF WINDER REEL IS QUICKLY MADE TO FIT ANY SIZE SKEIN OF YARN BY LOOSENING HUB SCREW AND SLIDING LARGE STICKS IN SUCH A MANNER THAT THE SKEIN OF YARN WILL FIT SNUGLY AROUND THE SMALL STICKS.

Setting Up New Stitch, Plain

- Step 1. Turn Crank forward slowly until Carrier rests at right side of machine like Picture 7. (Never run Machine when it is empty only as necessary.)
- Step 2. Look at Unpacking Picture 1. The Set-up is like a bunch of small bent wires fastened together at one end and a wire with a hook fastened to it.
- Step 3. Thread the yarn from the Bobbin, through holes "A" "B" "C" and "D" of the Yarn Guide, see Picture 2, and bring it down through Carrier hole "E" and hole "F".
- Step 4. Pull out through this last hole "F" about six (6) feet of the yarn and let it hang down over the Machine onto the floor as it comes from the Carrier hole "F".
- Step 5 Hold the Set-up with the left hand pushing it up into the Cylinder from underneath the Machine as Picture 7 shows it. See that Needle Hooks are open and Latches are down.
- Step 6. With your right hand grasp close up to the Carrier the yarn laying over the side of the Machine, letting it slip through the first finger and thumb as you loop it first around a Set-up Hook then a Needle. Work around the back of the Cylinder—always turning the loop loosely with a right circular motion as illustrated. Yarn must be looped around each Needle once and can be looped around each Set-up Hook twice for plain set up.
- Step 7. Set up all the Needles around the back and to the front as illustrated, hanging the yarn you have left of the six feet, out over the Machine to complete balance of setting up on remaining Needles after Step 8.
- Step 8. With the left hand pull down firmly on the Set-up underneath the Machine, turn the Crank carefully and slowly. The first Needles in front of the Carrier hole "F" should begin to take the yarn and form stitches slowly one at a time. Continue to turn the Crank until the Carrier is around to the left side of the Machine.
- Step 9. Finish setting up the remaining Needles around to the start where the first stitches were made. To make sure you set up on all the Needles, loop yarn around the first three Needles again. Place the remainder of the original six feet of set-up yarn up over and down inside of the Cylinder.
- Step 10. Hook the Stem Weight onto the Set-up underneath the Machine and place the two Top Weights on this Stem Weight. It is now ready to knit.

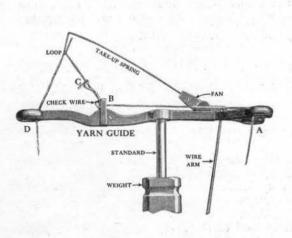
IMPORTANT. Set up the yarn on the needles loosely and don't pull the Set-up Hooks tight to the Needles or you might have broken stitches which will require your setting up again. When knitting is set up as instructed with a right hand turn around each Needle, it will not ravel back. In knitting the first few rounds, as soon as you have set up on all the needles, turn the Crank very slowly and watch each Needle form its first stitch. Make sure all the Needle Hooks are open to take the yarn as it comes through the Carrier Face Hole. Pull down on the Set-up, with the knitting fastened to it, sufficient to keep the new stitches formed down on top of the Cylinder. See Picture 5. If stitch is too tight, force Machine Cam lower with Cam Nut. If you have not learned to do plain knitting yet, work through Page 8.

PART 5 Winding Bobbins Correctly

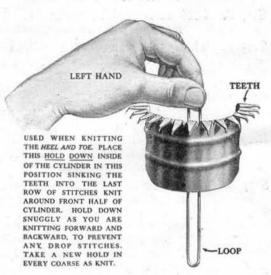
To start unwinding a skein of yarn; break apart the two ties around it after it is on the Reel. This will give you two ends. Take the end which unwinds freely from around the outside of the skein. Tie the end onto the Bobbin to start, if desired. Never knit all the yarn off the Bobbin. One of the most important parts about successful knitting is in the making of a free and easy stitch on the needles. This can be done only when the Bobbin is filled freely with the yarn led onto it by a staggard or zigzag motion of the left hand. Firmly grasp it between the thumb and fingers allowing it to slide through as you wind. Yarn Winder and the Reel must be placed at least two feet apart. Good knitting can be done only when yarn comes freely from a correctly wound Bobbin. Knitting cannot be done with the yarn unwinding from a ball or from a tangled mass on an incorrectly wound or crowded Bobbin.

PICTURE 10

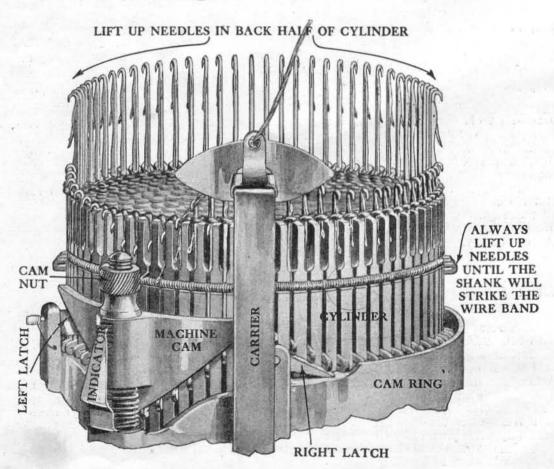
Threading the Yarn-Guide For Knitting Heel and Toe



Use of the Hold-Down



PICTURE 12 Setting Machine for Heel and Toe



GETTING READY TO KNIT HEEL OR TOE

Threading Yarn Guide

- Getting ready to knit the Heel—Pull all slack yarn, if any, down through "A" to the Bobbin and loop up yarn between "C" and "D" with Take Up Spring, but observe
- First. Take Up Spring is straight and moves freely up and down where it is connected to Yarn Guide at the Fan If it sticks take Screw Driver and pry under Fan slightly or use a drop of oil.
- Second. When the yarn is looped with the Take Up Spring as Picture 10 shows, the Check Wire should pinch or press against the yarn at Post "B" preventing the yarn from sliding through only as the Machine pulls it down in knitting. If Check Wire does not press against yarn to hold it, bend wire with fingers so it will.
- Third. The Weight must move freely up and down on the Standard and rest on the Wire Arm to operate the Take-up Spring properly.

