

HOW TO UNPACK THE MACHINE

The machine should be unpacked carefully so as not to damage the needles or the sock which is started on the machine.

Take out the excelsior and look it over carefully, before throwing away, for any loose parts. Remove the loose parts, such as weights, clamp, etc. Now lift the machine carefully from the box and fasten it, by means of the clamp screw, to the table. Wet a cloth with gasoline and carefully wipe off all of the grease which you will find on the machine. This was put on to keep the machine from rusting while in transit.

Fill your oil can with 3-in-1 Oil, or any other good machine oil, and oil the machine thoroughly. Oil the following parts: The handle, the needle butts where they rest on the bottom of the cylinder, the latches of the needles. You should oil these last two parts frequently until they become well loosened; after that it is not necessary to oil them so frequently.

Do not try to operate the Steber Knitter until you are thoroughly familiar with the operation of the different parts. Study these until you are thoroughly familiar with the names and uses of each part. By so doing you should become a good operator in a very short time.

THIS BOX CONTAINS THE FOLLOWING SEPARATE PARTS

- No.
- 1 — Main part of machine containing cylinder
 - 17 — Yarn arm
 - 27 — Handle
 - 30 — Clamp
 - 28 — Large weight
 - 6 — Small weight
 - 20 — Heel hook
 - 8 — Oil can
 - 9 — Screwdriver
 - 10 — Instruction book
 - 11 — Package dial needles

If any of these parts are missing, kindly notify us, giving packer's and inspector's number.

PRICE LIST OF PARTS

NOTE — We guarantee all machine parts except needles for 10 years against defects of material or workmanship.

| | Each |
|--------------------------------------|--------|
| Needles (Dial or Cylinder) | \$.05 |
| Screwdriver | .10 |
| Oil Can | .10 |
| Heel Hook | .25 |
| Heel Weight | .40 |
| Clamp | .75 |
| Large Weight | .75 |
| Cylinders per groove | .06 |

NOTE — Steber cylinders are made of iron far stronger and more durable than the lead composition used in ordinary knitters. Price does not include needles.

| | |
|----------------------------|--------|
| Trips | \$.70 |
| Trip Springs | .05 |
| Band Springs | .15 |
| Thumb Screws | .10 |
| Cotter Pin | .05 |
| Instruction Book | .50 |
| Hosiery Boards | .75 |
| Yarn per cone | 6.25 |

Pure Wool, Heather, Black, White, Navy, Maroon, Platinum Gray, Beaver Brown, Peacock Blue or Camel Buff — wound on cones of about 2½ lbs. each. This price subject to change without notice.

(We do not stock all these colors)

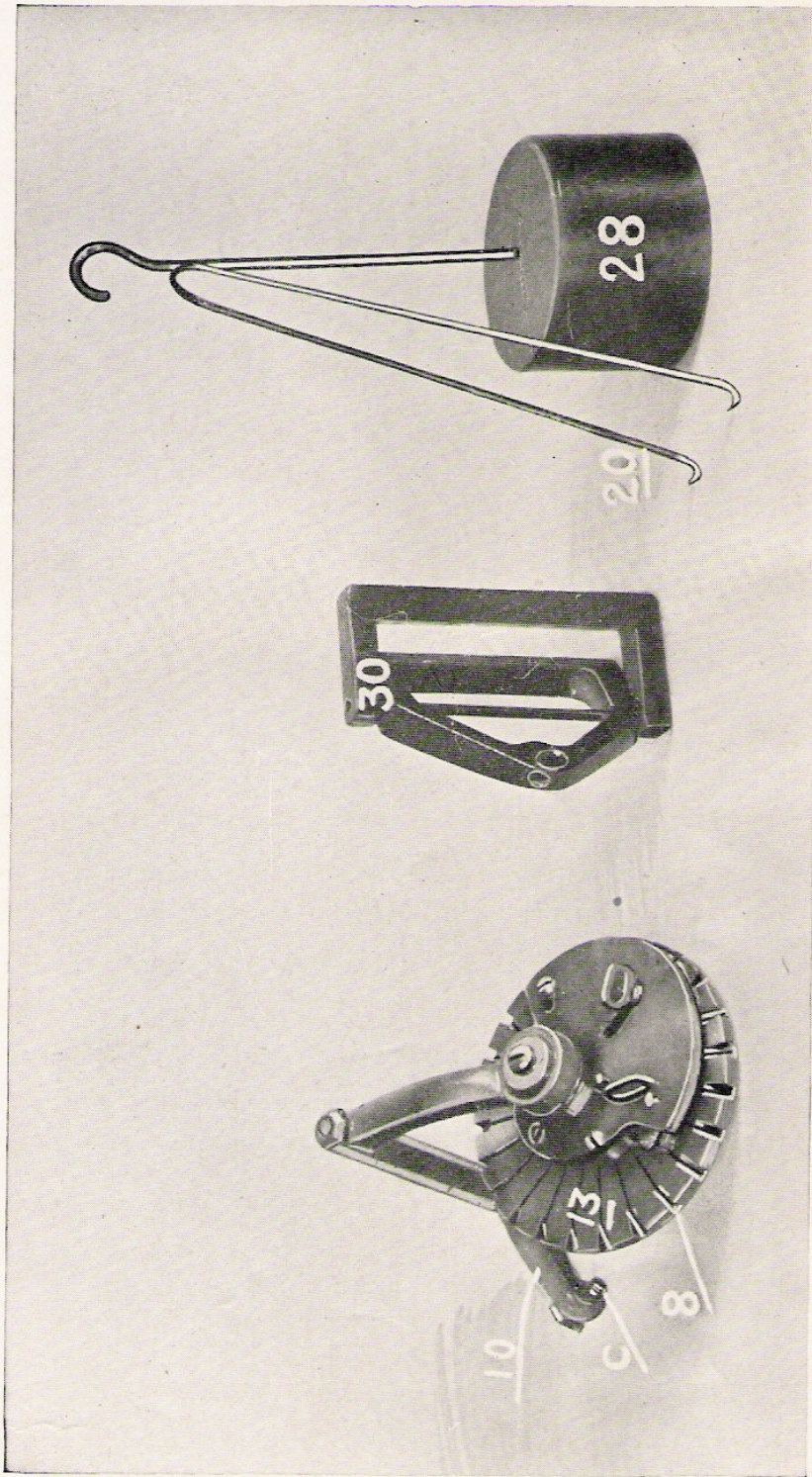
| | |
|------------------------------|--------|
| Cotton yarn per lb | \$.75 |
|------------------------------|--------|

For parting — this price subject to change without notice.

STEBER MACHINE COMPANY

Founded 1892

UTICA, N. Y.



