

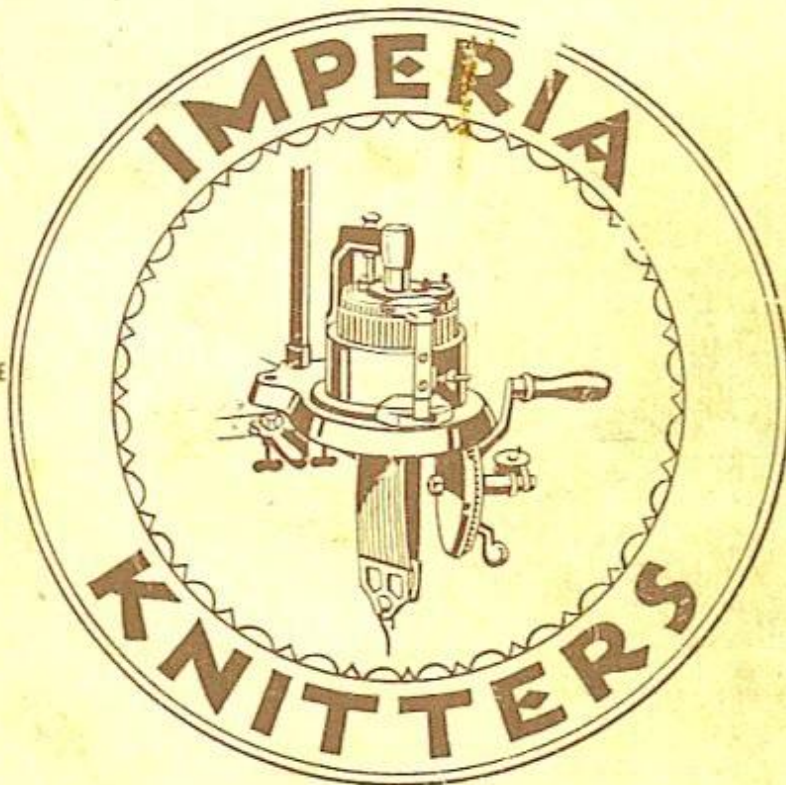


INSTRUCTIONS

for using the

Imperia

Circular Knitting Machine



Price 5/-

(One copy supplied free with every Machine Purchased).

THE
Imperia
HOSIERY MFG. CO. LTD.

Central Offices and Showrooms:

245, TOTTENHAM COURT ROAD, LONDON, W.1.
(Near Oxford Street)

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THE

Imperia



CIRCULAR KNITTING MACHINES

IMPORTANT

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



Imperia



FLAT KNITTING MACHINES

All sizes and types of Flat Knitting Machines suitable for Domestic or Factory use are stocked by us, full particulars and prices will gladly be sent on application. These Machines may be purchased by a small initial payment and the balance spread over a period of 6 or 12 months.

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THE Imperia



CIRCULAR KNITTING MACHINE.

INTRODUCTORY.

THIS Instruction Book has been compiled so that the beginner can easily master the IMPERIA CIRCULAR KNITTING MACHINE without personal instruction, but apart from the beginner, the skilled operator should also be able to derive considerable benefit, in regard to its operation.

In compiling this book the object at which we have aimed has been to make the instructions as plain as possible, so that they may be of the utmost assistance to every purchaser, and we hope, be the means of enlisting many more friends for the IMPERIA KNITTER.

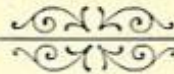
If upon receiving your machine any points are not clear, or any further information is required, WRITE FULLY TO OUR SERVICE DEPARTMENT—OUR EXPERTS ARE AT YOUR DISPOSAL.

We most strongly impress upon all beginners not to tamper with the machine or alter any of its adjustments, or to experiment with making any articles until you have carefully read the following instructions and have had sufficient practice as we advise, and have become quite familiar with the knitter.

THE IMPERIA IS SIMPLE TO WORK AND EASY TO LEARN so do not make it difficult for yourself by experimenting with the Machine until you have had a reasonable amount of practice.

PERSONAL TUITION.