Use of the Hold-Down

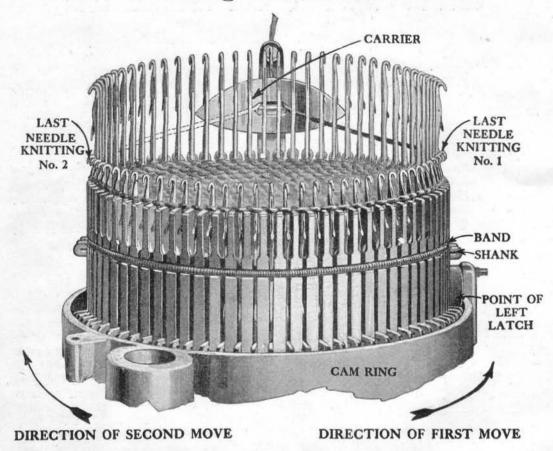
- The Hold-Down is a half round metal instrument used as an assurance against making dropped stitches in knitting Heel and Toe. The beginner must learn to use it as instructed Picture 11.
- It is especially important to follow these instructions, holding or pressing down firmly as the stitches are being formed on the first few Needles beginning each course of knitting backward and forward, with the Teeth hooked into or catching the last loop made on these needles. Hang the Stem Weight on the Loop down inside of knitting if you think it necessary.

Setting Machine for Heel and Toe

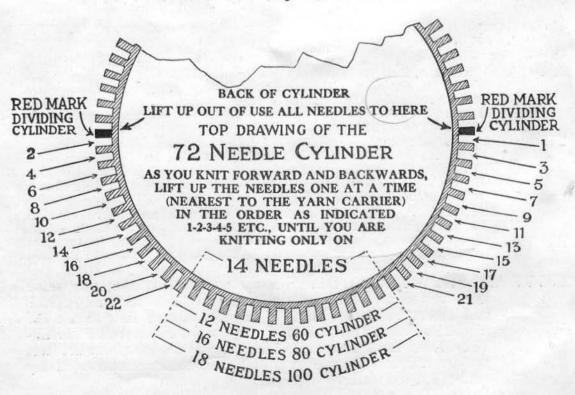
- The Toe is made just the same as the Heel except in knitting the last two rounds of Toe at the finish. Covered by instructions on Page 15.
- Yarn Carrier must be in position at the front of Machine like Picture 12.
- Screw Down Cam Nut at least one-half turn. This lowers the Machine Cam slightly to make a looser or longer stitch. After the Take-Up Spring is looped on theyarn in the Yarn Guide the same sized stitch is formed as in the ankle of hose because the Take-Up Spring will cause a little more tension or strain on the yarn going to the Machine.
- Lift up all the Needles around the back of the Cylinder as shown. The Red Marks on either side of Cylinder divide it in half. Use the Pick-up for lifting needles. A long needle like wire with the sharp end bent over slightly which you found when unpacking Machine. Needles must be lifted until their Shanks will strike the Wire Band. They are then out of use.
- Re-enforced Heel and Toe can be made by threading a second strand of yarn or cotton thread through the Yarn Guide and into the Machine, but the Machine Cam must be forced down lower to make a looser stitch allowing for the extra yarn being knitted. Re-enforced Heel and Toe is not required in Standard knitting for the Company.
- THERE ARE FIVE DEFINITE STEPS in the construction of a hose which must be learned. The first is PLAIN knitting. Second—HEEL and TOE. Third CLOSING of the toe. Fourth how to use the the RIBBING ATTACHMENT for the ribbed top. Fifth SEL-VEDGE on the ribbed top. With this knowledge about knitting, you are prepared to make your first plain knit hose and to do any kind of knitted wares.