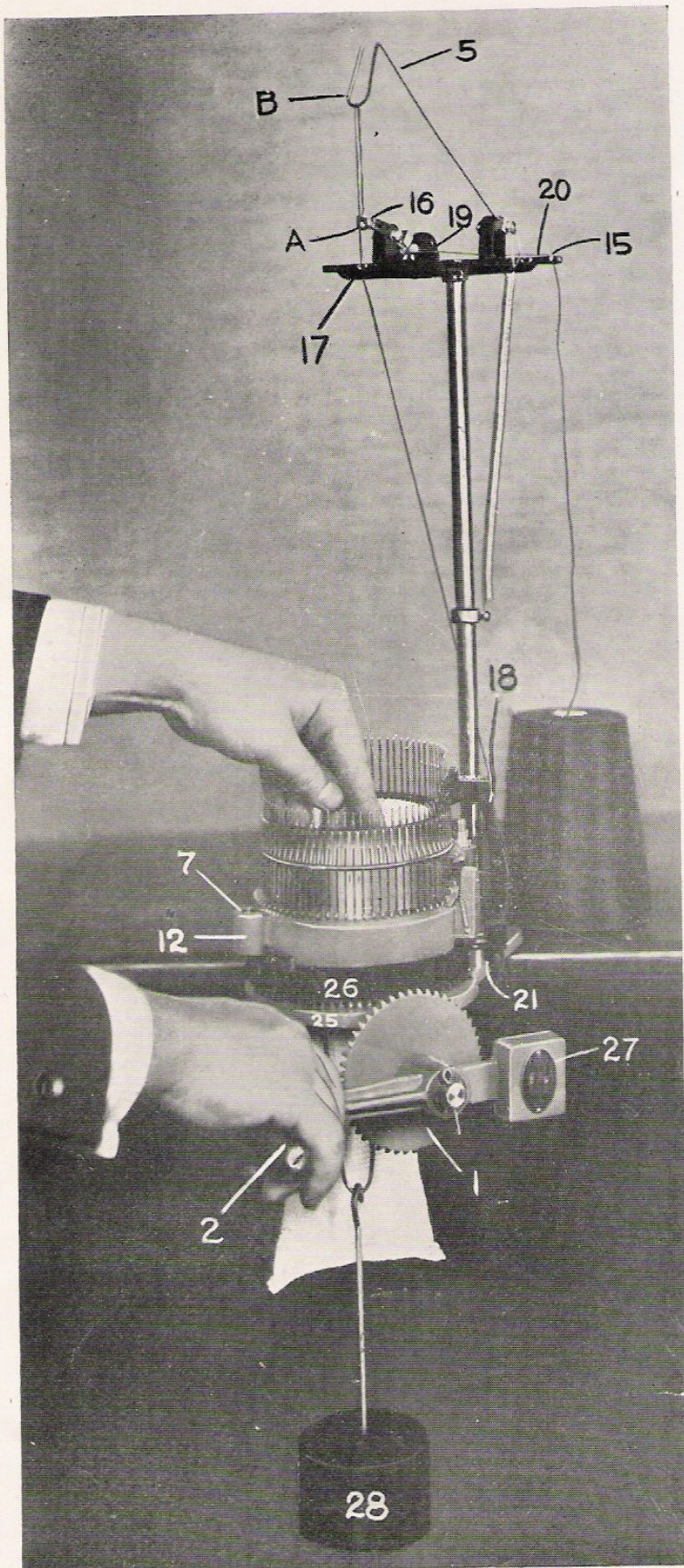
WEIGHT

HEEL
HOOK

CLAMP

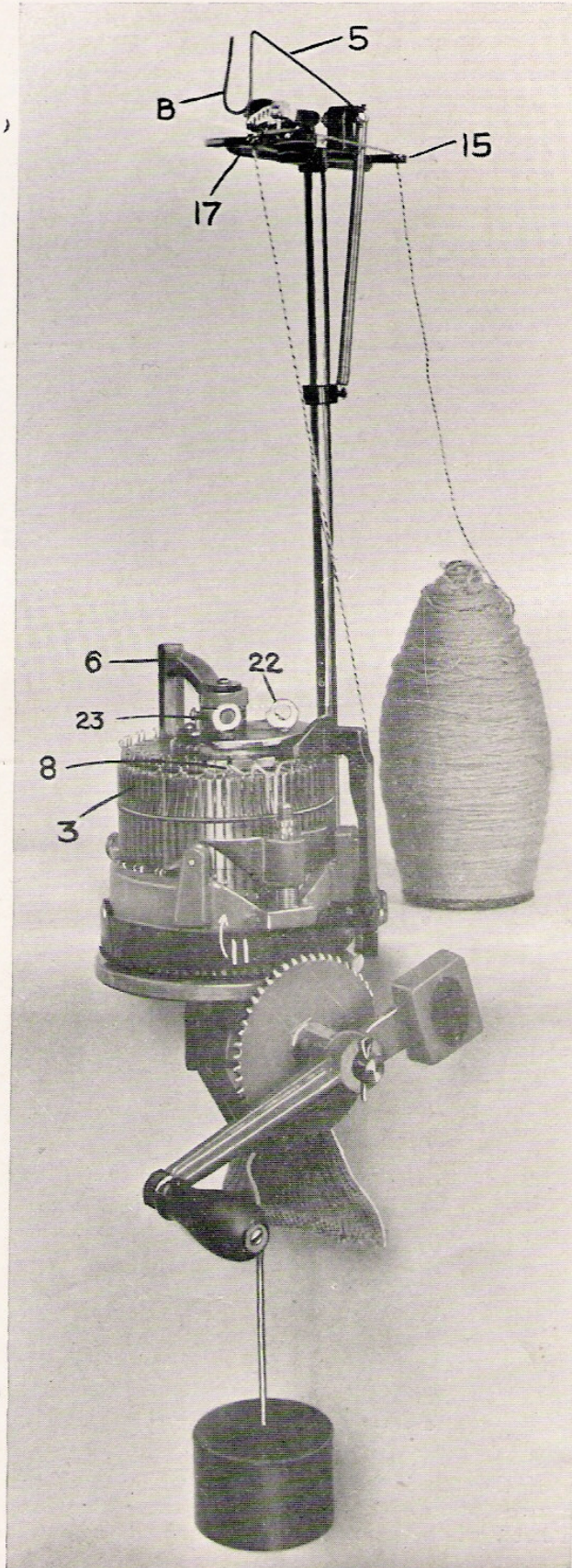
RIBBER COMPLETE

Your socks are unfit for the market if the sides of the toes look **baggy**.
Send in a single sample sock for inspection. See bottom of page 12.



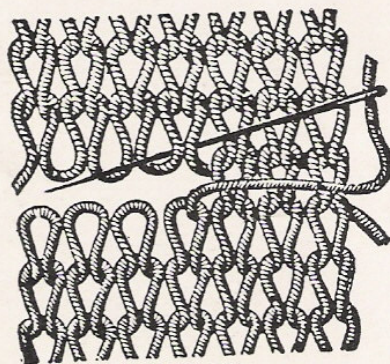
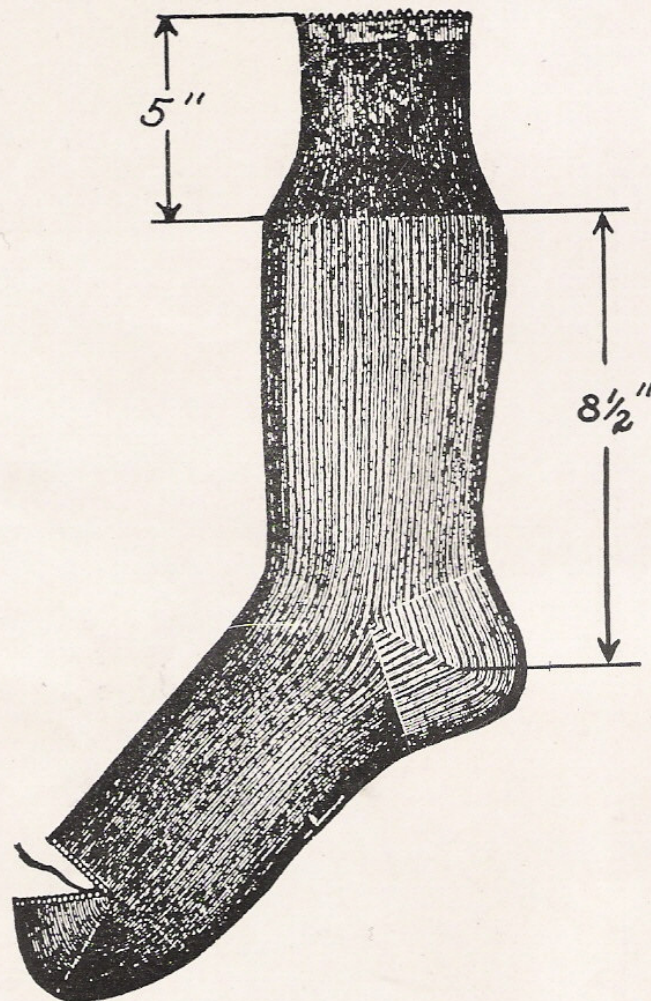
ILLUSTRATING HOW HEEL AND TOE ARE KNIT

The yarn is not passed over the take-up (5) at (B), excepting when **knitting** forward and backward, as when making heels.



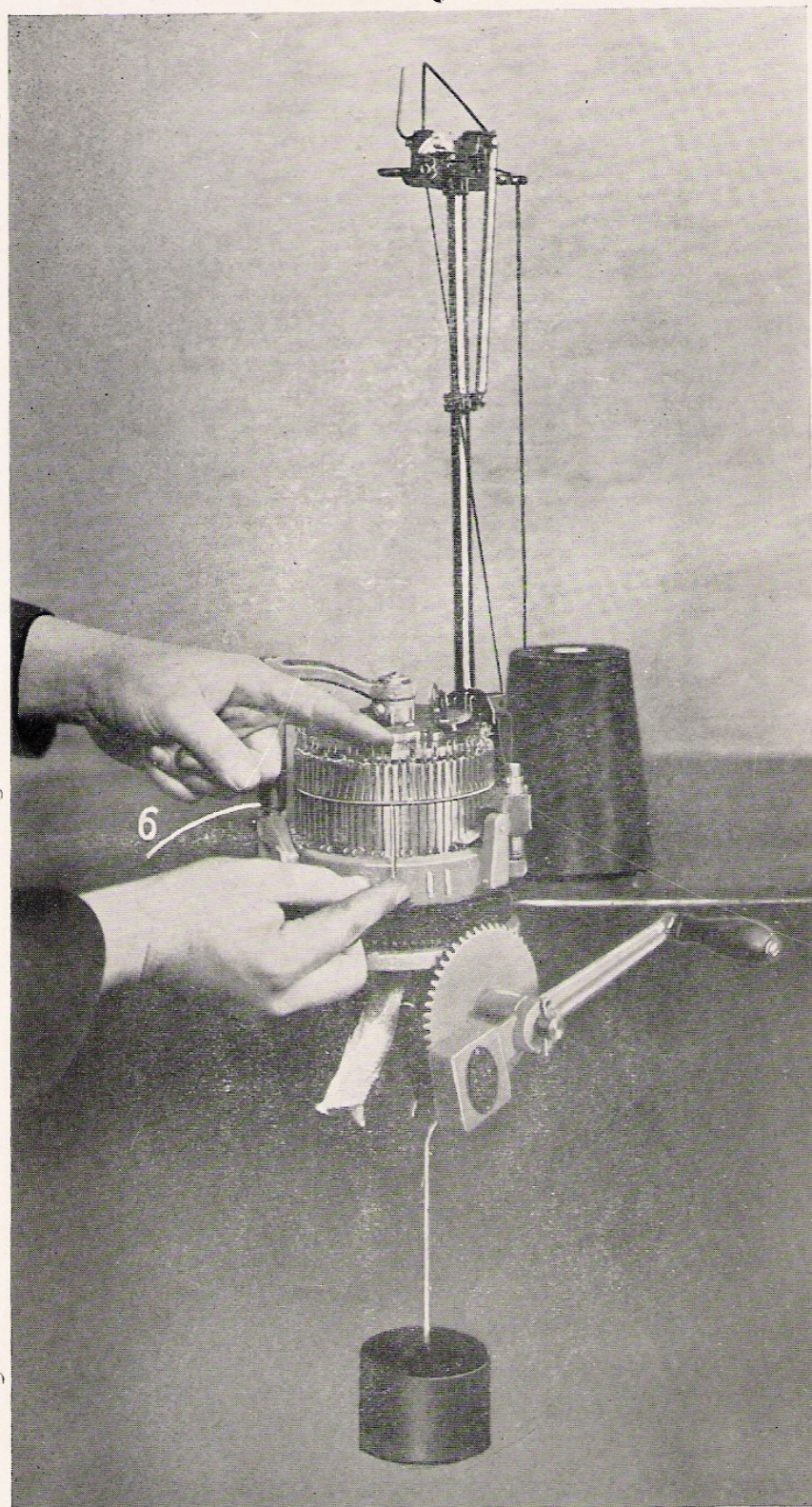
Notice the dimensions. Many socks must be rejected on account of wrong dimensions. See also page 22.

Be sure and press the toe portion between two damp cloths with a hot flatiron; then when unraveling, preparatory to closing the toe, be sure to unravel all surplus yarn down to the gore, otherwise there will be unsightly pockets projecting from the sides. See bottom page 13 and top of page 14.