Although it should be easy for the reader to become an expert Machine Knitter by carefully following the instructions contained in this book, personal tuition is undoubtedly helpful, and for those who can conveniently call at our tuition parlours (the addresses of which we give on page 3) they will find placed at their entire disposal, the services of our experts **FREE OF CHARGE**. We most cordially invite all our customers to visit as often as they wish, and have as much instruction as required. It is for you we have arranged this service, and we want you to take advantage of it.



POSTAL TUITION.

Our Free Service Bureau is entirely at the disposal of all our customers, and those who cannot conveniently call at our tuition parlours, and find that there is any point upon which they require further explanation or who require some further details or information, are cordially invited to write fully and as often as they wish, and every letter will receive the closest attention of our experts, who will gladly give their personal advice by letter.

If it is a question of advice you require regarding the selling of your goods or the prices you should charge or the materials you should use; or should it be particulars that you require for making any kind of garment, do not fail to write us. It does not matter what the problem is; our experts will be willing to assist you.

LOCAL INSTRUCTORS.

We have local Instructors and Instructresses in nearly all districts throughout the country, including Scotland, Wales, and most parts of Ireland, and if any should find it necessary or desirable to receive personal attention, our Service Department will gladly arrange for you to receive a visit from the nearest resident Instructor. This service is entirely free of charge except that the customer is expected to pay the fares incurred by the Instructor or Instructress.

Our Showrooms and Tuition Parlours are open to all Customers: Monday to Friday, from 9 a.m. to 6 p.m., and Saturday, from 9 a.m. to 1 p.m.

THE
Imperia
HOSIERY MFG. CO. LTD.

Central Offices and Showrooms:
245, TOTTENHAM COURT ROAD
(NEAR OXFORD STREET)
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Tuition Parlours:
245, Tottenham Court Road
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Hosiery Factory:
10-12, Phoenix Place,
London, W.C.1.

Machine Warehouse:
6, Morwell Street,
London, W.1.

Branch:
97, Grays Inn Road,
London, W.C.1.

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Instructions
for using the
Imperia
CIRCULAR KNITTING MACHINE.



Section 1.

WHEN RECEIVING THE MACHINE.

When the case containing the Machine is received by you, from the Railway Company or Carrier, observe its condition, and if apparently all right sign for same "**Unexamined.**"

If it appears to have been crushed by other goods or cases, or the wood is smashed, sign for same but be sure to write the word "**Damaged.**"

If upon unpacking the Machine you find that any parts have been broken or damaged, write immediately to our Service Department giving full details, and at the same time carefully repack the broken parts and return them **TO OUR MACHINE WAREHOUSE** (mentioning your name and address inside the parcel), and we will have new parts immediately sent to replace those returned to us. However, as every possible care has been taken with the packing, no trouble whatever should arise.

Section 2.

CORRECT WAY TO UNPACK THE MACHINE.

The lid which is screwed on, is the first part to be removed, when you have done this take out all loose Accessories, then remove the batten which holds the Machine in position, by taking out the Screws at the side of the case. Next, remove the partition which forms a compartment in which the Accessories are packed. After this take out the screws from the side of the case, which hold the shelf to which the Machine is clamped. You will then be able to remove the entire Machine together with the shelf. Then take out any other Accessories or parts which still remain in the case. Whilst removing the various pieces of wood from the case, be very careful to see that the needles in the Cylinders are not knocked or damaged in any way. Clean all parts of the Machine and then it will be ready for assembling.

Section 3.

LIST OF ACCESSORIES SUPPLIED.

Please see that you have a full Set of Accessories. The following is a List of the Accessories supplied with every Machine:—

No. 4....2 Bobbins.

Fig. A....One setter up.

No. 23....2 Sets Weights.

Oil can and oil bottle.

No. C....Bobbin Winder.

No. D....Swift and holder.

No. E....Work Hook.

Fig. F....Heel Hook.

Extra Needles.

Fig. H....Crescent needle raiser.

Fig. J....Screwdriver.

No. 19....Buckle.