PICTURE 13

Starting First Half of Heel



PICTURE 14 Guide and Key for Heel and Toe



KNITTING HEEL AND TOE

First Half

- It is assumed that you now have everything set and ready as told on Page 12. The Yarn Guide threaded, Machine Cam lowered one-half turn or more of Cam Nut screwed down, and the Hold Down in your left hand and placed down inside of cylinder with the Teeth into last round of knitting. (Holding down with the Teeth of the Hold-Down into the last round of knitting means the last round at the edge and inside of the Cylinder and not the last stitches or loops on the Needles.)
- Step 1. Look at Picture 13 (opposite page) and turn the Crank forward in the direction of first move with the Carrier stopping at the back of Machine. The point of Left Latch must fall down off of the Shank of the last Needle knit on, A clicking sound will be heard as it drops off and strikes on the Cam Ring. Always make sure of this by turning Crank around a little further and listen for the click.
- Step 2. Lift up the last needle knitting, (look at Picture 13 again) until Shank strikes Band. See Picture 14, this is needle number 1. Use the Pick-up held in the right hand while knitting, to lift all needles.
- Step 3. Slowly turn the Crank backwards and as the Carrier comes around from the back, watch the Yarn Guide Take-up Spring pull the slack yarn up from the Carrier. Always be sure in knitting every course, backwards and forwards for Heel and Toe, that all the slack yarn is taken back each time. This is very important to successful knitting. If you continue to turn the Crank the Needle Shanks will start going up over the point of Left Latch and form stitches. Be careful now to press down firmly on the hold down. Finish knitting the course across the front of Machine in the direction of second move Picture 13 until you hear the Right Latch click down off of last needle, number 2.
- Step 4. Lift up the last Needle knitting number 2 on the left hand side of Machine; Look at Picture 13 and 14 again.
- Step 5. Slowly turn the Crank forward; Study step 3 again only your last needle knitting will be number 3 this time and you are knitting forward.
- Step 6. Lift up needle number 3, knit backwards across front of Machine, then number 4 and turn Crank forwards. Continue to do this backward and forward lifting the needle each time as numbered in Picture 14, until you are knitting on only 14 needles for the 72 cylinder (16 on the 80 cylinder) (18 on the 100 cylinder) etc. Take up the slack yarn and use the Hold-down, beginning each course. Go slow at first; speed will quickly come through practice. Be sure you are right, then go ahead.

Second Half

- Step 7. When step 6 is completed the last course across the front of Machine should always be knit forward with the Yarn Carrier resting around the right of and to the back of Cylinder in the direction of first move.
- Step 8. Push down with the end of thumb of left hand the last needle knit on, If number 72 cylinder is being used, it is needle number 21. If number 80 cylinder is used, it is number 23. If 100 cylinder it is number 31. Push this needle only half way down because if pushed clear down like the rest, the Latch might close on the Needle Hook and cause a dropped stitch. Always watch this in pushing the Needles down.
- Step 9. Instead of using the Hold Down now use the Heel Hook (A V-shaped bent wire instrument with the two ends curled over). Place this Heel Hook up inside of the Cylinder alongside of the knitting, hooking it through the last stitches made by needles 21 and 22. Hang on the Stem Weight only.

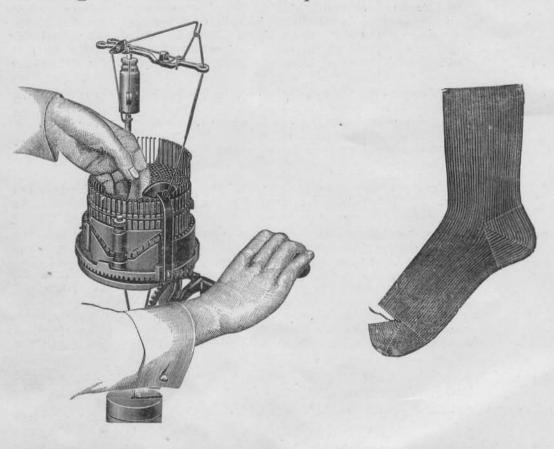
(Continued on Page 16.)

PICTURE 15

How to Hold Down for Knitting Second Half

PICTURE 16

First Sock Without the Ribbed Top as Taken from Machine



IMPORTANT

EXPLANATION OF PICTURE 18 FOR CLOSING THE TOE

LOOK AT THE PICTURE AGAIN, NOTICE THAT THE UPPER HALF REPRESENTS THE STITCHES ACROSS THE TOP OF FOOT OF HOSE. THE LOWER HALF ACROSS THE TOE SIDE OF HOSE.

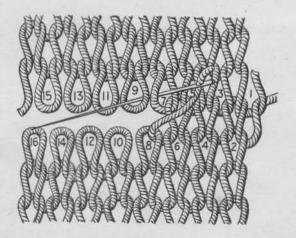
THE CLOSING YARN MUST BE PLACED THROUGH EACH LOOP OR STITCH IN THE SAME WAY AS ILLUSTRATED OR YOU WILL NOT HAVE IT CLOSED RIGHT. THIS IS VERY IMPORTANT.

NOTICE HOW THE NEEDLE AND YARN WAS PASSED DOWN THROUGH LOOP 2, OVER AND UP OUT OF LOOP 4, ACROSS UP OVER THE OPENING AND DOWN THROUGH LOOP 5, ACROSS UP OVER THE OPENING AND UP OUT OF LOOP 5, ACROSS UP OVER THE OPENING AND UP OUT THE VARN IS DRAWN EACH TIME OVER ACROSS THE OPENING EXACTLY IN THE MANNER INDICATED WHICH MAKES THE CLOSING STITCH LIKE THE KNITTED STITCH AND IF DONE PROPERLY, NO ONE CAN DETECT WHERE THE CLOSING WAS MADE.

TRY TO GET THE CLOSING STITCH THE SAME SIZE AS THE MACHINE STITCH AND NOT TOO LOOSE OR TOO TIGHT. THIS COMES EASY WITH PRACTICE