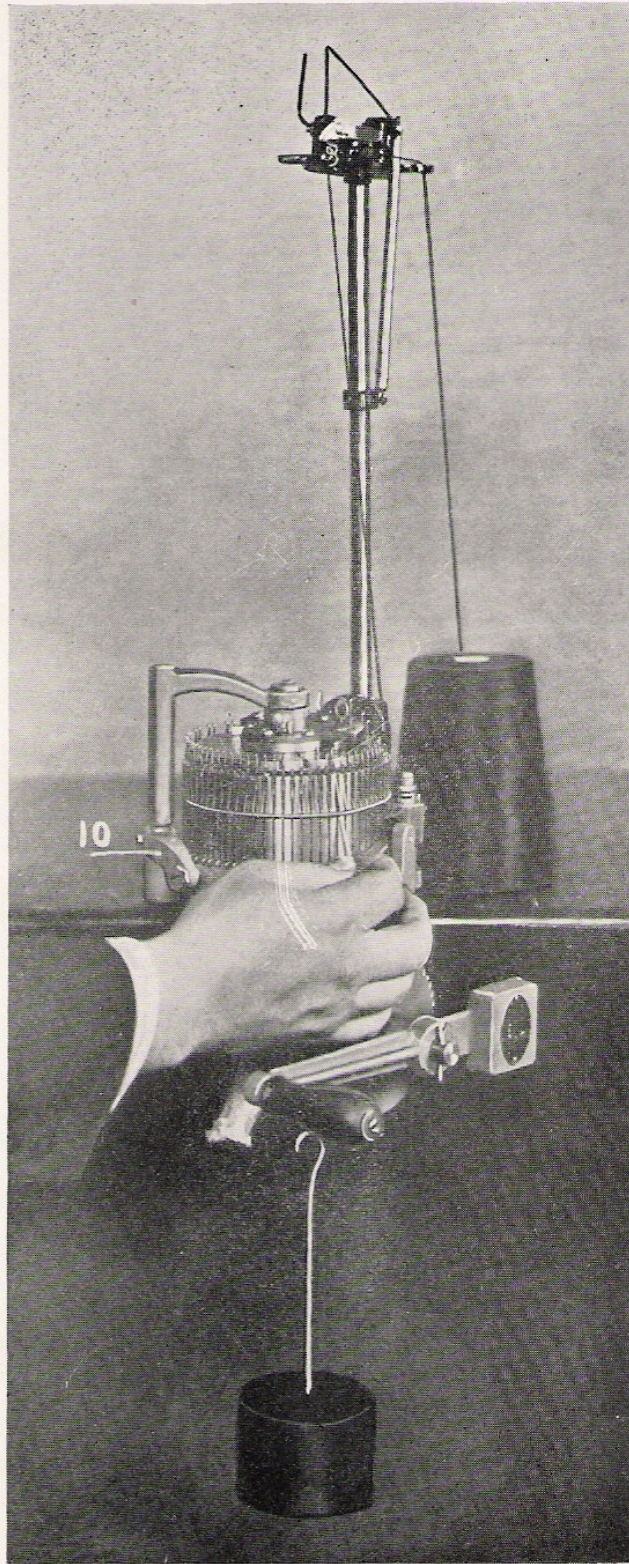


The closing of the toe is very important. Notice that while the needle passes through two loops each time, one of these two loops had a thread passed through itself when the needle went through before, as shown in cut.

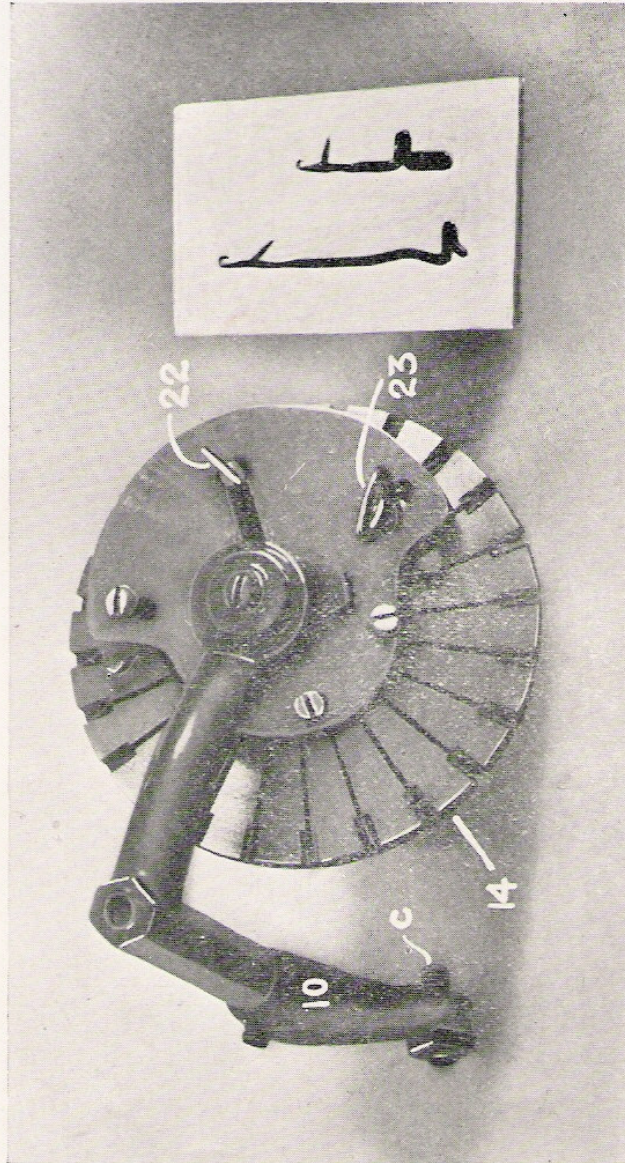
See page 9 about transferring the loops from the dial to the cylinder needles.



After the loop is caught up by the dial needle, you close the latch on the cylinder needle to be removed and push outward on each neighboring needle; then draw the cylinder needle downward through the band spring and out.



Notice that thumb screw (23) has been replaced with a common screw and is not used in any of our later models. All adjustments are made with thumb screw (22).