With the Triplex Machine 2 Sets of Needles are given; one set of fine needles for the 108 Cylinder, and only one set of coarse needles for both the 84 and 72 Cylinders. Care should be taken not to mix these.

Illustrations of the Bobbins (Fig. 4) and the Sets of Weights (Fig. 23), and the Buckle (Fig. 19), will be found in the illustration of the Machine on Page 9. The other Accessories are illustrated in Section No. 7. "The Uses of the Accessories."

Section 4.

VERY IMPORTANT.

IT IS VERY IMPORTANT INDEED THAT CUSTOMERS SHOULD BE MOST CAREFUL TO READ THE FOLLOWING INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO WORK THE MACHINE OR TO ALTER ITS ADJUSTMENTS, OR TO HANDLE IT IN ANY WAY APART, OF COURSE, FROM TAKING IT OUT OF THE CASE AS INSTRUCTED ABOVE.

Unless a customer is already very familiar with Circular Knitting Machines some trouble or difficulty may arise, if there is any attempt whatever to experiment with the Machine or to handle the various levers in order to see how they work. Before despatching the Machine to you, our Mechanics carefully tested and adjusted it, so that we strongly advise that you only proceed to set up the Machine and operate same as directed in the instructions and in the order in which the instructions are set out. One rule which every beginner should carefully follow is:— Practice well before attempting the next operation. We again repeat the message we gave in the "INTRODUCTORY." The Imperia Knitter is simple to operate and easy to learn, so do not make it difficult for yourself by experimenting with the Machine or altering any of its adjustments until you have had a reasonable amount of practice.

If any of the parts should not be sufficiently clearly indicated it would be advisable for you to refer to the further illustration on Page 10. This gives a different view of the Machine.

Section 5.

HOW TO FIX UP THE MACHINE.

The first thing to do is to clamp the Machine to a table or bench, and then you should proceed to fix the various parts as shown in the illustration on Page 9 and Page 10. These illustrations should be sufficiently self-explanatory and should enable you to set the Machine up correctly without any further details.

You will notice that our Engineer has left a piece of knitting in the Machine as evidence that the Machine was thoroughly tested and that it worked satisfactorily before being sent out from the Factory. You will also notice that continuing from this piece of knitting there is a strand of yarn which has been threaded through what is known as the yarn guide. Be very careful to see that this thread is not broken, and that the position of the yarn guide holding this thread is not altered. If you break the thread it will mean that you will have to set the Machine up again before commencing to knit, and if you alter the position of the yarn guide you may cause some of the stitches to drop off the needles and possibly make it necessary for you to set the Machine up again before commencing to work.

Section 6.

NAMES OF PARTS OF THE MACHINE.

Now that you have got the Machine set up, before commencing to work it, you should make yourself familiar with the various parts and their names and their uses. To do this, study very carefully the illustrations of the Machine given on Page 9 and Page 10 together with your Machine, and observe the particular parts to which the various numbers point, and learn the names of the parts, and their uses.