PICTURE 18

Proper Stitch to Make in Closing the Toe



- Step 10. Before Crank is turned backward, throw the yarn with your Pick-up Hook, up over and down back of this new needle number 21 just placed in action again, continue to do this with every needle as it is placed in action again. Use the ends of fingers of left hand to press down on the knitting inside of the Cylinder as the new stitches are being formed across each course, like Picture 15. Turn Crank backward slowly and watch this Needle take the yarn from Carrier and make it stitch. If this is not correctly done there will be holes in the finished heel or toe.
- Step 11. Needle number 22 is pushed down into action the same way after the course is knit across the front in direction of second move. Knit forward again and push down Needle number 19, then number 20, then number 17, etc., knitting backwards and forwards pushing one needle down each time until number 4 is pushed down, then knit forward only part way, stopping the with Carrier resting directly in front of machine, as in the beginning, Picture 12.
- Step 12. Unloop the Take-up Spring from the yarn on Yarn Guide. Unscrew Cam Nut one-half turn or more to its original position again Push down into action all the Needles around the back of Cylinder including needles number 1 and number 2. Carefully examine them and see that their Latches are all down and Hooks are open.
- Step 13. Hold down firmly on knitting under the Cylinder gathering up the knitting under the Machine with the left hand and thumb and knit forward again for plain knitting the foot of the hose Turn about 80 rounds of knitting for the foot counting the number of times the Yarn Carrier passes the front of machine.
- Step 14. The Toe is knit the same as Heel but always in finishing off the Toe, knit 4 extra rounds after all the Needles are pushed down into action. These four extra rounds are made to permit the toe being pressed out flat with a damp cloth laid on first and a hot iron used, after the finished hose is taken from the Machine. To run the hose off of the Machine, break the yarn off at Carrier and turn the Crank forward slowly holding the knitting as it drops out of machine.

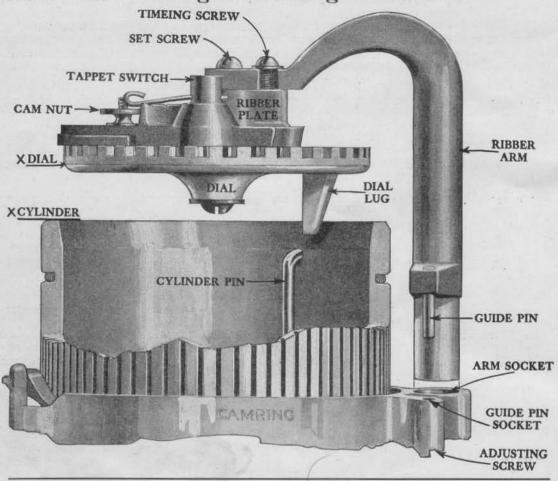
PART 8

Closing the Toe

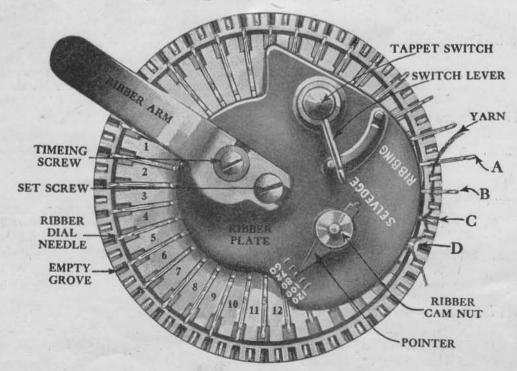
- Closing up the toe at first may appear to be a long hard process, but practice and experience will soon make this a simple and easy process to be done in a few moments Follow these instructions very carefully and when properly done the place of closing cannot be detected from the adjoining stitches.
- First. Press out with a hot iron using a damp cloth laid on the toe only. (The steam sets the stitches.)
- Second. Take hold of the loose end of yarn and ravel back these last four extra rounds of knitting. The toe will then appear as the toe of sock on Picture 16. Break off all but two feet of this raveled back yarn.
- Third. Secure a darning needle and thread up this two feet of yarn which you will use to close across the toe with.
- Fourth. Hold the toe securely with your left hand placing the first finger between the edges to be drawn together, and gather up all loops or stitches working toward the left clear across the opening by
- Fifth. Passing the needle in through loop 1 and out loop 3, in through loop 2 and out 4.

 Pass in through loop 3 again and out through 5 etc. See Picture 18. Be sure the needle passes through each loop or stitch two times in and out as illustrated and the yarn passes across the opening to draw up the edges.
- Sixth. Do not draw the loops or stitches tightly. When the toe is closed, secure the end of yarn into the knitting, working in, about two inches and break off the balance, but do not tie a knot in the end as it will show in the finished hose.
- IMPORTANT—If one loop or stitch is missed in closing up, this missed stitch will ravel or slip back up the foot of the hose and will be an unsatisfactory garment. The needle and yarn MUST be passed through every stitch TWO times loosely.

PICTURE 19. Setting the Ribbing Attachment



PICTURE 20. Adjusting the Ribbing Attachment

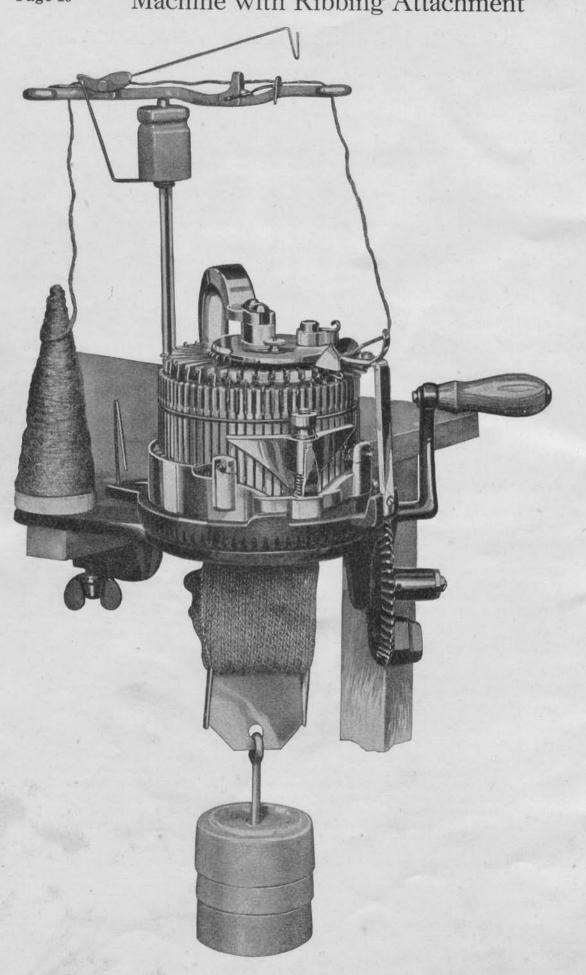


Knitting With the Ribbing Attachment.