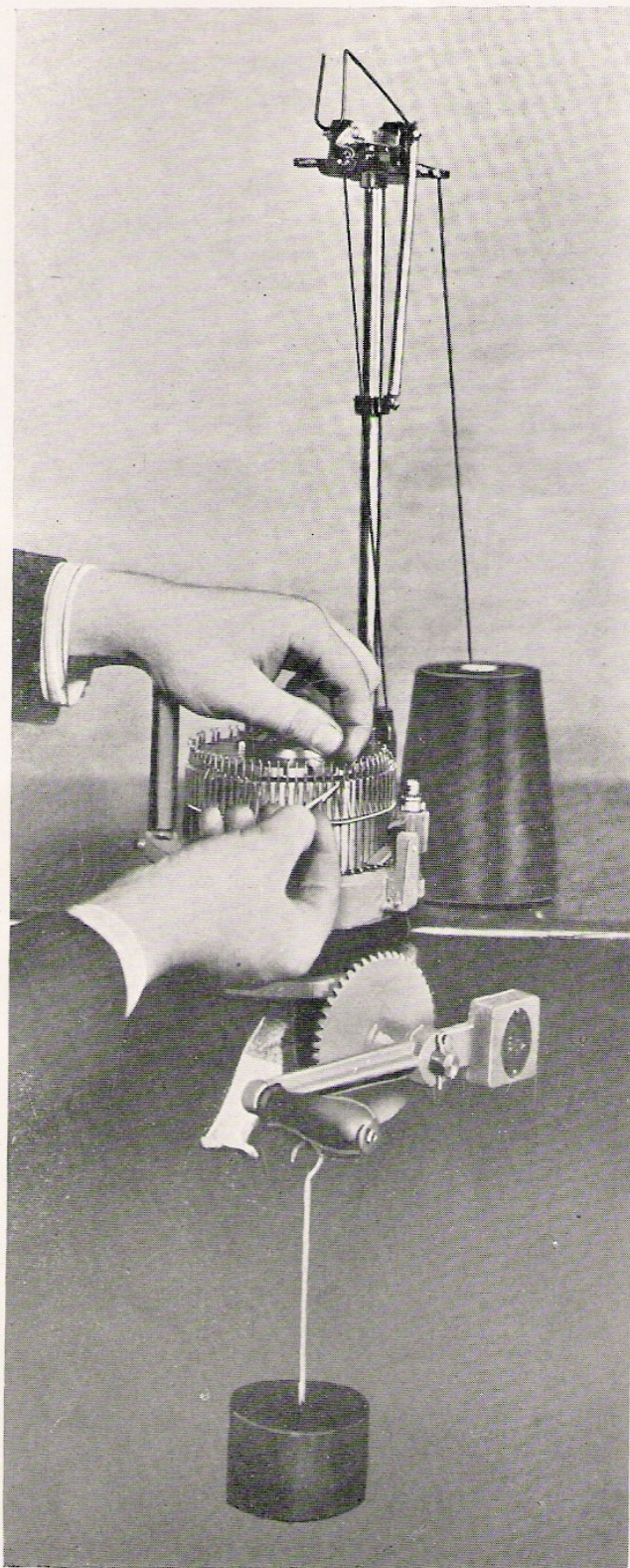


RIBBER COMPLETE

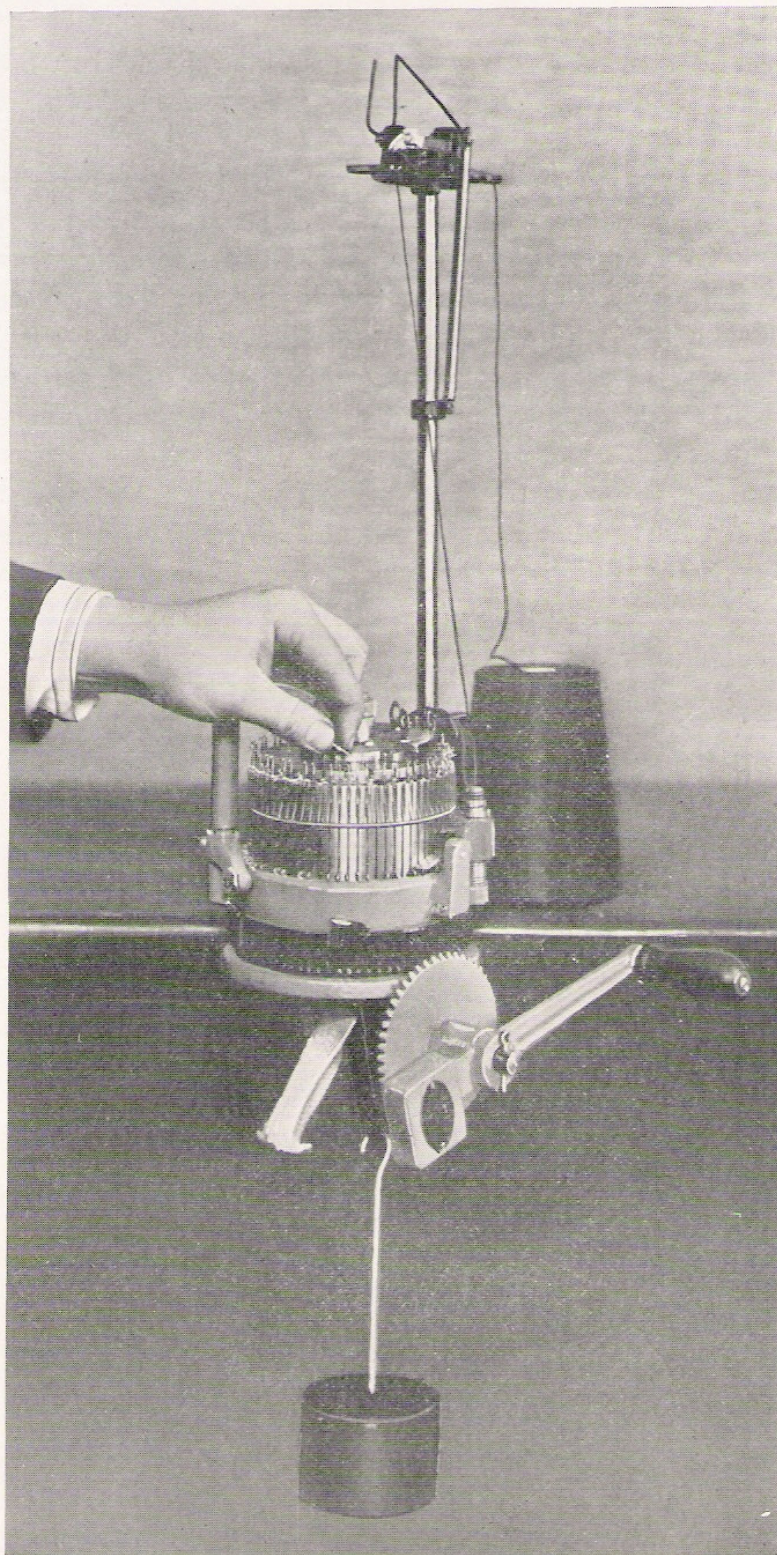
CYLINDER
NEEDLE

DIAL
NEEDLE

Be certain that the loop remains in the hook of the dial needle and does not slip over the open latch when you take the loop from the cylinder needle.



When transferring from dial needle to cylinder needle you may draw the dial needle outward until the loop of knit goods strikes the butt of the needle, holding the needle by its hook until the loop of knit goods is transferred to the cylinder needle. Be certain that it **does not go between two cylinder needles.**



DIRECTIONS

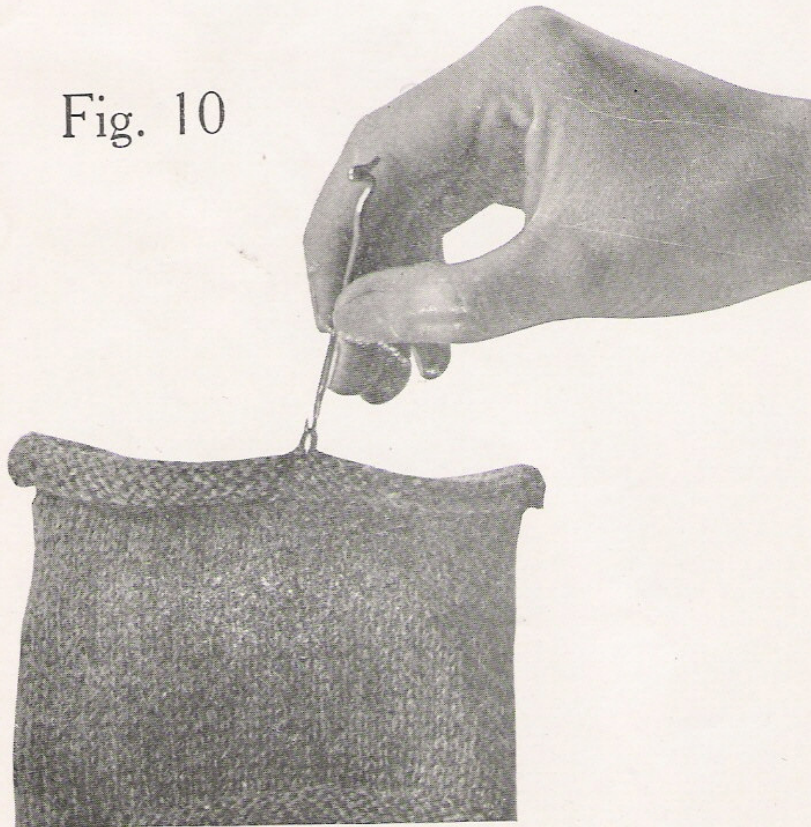
Be careful after you remove the cover from the box, and handle the machine carefully so as not to bend any of the parts.

Clamp the machine on a table or other suitable place. Be sure and tighten the clamping thumb screw which holds the machine to the table.

Never try to run the machine backward and forward without first lifting half the needles on back. See page 11, "How to Knit Heels."

We always knit a small piece of the fabric to try each machine and this is attached to the machine when you get it. You hang the weight (28), shown on page 1, to the projecting fabric by means of the clamp (30), shown on page 1, and do not turn the handle of the machine until after you have tied the end of the yarn which projects from the end of the yarn guides to the end of the yarn from your ball or bobbin, which must unravel very easy from the ball or bobbin. See to it that you place the ball or bobbin on the floor or table at a position where it will unwind evenly, and where there is no side pull towards the machine when it begins to knit. If for any reason the fabric has been disengaged

Fig. 10



Cut showing a piece of fabric having top rolled over and how loops are pulled out to start the machine

from the needles, roll the top edge over as shown in Fig. 10, and pull a loop over every alternate needle as described on page 16. Do not fail to push the end of the yarn from hole 17, shown on pages 2 and 3, through the yarn carrier at 18, letting it hang down inside the cylinder before you turn the machine. You may now turn the handle of the machine forward slowly and watch the operation of the needles while they are knitting. This will knit a tube like the straight part of a ladies' stocking. You must practice this for a while until you become familiar with the machine, and you can unravel it and use it over again afterwards. When the time comes when you are sure that you understand this operation, you may make several heels to get familiar with how they are made, which is as follows (see also question No. 8, page 19):

HOW TO KNIT HEELS — Without disturbing the knitting which you have been doing, stop the machine in a manner so the yarn carrier will be in front facing you, leaving the needles in the rear half of the machine unobstructed by cams; you then draw or push up all the needles which are in the back half of the cylinder, as shown on page 2, until their needle butts strike the band spring which you will see reaches around the cylinder about three-fourths inch from the top. You will find two small marks cut into the cylinder on each side, and start pushing up the needle that is between two of these marks on one side and then the needle that is between the marks on the other side, and then all which are between these two on the back side.

Your needle cylinder now has the needles which are located in the back of the cylinder up where they will stay until you are done knitting the heel and until you push them down again. Take notice that the needles in the back of the cylinder when knitting will knit the front of the sock and those in the front of the cylinder will knit the back of the sock.

After you have the back needles up and before you turn the crank, you must pull slack yarn from the bobbin or ball by pulling the yarn above the top guide hole through the take-up arm (B), shown on page 3, and this take-up arm, on account of its spring, can take up slack yarn, and you will now see why.

You are now ready to start knitting the heel, so you will now take the heel hook and push it up so it will hold on the fabric directly in front of the machine $1\frac{1}{2}$ inch from top of cylinder, and will pull down the cloth as the heel is being knitted at the front of the machine. You will probably be obliged to change the location of the heel hook several times to have it pull right. You will now move the handle forward slowly until the yarn guide (18), shown on page 2, is about central behind the up needles, and after the front needles have stopped knitting. Be sure the trip has passed over all the needle butts.

Next you lift up high one needle (until the butt strikes the band spring) on the right hand side and next to the ones which are already up; this makes one more needle that cannot knit. It is well to follow along where the needles are knitting to hold down the fabric with the left hand, **ESPECIALLY where the up needles begin.** Push gently inward and downward with your fingers just when the needles which are knitting at this place begin to rise.

Left to right referred to herein means the left or right side of the operator.

You now look down where the needle butts are, which are down, and see if the little trip has passed over all the down needle butts, which you have seen dancing over the needle butts while you were knitting the round; if it has not passed over all of them you turn the handle a little farther forward until it does, and then you turn the handle backwards slowly. You will notice how the top take-up arm keeps the yarn tight, which was around the up needles of the back of the cylinder.

Be sure that the yarn carrier (18), shown on page 2, does not strike the needles. See question 6, page 19. It should be from $\frac{1}{32}$ to $\frac{1}{16}$ inch away from the hooks of the needles. Our later models may do away with all adjustment and have the yarn carrier held rigid in its place. You keep moving the handle backwards until all of the down needles have knit and until the right hand trip has passed over all of the down needle butts and the yarn carrier is on back.

Next you lift up one of the active needles on the left hand side. The needles are always lifted one at a time on the same side where you see the slack yarn spanning across the up needles, lift the needle way up until the needle butt strikes the band spring and can go no farther.

This makes one more inactive needle, and now you may turn the handle forward until all of the active needles have knit, and until the trip has passed over all of the down needle butts as before.

You now raise the first active needle next to the raised needles on the right side to be a companion of the other raised needles, and knit backwards again, and after the trip has passed over all of the down butts you raise another needle on the left side and again turn the crank forward, and so you continue knitting backwards and forwards until all but about 12 needles have been put up (see marks on the cylinder). This is what is called narrowing the fabric for a heel.

You must now begin to widen in order to make the other part of the heel, and this is done as follows.