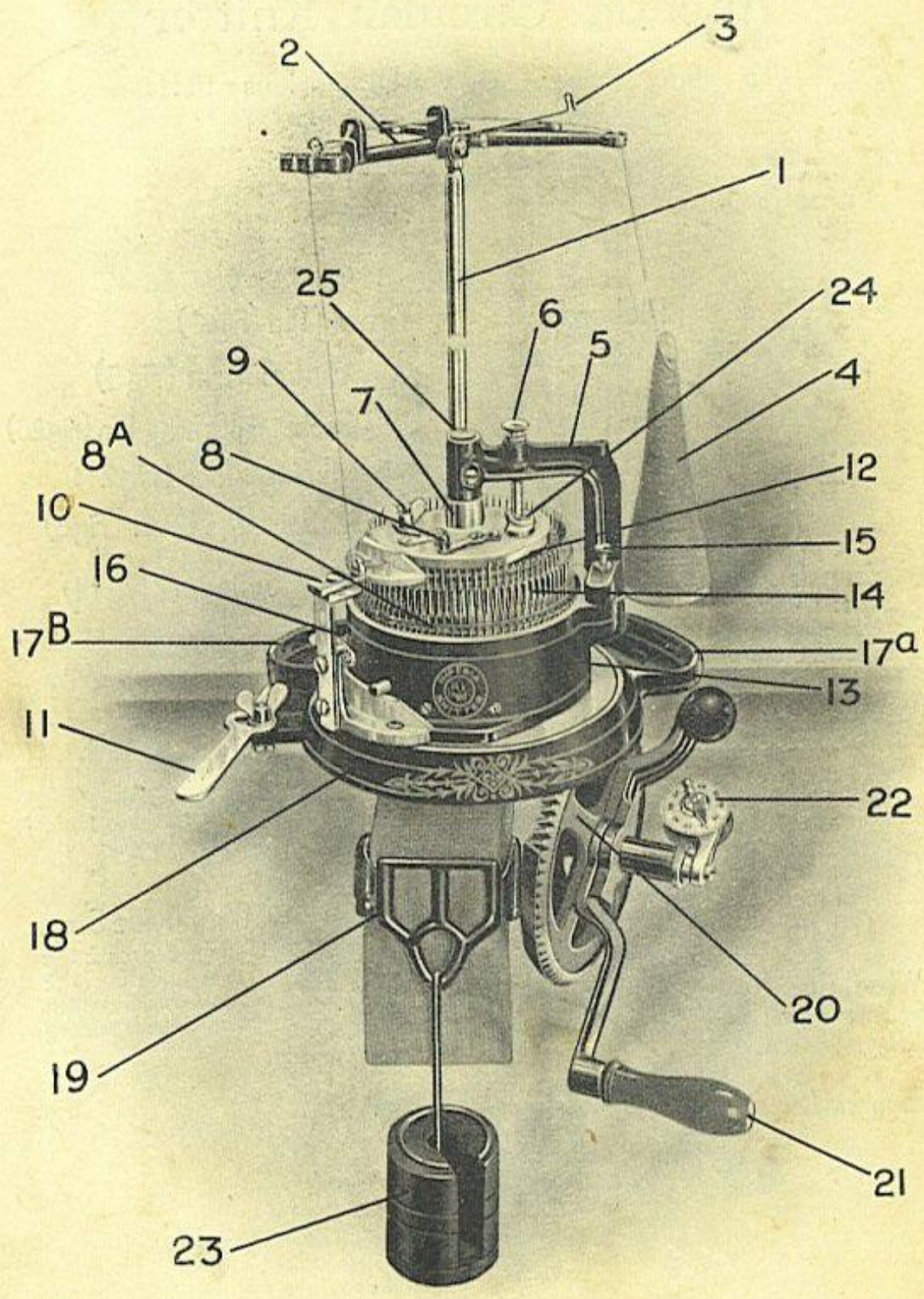
We have set out hereunder practically all the various parts of the Machine. the same numbers are used to indicate the same part in both illustrations. The following list is in numerical order:—