The Ribbing Attachment was properly adjusted to the Knitting Machine and a ribbed top of a Standard hose was knitted with it at the factory, so no re-adjusting should be necessary. The beginner should study Picture 19 carefully. If any trouble is experienced, study the Adjustments on page 20.

- Take off any knitting which may be set up on the Cylinder. Place the Ribber on the Machine exactly in the position as illustrated and always be sure in placing it on that the Lug on the Dial slides down beside and rests against the right side of the Cylinder Pin.
- 2. The Ribber Arm should be pushed down firmly into the Arm Socket as far as possible until the Guide Pin, going into its socket, rests on the end of the Adjustment Screw which is located inside of the Guide Pin Socket.
- 3. The bottom of Ribber Dial at X should be even with top of Cylinder at X. Look at Picture 19. Height of Ribber must be re-adjusted when Cylinders and Dials are changed.
- 4. Observe when the Machine Crank is turned forward the Dial will not turn because the Dial Lug rests against the Cylinder Pin. This is the position it must be in at all times when knitting.
- 5. With the Dial Lug against the Cylinder Pin, remove from the Cylinder as many Needles as there are empty Grooves in the Ribber Dial, (study Picture 20) which will be every other Needle clear around the Cylinder opposite and in front of every Dial needle Groove. When knitting this will give a 1 and 1 Rib.
- 6. When Needles are removed from Cylinder, remove the Ribbing Attachment and lay it aside. Set up new stitch on the remaining Cylinder Needles the same as for plain setting up (See Part 4, Page 10). On the 80 Cylinder there will be 40 Needles to set up—on the 72 Cylinder, 36 Needles, etc.
- 7. Knit at least 10 rounds—Count the times the Carrier passes front of Machine—then place the Ribbing Attachment on the Machine again as instructed in Paragraph 1.
- 8. Swing the Tappet Switch Lever to Selvedge or the In position, Picture 20, and place Dial Needles with needle hooks open, in all the empty Dial Grooves, turning the Crank forward as necessary to clear the Grooves. Be sure to use the size of needles which fit the Dial Grooves.
- 9. Swing the Tappet Switch Lever to Ribbing or Out position. Be sure the Dial Needle Hooks are open to receive the yarn from Carrier as the Crank is turned forward to knit. The Pointer should be set to the number which corresponds with the Cylinder being used by loosening the Ribber Cam Nut. If 80 Cylinder, set at 80, etc. The yarn from Carrier should fall on the open Dial Needles and they should begin to make the stitch as Picture 20 shows "A" "B" "C" "D." Carefully watch each Cylinder and Dial needle take the yarn and form its stitch.
- 10. The Machine is now set for ribbing. Turn the Crank forward about 20 times to see if everything is working right, and watch the needles knitting.
- 11. Selvedge for Ribbed Top is made by First knitting at least 5 rounds of white cord or different colored yarn. This different colored yarn marks where the Selvedge starts. Then, Second, tie on the hosiery yarn and knit one round. Third, knit two rounds only with Tappet Lever Switch Swung to Selvedge or In position (See Picture 20) which puts the Dial Needles "out of action." Fourth, swing Switch Lever again to Ribbing or Out position and continue to knit the ordinary length, about 55 rounds, for ribbed top for men's hose.
- 12. To remove Ribbing Attachment the Dial Needle stitches must be transferred to the cylinder needles, put back into the empty Cylinder Grooves. Transfer in the following way:

Machine with Ribbing Attachment



- 13. Turn Crank until Ribber Arm is like Picture 20. Insert the end of the Pick-Up back of Shanks of the twelve needles numbered on Picture 20, and push the Dial needles out of Dial until the ends or heels of needles tip up and out from under the Ribber Plate. Take hold of these needles, one at a time, with the right hand and simply lift its stitch over and onto the empty Cylinder needle just placed in Cylinder. Be careful not to allow stitch to slip off until it is put over Cylinder needle.
- 14. Turn the Crank forward a quarter of a turn to clear six more needles in front of Machine, and transfer their stitches. Turn Crank forward again far enough to clear all the remaining Dial Needles—push them completely out of Dial, then the Ribbing Attachment can be lifted out of the Machine and these last needle stitches can be transferred quickly when the Attachment is off. If Attachment cannot be lifted off easily, use the Screw Driver as a pry beside the Arm Socket. A drop of oil will help.
- 15. The Machine is now ready to do plain knitting again. About 80 rounds of knitting makes an ordinary length for the leg of men's hose.
- Large Bobbins carefully wound and placed either on the floor or stand shelf should now be used in all knitting hereafter. Do not re-use the practice yarn only for knitting sample hose for the company. Knitting can always be raveled out and re-used on the machine but knots should be cut out and yarn spliced (Page 22.)