HOW TO WIDEN—Put the heel hook way up, as far as it will go. We suppose that the last stroke of your handle was from right

to left, and that the yarn carrier is on the left hand side of the cylinder and the slack yarn is spanning across the left up needles. "The Yarn Carrier" is the part through which the yarn goes directly in front of the needles and the needles take it directly from the "Yarn Carrier," see (18), page 2.

You now lift one more needle on the left side and before starting to knit, lower the first needle on the right side, which is the side **opposite** to where the yarn is spanned across the up needles (this will be the last needle that you raised on the right side) and then knit from left to right, moving the handle at least far enough forward to have the trip pass well over the last down needle butt on the right hand side.

Now you push down the first up needle on the left side (this will be the last needle that you raised on the left side), and **DO NOT RAISE ANY MORE NEEDLES.**

Now turn the handle forward until the trip has well passed the last down needle butt, and this you continue, lowering the needles one at a time always on the side **OPPOSITE** to where the yarn spans across the up needles until the raised needles have been lowered, one at a time, until there are only 3 on a side of the needles which you raised one at a time still up when your handle is stopped on the left side. By 3 on a side still up is meant that 3 more needles on each side are up than the original half of all the needles that you raised at first.

HOW THE TOE IS KNIT — Begin exactly as you did with the heel and when you knit the toe and are widening you may keep on lowering the needles one at a time until you lower the needle next to the two marks, making exactly half of the needles lowered. This is done to avoid pockets on the sides of the toe after closing it.

Always push down one at a time when widening on the opposite side from the direction you are knitting, and when narrowing push up one at a time before the yarn carrier comes towards them to knit, and on the side towards which the yarn carrier is coming as stated above in the instructions for knitting the heel.

IF YOU RAISE OR LOWER A NEEDLE ON THE WRONG SIDE THERE WILL BE A SMALL HOLE IN THE EDGE OF THE GORE.

Next you push down as many as you can of the up needles on the right side, then move the handle slowly forward and push down more of the up needles until all are down. Remember, that when you push down needles which were raised some of the needle latches might close, and if they do you must open them before you let such needles try to knit, for if one of the latches is closed the needle cannot take yarn from the yarn carrier, and there will be a drop stitch. Practice making toes until you are perfectly familiar with toe and heel making.

Keep on practicing making heels and toes until this comes natural; after this you are able to knit a ladies' stocking or any stocking which has no rib; make a few. Use yarn fine enough for your cylinder, say Saxony yarn to practice with. If the yarn is too coarse, or if something holds back on the yarn, or if the weight is too light, the goods will climb up the needles, while if the yarn is too fine, you will knit too open. You can knit a closer fabric by turning to the right on the small knurled nut on top of the stitch cam so that it will pull a short loop, and a more open fabric by turning down the knurled nut so that it will pull a longer loop. This is the manner in which ladies' stockings are knit larger on top, by drawing a long loop, but there is a limit as to how long you may draw the loop. This will be noticed by the way the machine acts when too long a loop is being drawn. If the fabric climbs the needles when you are pulling down as far as possible with the stitch cam, and if, by adding more weight this is not overcome, then the yard is too coarse for the cylinder that you are using. When you raise the stitch cam to knit tighter and have enough weight to pull down the fabric, if the cloth climbs the needles, turn the nut forward, thus lowering the stitch cam until the fabric does not climb the needles. Remember that the spring take-up arm which is up on top and which you use when making heels of stockings as above described, should not be used when knitting anything other than heels or toes, and the yarn must not pass over it excepting for heels or toes. Always be sure that the yarn comes freely and draws very easy from the cone.

HOW TO MAKE RIBBED GOODS AND HOW TO MAKE RIBBED TOP STOCKINGS OR SOCKS — See also page 22. Having thoroughly mastered the knitting of plain stitch goods, you may now practice on ribbed goods. This you do by attaching the ribbing attachment to the machine, as shown in the picture on pages 3, 5 and 6. You will notice that the end of the ribber stem "6," page 5, is pushed into socket "7," page 2. You push the standard part (6) into the socket (7) until the bottom of the dial needle groove, page 8, is about one-eighth inch above the top of the needle cylinder, page 3, and the lug (14), which extends downward from dial at (14), page 7, touches the back lug inside of the cylinder and is between it and the next lug to the right, the fabric being between the two lugs. Be sure that it does and that the dial (13) page 1, cannot possibly revolve forward. Be careful and do not bend this lug faintly shown at (14) page 7.

Now being careful that the end of (C) of the locating stop (10), page 1, is touching the camring (11), you tighten the tightening

screw (12), shown on page 2, with a screwdriver. You are now ready to put the needles into the dial (13). Let us suppose that you wish to knit the cuff portion of gents' socks, you proceed as follows: You are having a broad rib outside and a narrow rib inside, you use a dial having 24 grooves as comes with the machine. Each of these 24 grooves will align with one of the cylinder needles when the dial is turned forward as far as it will go, and if you would put a ribber needle into one of the grooves of the dial it would strike against one of the cylinder needles unless the cylinder needle is removed.

You now take one of the small dial needles as follows: After pushing the cylinder needle, which would be in your way, as far up as it will go, and holding it outward, see page 8, stretching the band spring a little, you catch up its loop in the hook of the dial needle; you then put the dial needle into its groove in the dial, being certain that the loop from the cylinder needle is within its hook, and that the loop does not pass beyond the end of the open latch of the dial needle while you are putting said dial needle into its groove in the dial. You can prevent this from happening by holding outward on the neighboring cylinder needles while you are putting in each dial needle. You now examine the cylinder needle to be sure its latch is closed and released; then you draw it DOWNWARD out of the machine, at the same time pushing outward on the neighboring cylinder needles on each side, and put it on the table for future use. This is shown by picture, page 6.

Now turn the handle of the machine forward a few times until you are perfectly familiar with the working of the dial needle, which is now knitting a single rib inside the fabric. Then put in all the dial needles as you did the first one, being sure that none of the loops which you take from the cylinder needles get over the end of the dial latch and the loops are within the hooks. Turn the handle forward slowly, seeing that everything works right, and you are making the ribbed cuff of a sock.

Practice this until you are familiar, and then put back into the cylinder, one at a time, the needles which you had laid on the table, as shown on page 5, and draw out the dial needle which was in its way, and be sure to put its loop over and into the hook of the cylinder needle which you have just put into the cylinder, shown on page 9, and continue thus until all of the dial needle loops have been transferred to the empty needles just put into the cylinder one at a time. Now loosen the screw (12, page 2) and pull up and remove the ribbing attachment; turn the machine slowly to be sure all is right and then proceed with the leg portion of the sock

until you reach the heel, and then proceed as you did with ladies' stockings. Remember the top of the sock is knit first. After you are perfectly familiar and ready to start knitting socks, turn to page 21 and follow instructions.

HOW TO START AN EMPTY MACHINE — This only becomes necessary in case you break the yarn while turning the handle or in some other manner your fabric drops down by some accident. Take a piece of knit goods made on your machine to start from. First hang the knit goods into the machine, roll the edge over outward for about one-half inch and with an extra needle reach inside of the top of cylinder to A, Fig. 10; then pull a loop over one of the needles, then one about half round the cylinder, then one half way between these two on one side, then one on the opposite side from the last one, and then on every alternate needle between these four. You will be obliged to turn the machine before you can put a loop over the needles which are at the stitch cam, and before you turn the crank you must enter the end of yarn through hole 18 in the yarn carrier, letting it hang down in the center of the needle cylinder. After this you clamp the weight on the bottom of the knit goods and push the end of the yarn through the yarn carrier, drawing it between two of the needles, and turn the handle slowly. If any of the needles do not knit, pull loop over them from the knit goods as before. The object of rolling the edge of the knit goods outward is to prevent it from unraveling when you pull up the loops, which can be caught up from the fabric.

HOW TO THREAD THE MACHINE — Before having loops on the needles and weight attached, set the bobbin or ball of yarn on the floor about under the hole in the top arm marked 15, see page 3. Take the end of yarn from the bobbin and push it upwards through hole (15, page 2), then through hole (19) and under the rocker arm, then through the hole (16) in the front end of rocker, then draw through the hole (17), then after as many loops are on the needles as you can put on before you turn the machine put the end of yarn through (18), shown on page 2. (18) through the yarn carrier to the needles, drawing the end of yarn well into the center of the needle cylinder and let it lay there. When knitting backwards and forwards for making either a flat web or the heel or toe of a stocking, you pass the yarn over the hook (B) of the take-up (5), after it leaves the rocker hole (16) and before it enters the hole (17). See cut on page 2.

SEE THAT THERE IS NO OBSTRUCTION TO YARN LEAVING THE BOBBIN OR BALL, AS THIS MUST BE PERFECTLY FREE.

Do not send us socks for sale if they look bad, and if you would refuse them from a store were you in the market.

KNITTING FLAT WEB — By Flat Web is meant a knitted band having a selvage on each side. Flat Web may be either a band having two straight parallel sides, or it may have projecting portions on its sides. We will first begin by knitting a straight band like a suspender.

Take out all of the needles from the back of the needle cylinder, leaving, say, a dozen, more or less, according to the width of band wanted in the front of the cylinder. Next take a piece of knit goods and put one loop over each needle, just as you did for the circular web. Put the yarn through the tension arm above just like for heels. Next take and hang on the light weight and knit forward until the trip has passed the last right hand needle butt. Then knit backwards until the trip has passed the last left hand needle butt, then to the right, then to the left and continue right and left until the band is as long as you want it. You can make a narrow or a wide band according to the number of needles you put into the cylinder to knit, but you must leave enough of the needles out on the back of the cylinder to allow both trips to be down and away from the needles, making 22 needles out on a 72 needle cylinder.