1. **Yarn Stand Rod.** This part is for carrying the Yarn Stand Top (Fig. 2) and should be screwed into the back of the Machine.
2. **Yarn Stand Top.** This part is for feeding the Yarn from the Bobbin to the Yarn Guide and should be screwed to the top of the Yarn Stand Rod.
3. **Heel Spring.** This is used for holding the Yarn tight when making the heel or toe, and prevents slack yarn when reversing the handle.
4. **Bobbin.** The Bobbins are for carrying whatever yarn you wish to use. Note this is how the Bobbin should be correctly wound to prevent yarn coming off in use.
5. **Ribber Arm.** This arm holds the ribbing attachment which makes the purl stitches. It fits in a socket in the Shell round the Cylinder when in use, and is placed in the socket in the back of the base of the Machine when not in use. Illustration of these two sockets is on Page 16.
6. **Driving Pin.** This pin when in position drives the tappet plate which in turn operates the ribbing needles. A more detailed illustration will be found on Page 20.
7. **Tappet Plate.** This is laid on to the face of the ribbing dial in which you will find the grooves for the ribbing needles. A further photograph of this part is on Page 22.
8. **Selvedge Lever.** This is for putting into action and out of action the ribber needles. This part is further illustrated on Page 22.
- 8a. **Clasp Band.** In the groove to which this number points you will find the spiral band with clasp which holds the needles into their grooves in the cylinder.
9. **Ribber Tension Pointer.** By loosening this wing nut you can alter the tension of the ribbing stitches. **IT IS ADVISABLE NOT TO ALTER THIS TENSION** until you are quite familiar with the Machine, as same has already been correctly set.
10. **Yarn Guide.** The yarn is threaded through this part, and as the handle is turned, it feeds the yarn into needles and so enables them to make their stitches.
11. **Ribber Dial Adjuster.** By moving this lever you can adjust the position of the ribbing dial which holds the ribbing needles. This is necessary in order to alter the position of the grooves of the ribber dial, sometimes it is necessary to have the grooves between those of the cylinder, other times it is necessary to have the grooves exactly over. The full use of this lever is described later.
12. **Ribbing Dial.** This is the plate (underneath the tappet plate No. 7), in which the grooves are for carrying the ribber needles. A better illustration is on Page 20.
13. **Cam Shell.** Small pieces of metal called cams are inside this shell and operate the needles in the cylinder when the shell revolves, upon the handle being turned.
14. **Cylinder.** This part has grooves in which the Cylinder or plain needles operate. Never allow the Cylinder to be loose. You will find two screws underneath holding the Cylinder to the base, these should always be screwed tight.

- 15. Screw and Lock Nut for adjusting the Ribber Arm.** This screw is always adjusted before leaving the factory, and should not be altered unless necessary. Its use is to raise or lower the ribbing dial so that the ribber needles as they come out of their grooves when they are in action clear the top of the Cylinder, but do not touch the Yarn Guide. Illustration showing position of the needles to the Yarn Guide is on Page 21.
- 16. Cylinder Tension Pointer and Screw.** On the Cam Shell (Fig. 13), you will find a pointer with a wing nut. This operates the tension of the Cylinder needles (plain knitting). To tighten the plain knitting raise this pointer upwards to No. 1; to loosen the knitting lower the pointer to No. 10. Before you are familiar with the Machine do not alter this adjustment.
- 17a. Needle Trays.** These are needle trays either side of the Machine, for the purpose of holding spare needles.
- 17b.**
- 18. Base of Machine.** Underneath which are the cogs which drive the Machine. Keep these well oiled.
- 19. Buckle.** This is for gripping the work and hanging the weights on, so as to hold down the stitches, so that they do not ride to the top of the needles and cause dropped stitches. Be sure to see that you fix work correctly in the buckle, otherwise it will not grip.
- 20. Driving Wheel.** The cogs on this wheel fit into the cogs underneath the base and so it drives the Machine when the handle is turned.
- 21. Machine Handle.** Always see that this Handle is turned to the right, or in other words upwards and away from you, never backwards, except when making heel and toe. If you push the handle backwards, dropped stitches are caused, unless you are making the heel or toe.
- 22. Counting Dial.** By putting the pointer at "O" you will be able to easily ascertain the number of rows of knitting which you have done at any one time.
- 23. Weights for holding down Work.** Two Sets are supplied, and they are in sections. It is not necessary to have all on at one time, only just sufficient to hold the work down.
- 24. Timing Plate.** This plate holds the driving pin (Fig. 16). It is a very important part indeed, as it regulates the time when the ribber needles come out and pick up the yarn to make their stitch. If this part is altered the needles will either operate too soon or too late, and consequently will not be able to pick up the yarn, and dropped stitches will occur. A better illustration appears on Pages 20 and 22.
- 25. Ribber Pin.** This pin is held into the Ribber Arm by a screw at the side, its purpose is for carrying the Ribber Dial and Tappet Plate. This part you will notice is illustrated again on Page 20.
- 26. Socket for Driving Pin.** Unless the Driving Pin (Fig. 6) is placed properly into this socket the Ribbing Needles will not operate correctly. See Page 20 for a better illustration of this socket.
(Shown on Page 10).