General Observations

1. MACHINE LOCKS:

If Dial Needles lock under Ribber Dial and Crank will not turn, push in each Dial needle "A" "B" "C" "D" with your finger or swing the Switch Lever just a little toward Selvedge and turn Machine Crank slightly. Or, there is a damaged Dial Groove, in which case the Dial should be taken off of Ribber Plate by removing Screw and Washer on under side of Dial and the damaged place smoothed down with some sharp instrument or a new Dial secured from the factory. If the point of Machine Latch strikes against the Cylinder Needle Shanks the Machine will lock. (Cylinder should be removed and the point of Latch re-sharpened with a steel file.)

2. DROPPED STITCHES:

There are several reasons for dropped stitches, as follows:-

Needle **Hooks** are not open to receive the yarn.

Needles are damaged and Latches will not close freely in knitting. New needles should be secured from the factory.

The Yarn Carrier is not adjusted low enough to prevent the Dial Needle Latches

from closing until their Hooks receive the yarn.

Pointer is not adjusted in far enough to force the Dial needles to complete their stitch. Knitting is not held down hard enough under Cylinder for the weight of yarn you may be using. Or the Carrier is not adjusted to deliver yarn to Cylinder Needles.

may be using. Or the Carrier is not adjusted to deliver yarn to Cylinder Needles.

Ribber is not properly Timed to operate the Dial needles correctly. If yarn coming from Carrier Hole "F" does not fall directly into the open hook of the Dial needles "A" "B" "C" "D" and across the Latch where the Latch is joined to the needle so the Hook will be sure to take the yarn, the Timing Screw, Picture 20, should be loosened and the Ribber Plate forced slightly one way or the other for the correct result.

Crank should not be turned backward when Ribber is on the Machine.

3. TROUBLE:

Any difficulties experienced and which cannot possibly be found covered in this Instruction Book, should immediately be reported and discussed in full to the Service Department of the Company.

How to Knit "Allwear" Socks

- on every other Cylinder needle for 1 and 1 rib knitting, using the regular sock yarn, and knit about ten rounds. Fix the tension by adjusting the Machine Cam to knit a stitch as tight as possible that the three weights hung onto the Set-Up will hold the knitting down. This tension will be referred to hereafter as Standard Tension.
- 2. Place the Ribbing Attachment on the Machine as formerly instructed, Page 18. Part 9, and be sure the Dial Lug strikes the Cylinder Pin and the Dial needles are prepared to operate over the empty Cylinder Grooves, and not hit or strike any Cylinder Needles
- Swing the Switch Lever to Selvedge and place all the Dial needles in the Dial with the Latches down and Hooks open.
- 4. Swing Switch Lever to Ribbing, tie on dividing cotton, cord or different colored yarn, and turn the Crank slowly for 5 rounds. Break off dividing cotton or colored yarn between Yarn Guide and Carrier and tie on the sock yarn. Knit just one round, which will make the top loops on the finished sock.
- 5. Swing Switch Lever to Selvedge and knit two rounds. If Lever sticks swing it back again and tap the Crank forward slightly then it will pass. Hold down with left hand firmly for these two rounds.
- 6. Swing Switch Lever to Ribbing and knit about 55 rounds or enough to make 5 inches. Write down as a record, which you must keep, showing the position of Indicator on Cam and number on top of Cam Nut so that your knitting can be duplicated. Always record rounds of knitting in each section.
- 7. Remove every other Dial needle, starting with the nearest one in front of Red dividing mark on Cylinder, and transfer their stitches to Cylinder needles placed back in the Cylinder Grooves. This will make 3 and 1 ribbing—3 Cylinder stitches and 1 Rib stitch.
- 8. Screw down Cam Nut ½ to 1 turn as necessary to reset the Machine to Standard Tension before starting to knit the Leg. Knit about 90 rounds, or exactly 8½ inches for the leg, as follows: 50 rounds Standard Tension; 30 rounds with Machine Cam raised for a slightly tighter stitch to shape the Ankle—about ½ turn of Cam Nut unscrewed. Remove all Dial needles in front half of Dial, transferring stitches to Cylinder needles placed back into the front of Cylinder and knit balance of 10 rounds to make up the total of 90 rounds for the Leg. Rest hand on Weights when shaping Ankle.
- 9. Remove Dial needles in back half of Dial but transfer their stitches to their adjoining or nearest Cylinder needles. This will make the desirable dropped stitch effect across instep of finished sock.
- 10. Lift off the Ribbing Attachment and you are ready to knit the Heel.
- 11. Lower Machine Cam one-half turn of Cam Nut and hook up yarn with Take-Up Spring. Knit the heel—Part 7.
- 12. Unhook the Take-Up Spring, raise Machine Cam again one-half turn of Cam Nut and hold down with left hand in addition to weights. Knit about 90 rounds or exactly 7½ inches for the Foot, or as otherwise instructed by the Hosiery Department.
- 13. Lower Machine Cam one-half turn of Cam Nut and again hook up yarn with the Take-up Spring. Knit the Toe—Part 7,—and run sock off Machine.
- 14. Close up the **Toe** as told in **Part** 8 for plain knitting with the following exception:

 When you count the loops across the top of foot side of closing, it will be found that there are less loops than in the toe side because some cylinder needles were taken out and were not knitting down across the top of foot, which gave the dropped stitch effect. It is necessary to pass the needle and its closing yarn three times through a loop alongside of each dropped stitch clear across the opening to obtain even, satisfactory closing.