Seamed stockings and other FASHIONED GOODS can be knit in this manner. Beautiful seamed infants' stockings are made as follows: Using the 72 needle cylinder (this is the standard), take out 22 needles from the back end of the cylinder. This will leave 50 needles with which to knit the stocking web. Set up the same as for knitting a band; knit 40 times across, then take out one needle from each side, putting their loops on the neighboring needles. Then knit 3 times across and again take one needle from each side, putting their loops on the next needles. After you have 8 needles out now knit 18 times across for the ankle, stopping at the end of the stroke from left to right. Lift up all of the needles excepting 9 on the right hand side. On these 9 you knit one-half the heel as follows: Knit from right to left, then lift up the left hand needle of those which are knitting. Knit to the right and then to the left and lift up another left hand needle. Knit left and right again until only 4 needles remain knitting. Then put down one needle before each left hand stroke until 8 are down. Your machine is now at the end of the right hand stroke. You now push down all of the needles and knit clear across from right to left. Now lift up all but 9 needles on the left hand side and knit the other half of the heel with these 9 left side needles just as you did with the ones on the right side. Of course the work must be held down with the heel hook, or your fingers, or both, while you are

Do not send us socks for sale which you would refuse from any store if you were buying socks.

knitting the sides. After completing the left side of the heel put down all needles and knit back and forward 20 times across for the foot.

The Toe Is Made as Follows: Your machine being stopped after knitting from right to left, lift up 10 needles on the right hand side and knit from left to right. Now lift up 10 needles on the left hand side and you are now ready to knit the toe just exactly as on a seamless stocking. Lift up one needle on the right side and knit towards the left, then one on the left side and knit towards the right. Continue until six needles only remain knitting; then you push down one on each side before you take each stroke just exactly as in knitting a toe for a seamless stocking until all but nine on a side are down; then with the machine at the end of the stroke to the left you push down all the needles and knit forward then backwards. Continue preferably with cheaper yarn until about $1\frac{1}{2}$ inch of fabric has been knit, when you can put in one needle on each side, drawing some kind of a loop from near the edge of this extra $1\frac{1}{2}$ inch near the top. Knit a few strokes and put in another pair of needles and continue until the eight needles are back again, when you can start another stocking.

If desirable to make the toe more pointy, you knit until fewer needles remain knitting while you are narrowing and vice versa.

Turn the web inside out and OVERSEAM through the short loops of the selvage with a darning needle.

QUESTIONS THAT WILL COME UP DURING ANY KIND OF KNITTING

1. Q.—Why do my stockings look different than those sold in the stores? A.—Because in the mills where they make stockings for the stores they wet the goods and draw them over formed Hosiery Boards and then allow them to dry, after which they are boxed and sent to the stores. We can furnish Hosiery Boards at a low cost if you wish to knit for the stores.

2. Q.—What shall I do if one or more of the needles begin knitting a drop stitch? A.—Reach in and engage the straight strand which spans across the drop stitch and draw it up over the needles, but be certain that the needle latch is open when you do this. After the goods are cut off machine you can pick up loops with a knitting needle.

3. Q.—How can I knit drop stitch hosiery? A.—By taking out one of the needles at each place where you want a drop stitch to extend down your goods. The loop from the needle taken out

must be placed on one of the needles left on either side to prevent a run. Sometimes this is done for the cuff of a woolen sock instead of making a ribbed cuff.

4. Q.—How can I put in a needle cylinder which is either finer or coarser than 72 needles? A.—Take out the two screws from underneath the cylinder and you can lift it out (but first lift up the back half of the needles as if to knit a heel) then use the two screws to fasten down the other cylinder. Extra cylinders of any cut stated on page 21 can be furnished by us at six cents per needle groove.

5. Q.—How should I take care of the Knitter? A.—Oil the machine and ribbing attachment frequently with a high grade sewing machine oil. We can furnish this at a low cost.

8. Q.—If the tension arm fails to pull up the slack when knitting a heel or toe or flat web, what shall I do? A.—Loosen the screw which fastens the tension spring nut to the stand rod and slip the collar downwards a little and tighten the screw. This stretches the spring downwards and makes it pull harder. IT SHOULD NOT PULL ANY HARDER THAN ACTUALLY REQUIRED OR IT WILL MAKE THE MACHINE KNIT TOO TIGHT AND THE FABRIC WILL CLIMB THE NEEDLES.

9. Q.—How can I make ribs run down on the top side of the foot, continuing from the front of the leg and extending to the toe? A.—You leave the ribbing attachment in the machine after the leg portion has been knit and, after you have raised the back needles preparatory to knit the heel, you take out such dial needles as are in the front part of the machine, transferring their loops to the replaced cylinder needles, making sure that there are no dial needles in front of the cylinder. Then you knit the heel as usual, first unscrewing the thumb screw (22) on top of the dial a little and push it back so it will not actuate any of the dial needles when it passes to the rear of the machine. The thumb screw (22) may be fastened in the center counter bore on this operation. After your heel has been knit you stop at the end of the left hand stroke, put (22) into normal position and fasten it by tightening; push down the rear needles as usual and proceed knitting the foot wherein the Ribber Needles will operate to knit as many rib wales on top of the foot as you have Ribber Needles in the rear of the dial.

Very pretty baby stockings down to No. 6 and smaller can be made by using the 84 cylinder and 42 dial, taking out every alternate cylinder needle. Knit the leg one and one rib, then remove the dial needles on the front side, putting their loops onto the cylinder needles. Release the thumb screw (22) and place it as

Send us a single sample sock for inspection before you knit in quantities

above directed. Knit the heel and proceed with foot and toe without replacing the dial needles until you are ready to begin the next stocking.

Some prefer to remove the entire ribber when knitting heels and to replace it and put back the required number of dial needles for knitting the ribs on top of the foot. In this case be sure and get the same loops back again.

10. Q.—How is a welt produced near the top edge of the cuff of a sock? A.—Very simple. After the machine has knitted a few courses with the ribber, you stop the machine, taking notice where the ribber post is situated when you stop the machine; then loosen the thumb screw (22) and push it back towards the center of the machine as far as it will go; then make three complete turns of the machine, bringing the ribber past just where it was when you first stopped the machine. Then loosen and draw the thumb screw (22) outward as far as it will go; tighten it and go on with your knitting. Both weights must be placed on the fabric when making the welt.

11. Q.—Can I make the welt more pronounced than the one which I made as above? A.—Yes, after you have made one turn of the machine as above, you pull the thumb screw outward one notch only, that is, to the middle counterbore, and make one more complete revolution, and after this pull it outward from the center as far as it will go. Fasten it and proceed with the knitting. You can put several welts about one-half inch apart around the cuff if you wish. Instead of stopping at the middle notch you can knit two rounds when the thumb screw (22) is way in if you wish to do so, but our standard sock only requires one welt.

12. Q.—How do I measure the length of the cuff, the leg and the foot while the weight is attached? A.—The end of the cuff should be approximately even with the center of the crank axle; the leg even with the bottom of the crank when the handle is up, and the foot can be measured on the crank when the handle is down. All with the weight attached. Try one and measure it. See dimensions, page 22.

13. Q.—How do I know where on the handle to find the number of the sock when the handle is down? A.—A No. 11 sock will reach within the bottom end of the crank (the weight being attached) when you begin knitting the toe. Finish one up and try it after cutting it off. Of course a No. 10 would not reach so far down as a No. 11.

14. Q.—How can I make the machine knit either more open or tighter? A.—If you turn down the knurled nut which is directly above the stitch cam which pulls down the needles to knit, it will knit more open. If you turn it toward the right it will knit a closer fabric.

FANCY OPEN WORK STITCH — Put enough needles into the front of the cylinder to knit the required width; then start a common flat web. After knitting a few times across, stop the machine with the cam in the back of the cylinder; then with a hook take the loop from the second needle and put it on the third. The fourth to the fifth, the sixth to the seventh, and so across the entire width. Then across and back again so the straight wales of yarn, which span across the empty needles after the first time across, will have loops on them. Then stop the machine again as before and transfer the loop from the second needle to the first, the fourth to the third, and continue thus across the entire width; then knit back and forward again and proceed as at first. Continue until you have the desired lengths.

To Knit "Cord" — Take out all of the needles excepting four, which may be located at any part of the cylinder, but they must be together. Pick up a fabric on these four needles, put the yarn over the upper take-up same as for heel or toe, and knit by turning the machine round until the cord is the desired length.

A great many varieties of fancy stitches can be made by various manipulations of the loops from needle to needle. And a great variety of work can be done on the machine according to the skill and taste of the operator.

The Machine is regularly equipped with a cylinder having 72 needles. This will knit common yarns, either wool or cotton. Two strands of yarn from two separate bobbins may be used if the yarn is too fine to knit proper fabrics, but each should be entered through its own hole 15 and 20 in the rear of the upper arm, thence together through the hole 19, 16 and 17, from whence they will feed downward and through the yarn carrier (18) as though there were but one strand.

We supply extra cylinders 54, 60, 72, 84, 108 or 120 grooves at \$.06 per groove. Our cylinders are all made of a fine grade of iron, the same as automobile cylinders, and should last a lifetime.

We recommend the use of the coarser cylinders as they are easier to operate and will knit goods which bring a better profit.

Because the market fluctuates, the price on needles and replacement parts will be quoted on application.

Send us a single sample sock for inspection before you knit in quantities

Our Yarn Winder and Reel which fastens to either a chair or table is a convenient accessory and will be sent for \$10.00. Do not confuse this instrument with cheaper devices.

The following are the dimensions which must be used on all socks knit for us, taken after the socks are cut off and not stretched:

Cuff, 5 inches long.

Leg, 8½ inches long, exclusive of cuff. See page 4.

Foot measured from extreme end of toe to end of heel shall be as many inches as is designated by the number of the sock required, that is, to say, if No. 10 socks are required they must measure 10 inches, No. 11 must measure 11 inches, and so forth.

Needles at present prices are 5 cents each.

SPECIAL INSTRUCTIONS FOR HOMEKNIT SOCKS

Another Method for Starting Shown on Page 27

If you wish to knit for us, the following additional instructions will help you, as they are written exclusively for facilitating the production of men's socks marketable to the first-class wholesale trade who demand absolutely first-class work.

Besides the pure wool yarn on cones, you should have a cone or ball of about No. 10 white cotton yarn to be used for knitting a short section between each pair of stockings where they are to be cut apart. Assuming now that your machine has plain fabric hanging therein, without the ribber attached thereto, and that the weights are clamped to the fabric and you are ready to knit with woolen yarn which is connected to a cone so that the machine will begin knitting plain fabric with the cylinder needles only, upon the turning of the crank. First you must break the woolen yarn, tie a piece of white cotton yarn to the machine end of the woolen yarn so when you knit you will knit with the white cotton.