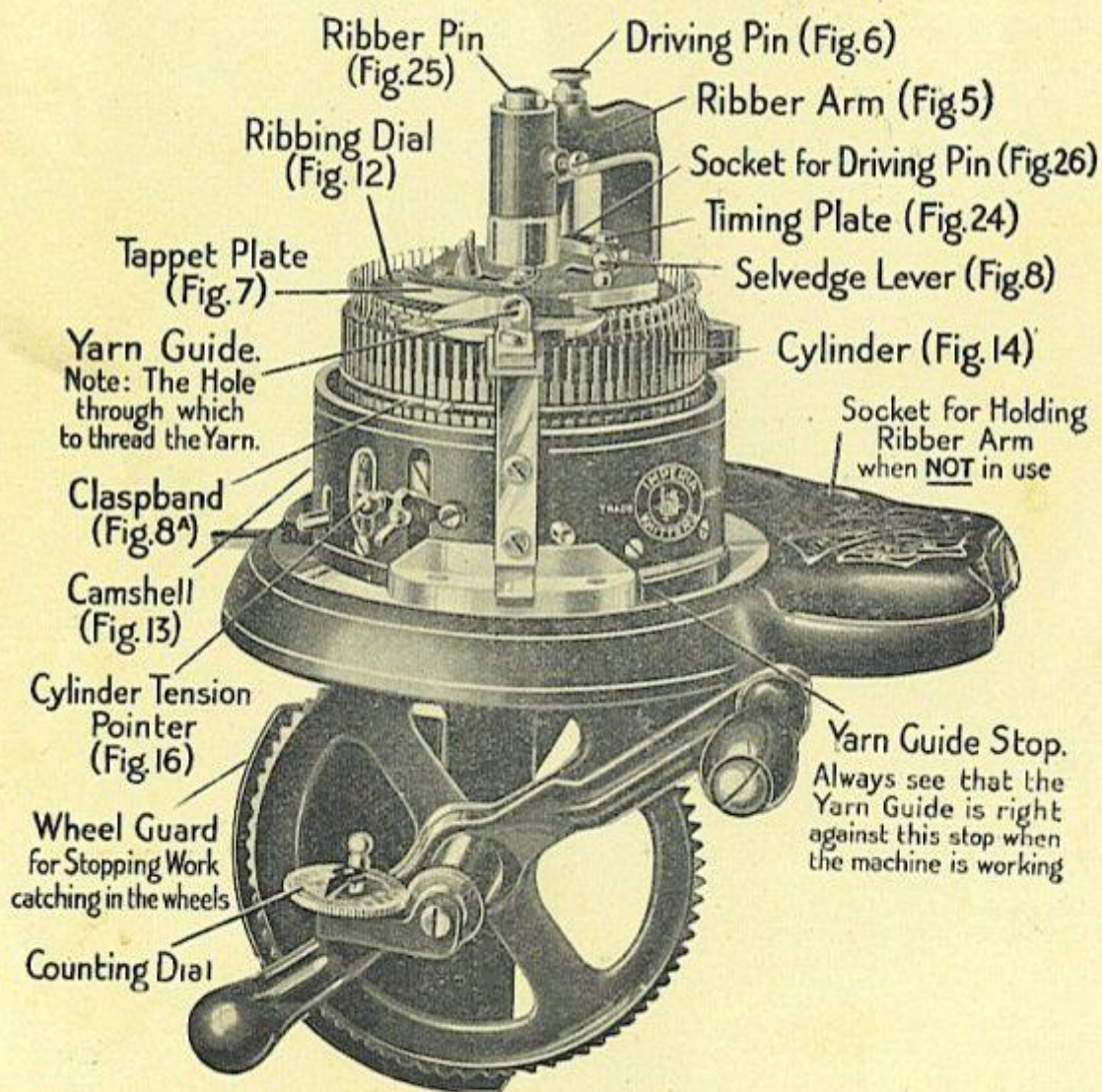
THE Imperia Circular Knitter

READY FOR USE.



A further illustration
of the
Imperia Circular Knitter

To show more clearly the Various Parts
described on pages 7 and 8.



Section 7.

THE USES OF THE ACCESSORIES.