- 15. Press out this finished hose with a hot iron and damp cloth, pressing it as near as possible like the shape of the Press Board furnished with the Outfit. Send this sample hose to the Hosiery Department, mailing it in the hosiery envelope furnished you for that purpose. Never press the Ribbed Tops of any hosiery. Cut all knitting off, knit with different colored yarn, to the selvedge, (cut about 3 of the dividing cotton stitches at 3 places in the row next to the selvedge and pull out this row of stitches by pulling on the cut ends and the top will be released from the knitting.) Pull out all little loose pieces of yarn if any left.
- 16. When your sample hose is correctly made to these instructions, our Hosiery Department will issue their report to you in full. You are then privileged, under the terms of the contract, to produce and send in quantities as you may desire. You will be advised of all corrections on your hosiery as found necessary, for you to produce the best knitting. The Pressing Board furnished is for the size and shape hose desired by the Company.

Preparing "ALLWEAR" hosiery for shipment.

All knitting must be made in uniform size and pressed on Board furnished. Correctly mate up in pairs and fold together in pairs with one fold across the heel. (Do not press with iron after folding.)

Tie up in half-dozen pair lots.

Carefully pack in a strong, durable package and secure by twine.

Use the Hosiery Department shipping label showing your printed name, address, and assigned working number, and paste on the outside of the

The Packing Report stating the contents of the package, your name and

address, and working number must be placed inside of the package.

All correspondence concerning your shipments must be mailed in a first-class envelope and attached to the outside of the package, with first-class 2-cent postage. Use the mailing attachment furnished for this purpose. The Postoffice Department permits only the packing report to be enclosed in the parcel post shipments.

We accept the hosiery only when knit from Gearhart quality yarn as directed.

SPLICING YARN:

The best knitting is done when no knots are tied in yarn. It is recommended that this always be done and as follows: —When a knot is seen coming from the Bobbin, turn Crank slowly until knot is located half way between Guide hole "D" and Carrier "E." Cut out knot with knife or scissors. Insert a Cylinder long needle through hole "F" and hole "E", loop the end of yarn coming from Bobbin around the needle hook and pull down through holes "E" and "F" making a double lap of yarn threaded through these two Carrier holes. Turn Crank slowly and needles will knit this doubled yarn making a double stitch and splicing on four or more needles. Clip off loose ends sticking out from knitting after hose is taken from machine.

CHANGING CYLINDERS:

Under the Machine there are two cylinder Screws, holding the Cylinder to the Frame which must first be removed. All Needles in cylinder must be lifted up out of use. The needles which the Machine Cam and Latches do not permit lifting out of use can be released if the cylinder is slightly turned. The Cylinder is lifted out of the Machine and the cylinder exchange is made. Be careful to replace cylinder Screws under the Machine and tighten up on the new Cylinder as much as possible with the Screw Driver furnished.

OILING and CLEANING:

Rusted needles or parts of the Knitting Machine will not properly operate; therefore, to keep your Outfit in good condition all parts should frequently be oiled, using a good quality Machine oil. When the Outfit is not in use for any length of time all needles should be removed from the Cylinder and wrapped in an oiled cloth. Oil should be put in all the Cylinder Grooves and Dial Grooves from time to time as the Machine is in operation. If Machine is used steadily oiling once every few days should be sufficient. Oil will not injure any part of the machine or dark colored yarns. When Knitting Machine is used steadily it requires an occasional thorough cleaning. Experienced users can take the Knitting Machine apart and clean it with gasoline, thus removing dirty grease and yarn nap clinging to the Machine.