Knit about two turns down with the white cotton. Stop the machine with the yarn carrier and cams facing you; put up the rear half of the needles as when knitting the heel, then turn the

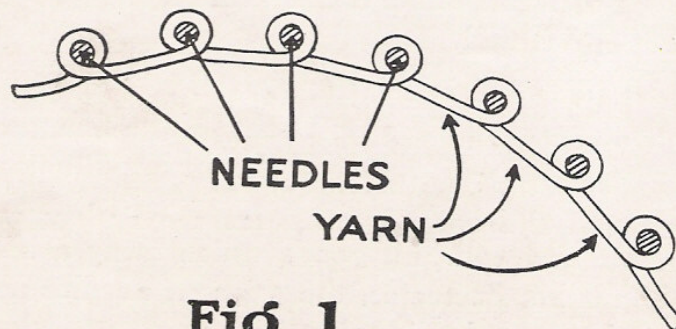


Fig. 1

machine forward until the yarn carrier is in rear and the cams are all under the raised needles; then push up all of the remaining needles so the butts will touch the band spring; then break the cotton yarn about one foot above the yarn carrier and draw this yarn inward through the yarn carrier and let it hang down into the center of the machine from between the needles where it had last been knitted. Next cut off from your cone of pure wool yarn a piece about one yard long, tie a slip knot at one end and attach it to one of the cylinder needles; push this end loop down to the needle cylinder, then pass the yarn behind the next needle and around it, as shown in Fig. 1, Page 22, below, and continue thus, keeping the loops down to the needle cylinder with the fingers of the left hand until you have put it around every needle in the cylinder, not too tight nor too loose, as shown clearly in the drawing. Do not wind the yarn around the needles the wrong way; be sure the loops are on the outside like the drawing. After this you can tie the two free ends of yarn together, letting the surplus hang down inside the cylinder or you can cut the surplus yarn off if it is tied right or let the free end hang down into the cylinder without tying. Now push down the needles ahead of your cams, connect the woolen yarn by pushing the end through the yarn carrier at (18), page 2, directly behind the first needle which will knit and between it and the up needle which is next to it, and turn the machine forward slowly. Push down all of the up needles, first being certain that all latches are open and down. Make one revolution, that is, there should be one loop knitted by every needle in addition to the yarn which you looped around by hand. Put the ribber attachment onto the machine, push the dial around until you feel that the lug is stopping it.

This will show you which needles in the cylinder align with the needle grooves in the dial. Now begin taking the loops from the cylinder needles, which needles are to be removed so soon as the corresponding dial needles have their loops, as explained on page 14. After all the dial needles are in the dial you may knit about six rounds; then push in the cam by thumb screw (22), page 7. Make three turns, keeping the fabric down tightly, then draw said cam outward again and tighten the thumb screw and proceed to knit the required length of cuff. If you are to make a plain leg, you may now after the cuff is done put in the cylinder needles, transfer the loops from the dial needles thereto, take off the ribber attachment and knit the leg, heel, foot and toe. After you have knit the toe and six rounds of the wool yarn round and round to be unraveled afterward, run in enough white cotton yarn to knit two turns. This is the parting yarn, and after this you begin the cuff for the next stocking and proceed exactly as you did on this one, the knitting of which is now completed.

After your weight gets too near the floor, open the clamp and move it upward. Do this often and do not let the weight touch the floor. When you have several socks hanging below your clamp, cut them off through the parting strip which is formed of white cotton yarn. Then press the toe between two pieces of damp cloth with a hot flatiron; then unravel until you reach the gore, when you may close the toe, as shown on page 4.

If you do not unravel enough, your toe will show pockets projecting from the sides and will not be fit for the market. After the toe is closed no one should be able to detect where it was joined, otherwise the sock is not passable and unsalable, as the stores will not buy the goods from us unless they are right.

All cotton yarn must be removed from the top edge of the cuff, just as basting yarn is removed from other garments. The socks are next wet, excepting the cuff, and are drawn on hosiery boards and dried. After they are "paired," such two as are exactly alike are a pair. They are now ready for the wholesale dealers.

It would be well for you to send us a sample after you think you have it right and let us put it through our inspecting department before you send on large quantities, as it is our desire to help and guide you. The speed will come with practice, and first-class work must be your aim.

To make our standard Homeknit sock, you start and knit the cuff exactly the same as above described, and after the cuff is finished you proceed with the leg as follows: Take out every alternate dial needle, transferring the loops to the cylinder needles which you put in at these places. Knit the leg down to the heel with the co-operation of 12 dial needles, making five and one ribbed leg. This being the proper length, you take out the ribber needles remaining in the front half of the dial, the half facing you, putting their loops on the cylinder needles, which you now put in the front half of the cylinder. See question 9, page 19.

Loosen the thumb screw (22), put it in the center counterbore and lift up the rear half of the cylinder needles, put the yarn over the take up hook (B), page 2, and knit your heel with the dial in the machine. The dial will stand still in its place until the heel is done. Then after you push down the up needles you pull the thumb screw outward as far as it will go, you are ready to knit the foot, which will have a five and one ribbed portion on top of the foot with the bottom of the foot plain. Just before you get ready for the toe, you put in the remaining cylinder needles, transferring the stitches from the remaining dial needles to said cylinder needles. Remove the ribber entirely, knit your toe, run in your parting yarn and start your next sock the same as you did this one. Remember that we want you to do well and that our socks must be sold in the cities and they must be right. People buying from you direct

might not be exacting, but to sell large quantities we must go to the dealers, so be careful about the work. Become an expert and the rest will take care of itself.

Stretch a correct stocking — see how far down the different sections reach and measure your fabric, which has a weight attached accordingly. See also question 12, page 20.

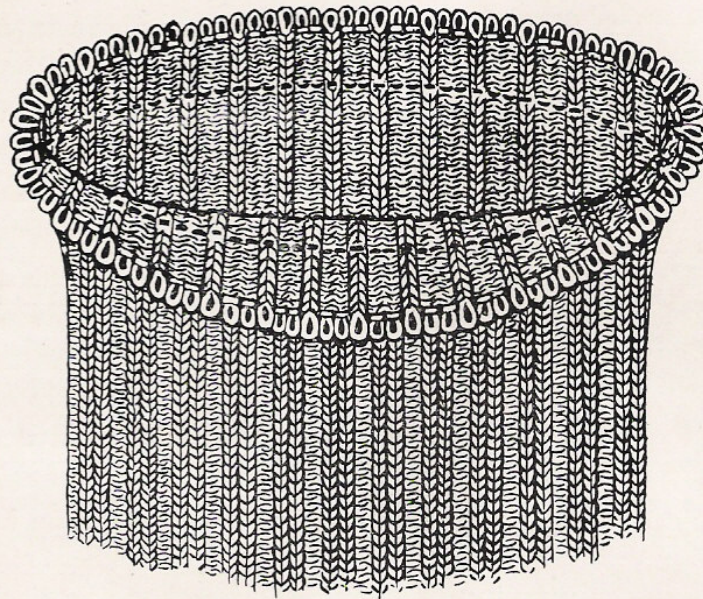
We will also accept socks whose cuffs are topped with what is known as Van Dyke finish on top if you have learned to do this and it comes handy to you. Of course they must be done nicely.

To make Van Dyke tops, you wind a piece of yarn around the needles exactly as on the straight finish described, only each cylinder needle is out opposite where the dial needles will work. You do this when the dial or ribber is not attached to the machine. Then you knit one revolution and put in the ribber, SEEING THAT THE DIAL LUG IS AS FAR AS IT WILL GO AGAINST THE CYLINDER LUG. Then you pick up the two spans of yarn, which are under the dial needles, and put them into the hooks of the dial needles. This can be done with the dial needle itself by reaching its hook down into the cylinder between the two cylinder needles, where a cylinder needle is out, and catching the two strands of spanning yarn on the dial needle. Then put the dial needle into its place and when all are so in the dial you proceed to make the ribbed cuff. **Always use parting yarn between each pair of socks.** See pages 27, 28, 29 and 30.

Another method commonly used in making socks is to make a long string of cuffs and afterward cut them apart, transfer them to the cylinder, having all of the cylinder needles therein, and knit the leg and foot thereto.

This is the method commonly employed in the large hosiery mills. Great care must be exercised in transferring such cuffs to the needles of the machine, which in this case acts as a footer, otherwise there will be drop stitches where the two fabrics are joined. Of course, the girls in the hosiery mills become experts on transferring, and do it very accurately and rapidly. By lowering the stitch cam for one revolution, you can knit a loose course on each cuff, which will help you.

You can, after knitting the cuffs proper lengths, run in a section of cotton or any yarn of different color to guide you; also to show you where to cut the cuffs apart. After you have a number of cuffs and when you get ready to transfer them to the needles of your machine, preparatory to knitting on the leg and foot, be certain that the first row of loops of the wool yarn are put over the needles, and that none goes between two needles. Then unravel the surplus from the outside right down to the needles and connect the yarn from the cone and proceed to knit the leg portion.



Cut showing how cuff looks ready to pull over needles, as described on page 25

Have all cylinder needles in machine. Raise half the needles as when knitting a heel.

Put the cuff inside the needle cylinder with finished end down.

Pull the top edge outward and downward so a needle will go into each dial needle loop and each cylinder loop. When you get all, or nearly all, of the down needles into loops, then lift up the front half of the needles, at the same time pulling down the fabric so it will touch the top of the cylinder; then turn the machine so the yarn carrier will be in front and the cams will be under the front needles.

Push down the back needles. Begin drawing loops over the back needles just as you previously did over the front needles, and when all of the loops are on needles turn the machine forward until the hole (18) of the yarn carrier, shown on page 2, is between the last up needle and the first of the ones which are now ready to knit.

Push the end of the yarn through 18 and between these two needles, letting it hang down about four inches in the center of the cylinder.

Hang on the weight and as soon as the cams are away from under the up needles, push them all down and proceed to knit.

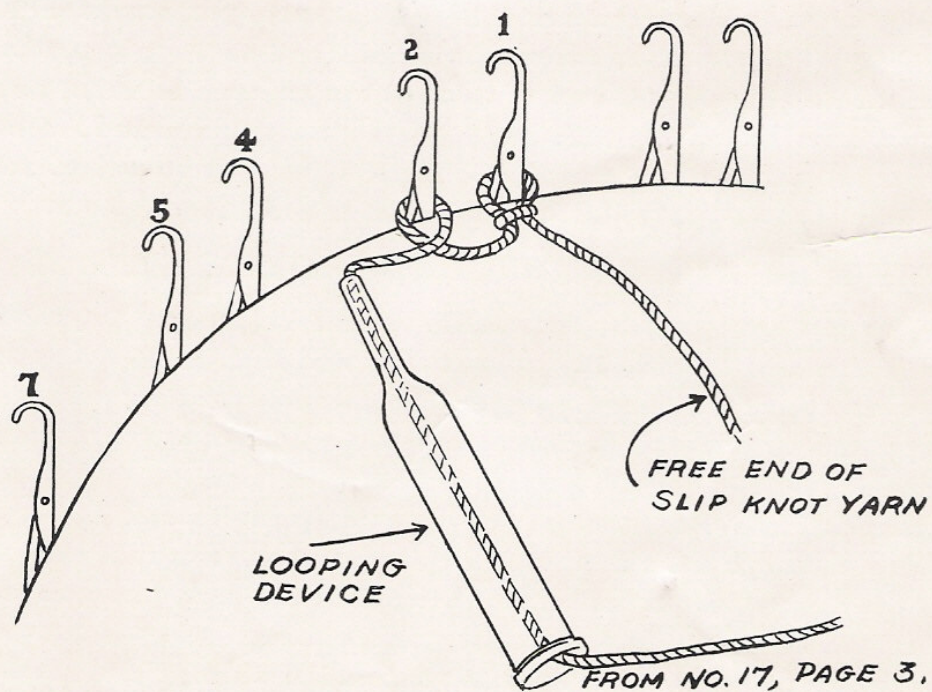
Please do not send in less than 2 $\frac{1}{2}$ pounds of socks at one time, because our yarn is wound on 2 $\frac{1}{2}$ -pound cones, which must be used for replacement of the yarn used in your socks.

ANOTHER METHOD

HOW TO START A SOCK OR STOCKING OR RIBBED CUFF

WITHOUT FIRST RAISING THE NEEDLES

Fig. 1



HOW TO MAKE BEAUTIFUL VAN DYKE TOP EDGES FOR SOCKS ON THE STEBER HIGH-SPEED KNITTING MACHINE

After the cotton parting yarn has been knit, the first requirement is to take out all of the cylinder needles which align with the dial needles.

It will be observed that after you have finished knitting the toe, and have knit about five rounds of wool yarn to be unraveled preparatory to closing the toe, you are ready to run in a section of light cotton parting yarn before beginning the cuff for the next sock. The thing to be avoided is the tendency of the loops to run down when you remove the cylinder needles and thus cause drop stitches in the toe of the sock just finished.

This can be avoided in two ways — you must either provide some way to stop the drop stitches from running down far enough to affect the toe or prevent the stitches from dropping at all.

The stitches or loops which are held by the needles which you wish to remove can be picked up from each needle when you remove it and transfer it to its neighbor, after which you could knit drop stitch with every third needle removed without any danger of having the wales disturbed below the place where you removed the needles. This, of course, takes a little time, and as there is another practical way in which it can be done at the expense of about one-half cent for each sock, estimating No. 10 cotton yarn at 75 cents per pound, we will now proceed to explain this way of doing, and you may use the way which is best suited to your requirements.

IT IS DONE IN THE MANNER NOW TO BE EXPLAINED

After you have knit the toe, and have knit with the white parting yarn, instead of knitting two rounds only and then transferring the loops as above explained, you simply continue knitting with the cotton yarn until it reaches enough below the bottom of the machine to enable you to attach the clamp entirely to the cotton fabric thus produced. You will note that after the clamp is attached, the drop stitches caused by the removal of cylinder needles cannot run below the clamp, and cannot affect the toe of the sock just finished. After you have fastened the clamp and attached the weight, you may withdraw the cylinder needles which align with the dial needles with which you are to knit, and let the stitches drop as they may.

HOW TO WIND THE NEEDLES FOR TOP CUFF SELVAGE IN ONE MINUTE WITHOUT LIFTING THEM

The needles will now appear as shown in Fig. 1, page 27.

1. Stop the machine, break the parting yarn which comes from cone, letting it hang about 12 inches down from the yarn carrier.

2. Tear off about 18 inches of wool yarn and put it on the table for future use.

3. Draw the end of the woollen yarn from hole 17, shown on page 3, instruction book, and either suck it or draw it through the small end of the looping device from the large end. The looping device is shown in Fig. 1, an ordinary glass medicine dropper.

4. Draw the slipknot loosely from the first needle ahead of the yarn carrier with reference to the direction in which the machine turns when knitting round and round, letting the free end of yarn hang loosely, as shown in Fig. 1.

5. Now wind, as shown in Fig. 1, until you reach the last needle which is high enough to wind upon. This needle will be behind the yarn carrier with reference to the direction in which it travels.

6. Draw the end of a piece of wool yarn, which you had previously put on the table (as told in instruction 2), through the hole in the yarn carrier, letting it hang loosely down from the outside of the yarn carrier and making certain that it will be taken by THE FIRST NEEDLE ON WHICH YOU TIED THE SLIPKNOT.

7. Every time the forward edge of the yarn carrier comes even with the front end of the hold down device, shown in Fig. 2, change the hold down device so that its rear end will align with the front end of the yarn carrier.

8. Continue thus until you have made one complete revolution. You will now have two strands of straight yarn spanning between each pair of needles and under the edge of the dial after it is attached to the machine.

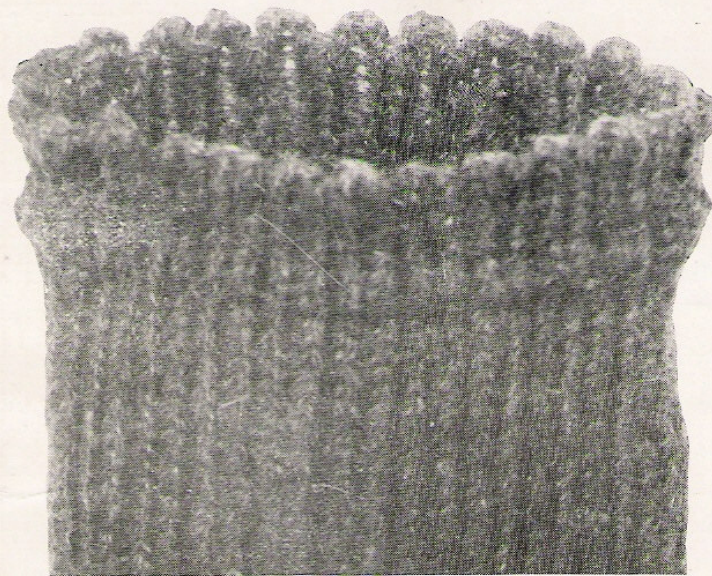
9. Next attach the ribber to the machine, pick up one of the dial needles. Hold it by its tail, having the butt and hook extending downward, and, after you have gently pushed the dial around with the other hand until you felt the dial lug strike against the internal cylinder lug, you pick up a dial needle, turning it over until its butt and hook extend downward and its tail is held in the fingers of the right hand). You now reach in between one of the pair of cylinder needles, and below the edge of the dial, and hook up two strands of yarn which span across the space. You now turn the dial needle over so its tail will project toward the dial and put it into its groove, being careful that the picked up strands do not slip inward over the end of the latch of the needle.

In another method you put the dial needles in their respective places, being certain that their latches are all open, and then reach in between each pair of cylinder needles with a hook and pull the two strands of wool yarn from under the edge of the dial and

deposit it within the hook of each dial needle before it has knit. It is well to do this each time you put in a dial needle.

10. After all of the dial needles have thus been put in, you will be ready to begin the cuff, as explained from line 34, page 23.

Fig. 3
Showing Van Dyke
Top Edge



HOW TO BOARD SOCKS

Wet sock thoroughly with the exception of the cuff. Draw on hosiery board with the ribs of the sock parallel to the edges of the board. Leave until sock is thoroughly dry. Board is sent to every knitter free.

STYLE C



SPECIAL INSTRUCTIONS FOR STANDARD HOME KNIT SOCK (Style C)

Make cuff as explained on page 22 and 23. When cuff is finished take out every alternate dial needle, transfer loop to cylinder needles and knit until the leg is even with the bottom of the crank when the handle is up. Stop with cam and yarn carrier at the front of the machine.

Starting on each side push up the needle between the two little marks and all other needles in the back half of machine. Turn handle slowly to the right until the last dial needle ahead of the needles pushed up is out. Then loosen thumb screw (22) and put it in the center position and tighten. Now turn handle until cam is under the back needles. Take out dial needles in the front part of machine putting loops from these on cylinder needles. Make heel as explained on page (11).

When heel is finished bring yarn carrier around to the front of machine, push down back needles, pull dial cap by thumb screw around to the front with the fingers, loosen thumb screw (22) push it out as far as it will go and tighten.

Knit until the foot is proper length. For an eleven inch sock the heel will come about even with the bottom end of crank (the weight being attached).

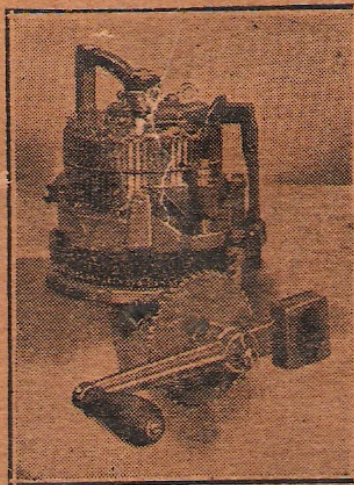
When the foot is knit stop with yarn carrier in front and remove dial needles at the back of machine putting loops from these on the cylinder needles, push up the back needles as for the heel. Knit around until cam is in the back, under the raised needles, take ribber from machine and knit toe as explained on page 13.

Instructions for Operating

THE STEBER

Family Knitting Machine

FIFTH EDITION



Price of Instruction Book by Mail, - - - .50

The Steber Machine Co.

Utica, N. Y., U. S. A.