GEARHART'S 1924 PRICE LIST OF PARTS

Delivery Charges Prepaid

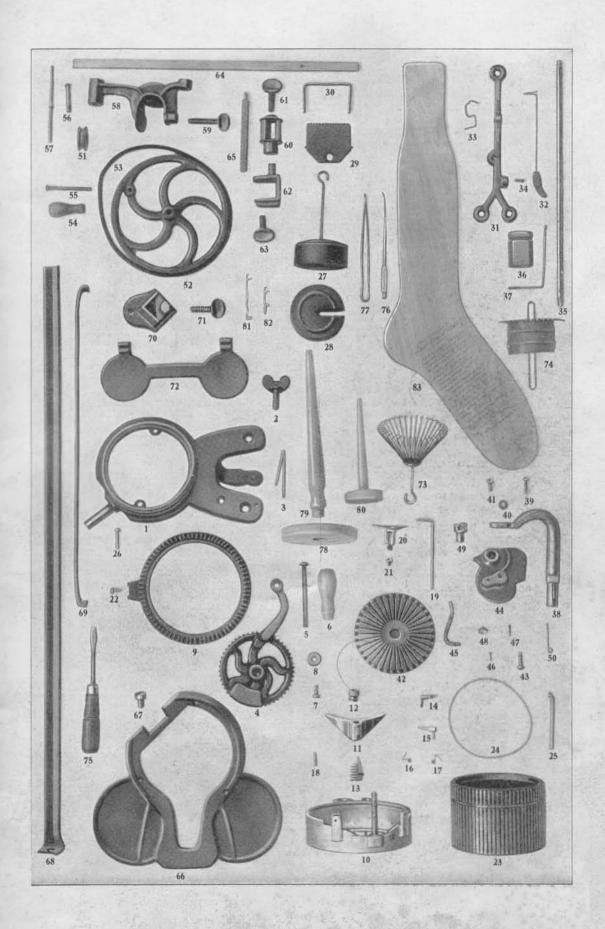
This supercedes all other Price Lists

NO.	NAME	NEW PRICE	NO.	NAME NEW	PRIC
1	MACHINE FRAME AND STEM	\$5.00	42	DIAL 30-36-40-50-60 FOR EACH GROOVE OR SLOT	
2	MACHINE FRAME WING THUMB SCREW	.25	-	IN DIAL-CHARGE	.1
3	MACHINE FRAME BOBBIN HOLDER	:10	43	DIAL SCREW & WASHER	.10
4-	CRANK	2.50	44	RIBBER PLATE	\$3.0
5	CRANK HANDLE BOLT	.10	45		. 5
6	CRANK HANDLE	.20	46	RIBBER PLATE CAM PIN	.0
7	STEM SCREW	.06	47	RIBBER PLATE CAM SCREW	.2
8	STEM SCREW WASHER (NICKEL)	.04	48	RIBBER PLATE CAM NUT	. 30
9	CROWN WHEEL	2.00	49	TAPPET SWITCH	, 6
10	CAM RING & STEM	6.00	50	TAPPET SWITCH LEVER	.20
11	MACHINE CAM	1.00	51	YARN WINDER PULLEY	.2
12	MACHINE CAM NUT (BRASS)	.30	52	YARN WINDER WHEEL	1.0
13	INDICATOR	.15	53	YARN WINDER BELT	. 3
14	RIGHTLATCH	.50	54	YARN WINDER WHEEL HANDLE	.20
15	LEFT LATCH	.50	55	YARN WINDER WHEEL HANDLE BOLT	.10
16	LEFT LATCH SPRING	.15	56	YARN WINDER WHEEL SCREW	. 30
17	RIGHT LATCH SPRING	.15	57	YARN WINDER SPINDLE	.4
18	RIBBER GUIDE PIN ADJUSTING SCREW	.25	58	YARN WINDER BRACKET	.7
19	YARN CARRIER BAR	.50	59	YARN WINDER BRACKET THUMB SCREW	.2
20	YARN CARRIER HEAD	.50	60	YARN WINDER REEL HUB	. 5
21	YARN CARRIER HEAD SCREW	.06	61	YARN WINDER REEL HUB SCREW	.2
22	YARN CARRIER BAR SCREW	.06	62	YARN WINDER REEL CLAMP	.50
23	CYLINDER 60-72-80-100-120-FOR EACH GROO	VE	63	YARN WINDER REEL CLAMP SCREW	.20
-	OR SLOT IN CYLINDER-CHARGE	.10	64	YARN WINDER REEL LARGE STICKS (EACH)	.1
24	CYLINDER SPRING BAND	.50	65	YARN WINDER REEL SMALL STICKS (EACH)	.0
25	CYLINDER PIN	.40	66	MACHINE STAND HEAD	1.5
26	CYLINDER SCREW	.06	67	MACHINE STAND HEAD SCREW (EACH)	.2
27	STEM WEIGHT	.60	68	MACHINE STAND LEG (EACH)	.4
28	TOP WEIGHT	.40	69	MACHINE STAND BRACE (EACH)	.20
29	BUCKLE PLATE	,30	70	MACHINE STAND FOOT	.20
30	BUCKLE BRACE	.20	71	MACHINE STAND FOOT THUMB SCREW	. 20
31	YARN GUIDE	1.00	72	MACHINE STAND BOBBIN STAND	.30
32	YARN GUIDE FAN & WIRE	.30	73	WIRE SET-UP	. 60
33	YARN GUIDE CHECK WIRE	.15	74	HOLD-DOWN	.4
34	YARN GUIDE FAN RIVET	.06	75	SCREW DRIVER	.13
35	YARN GUIDE STANDARD	.90	76	PICK-UP	.20
36	YARN GUIDE WEIGHT	.15	77	LARGE BOBBIN THREADED BASE	.2
37	YARN GUIDE WEIGHT WIRE	.10	79	LARGE BOBBIN THREADED SPINDLE	.20
38	RIBBER ARM	2,50	80	SMALL BOBBIN	.2
39	RIBBER ADJUSTING SCREW	06	81	CYLINDER NEEDLE (SEND SAMPLE WANTED) EACH	.0
100	A CONTRACTOR OF A SALARON AND A CONTRACTOR OF	110	82	DIAL NEEDLE, (SEND SAMPLE WANTED) EACH	.0
40	RIBBER ADJUSTING SCREW WASHER	.04	83	PRESSING BOARD (GIVE NO. ON BOARD)	. 50
41	RIBBER SET SCREW	.06	. 1.5	1924 INSTRUCTION MANUAL	1.50

Always give the Model Machine part is wanted for-"Standard" or "Allwear." All orders should be addressed to GEARHART KNITTING MACHINE CO., CLEARFIELD, PA., and sent in separate addressed envelope with remittance in full.

NOTICE

To secure the best results in knitting, use only the size and grade of yarns as specified by the Company and on the cylinder as indicated. A very large stock of yarn is always kept on hand by the Company to select from. Prices may change from time to time so it is necessary to apply for new prices and samples before ordering which will avoid possible delay in shipping. Samples are furnished on request.





Royal Purple



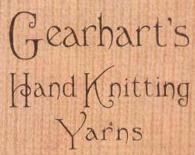
Cardinal



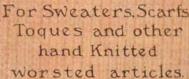
Navy Blue



Turquoise



The very finest pure worsted Yarn. In all fashionable

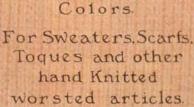




No. 1016 Heather Mix



White



Send for Special Attractive Prices direct from Factory.



Orchid



No. 10 X Oxford Gray

Address Color Yarn Dept. of Gearhart Knitting Machine Co. Clearfield, Pennsylvania, U.S.A.



Coral



Seal Brown



Black



These Reproductions Present the Yorns in full Color and One Half the Actual size @ G.K.M. Co. 1922