It is advisable for you now to study the following illustrations of the Accessories and to become familiar with their respective uses. We have already given you a list of the Accessories which should be packed with your Machine, and we illustrate hereunder those Accessories which have not already been shown in the illustration of the Machine, and those which are not obvious, such as the Oil Can, Screw Driver, etc.

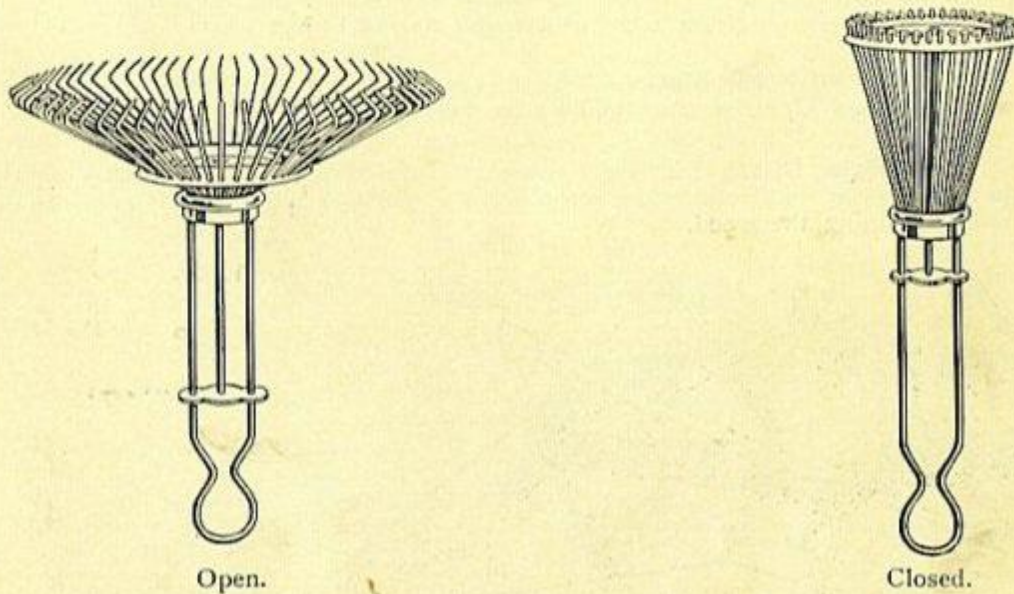
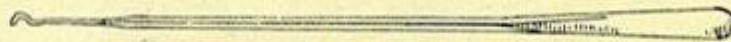
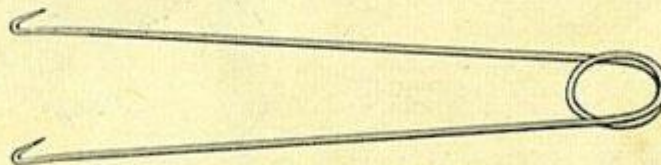


Fig. A. Setter Up.—The above illustrations show the setter up closed and open, this tool is used for setting up new work on the Machine when it is empty. Its use is fully explained in Section II: "How to set up the Machine when empty."



WORK HOOK

E. Work Hook.—This tool has many uses, one being to assist in unclasping the spiral band, another being to pick up drop stitches. Many workers prefer to use this tool for raising needles.



"H" HEEL HOOK.

F. Heel Hook.—This tool is used for the purpose of holding down the work while the heel is being made, a set of weights being placed into the hole at the bottom, this prevents stitches rising to the top of needles and causing them to drop. Many workers, however, prefer to hold the work down with their left hand.

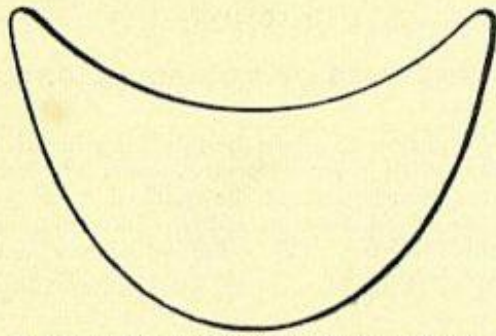
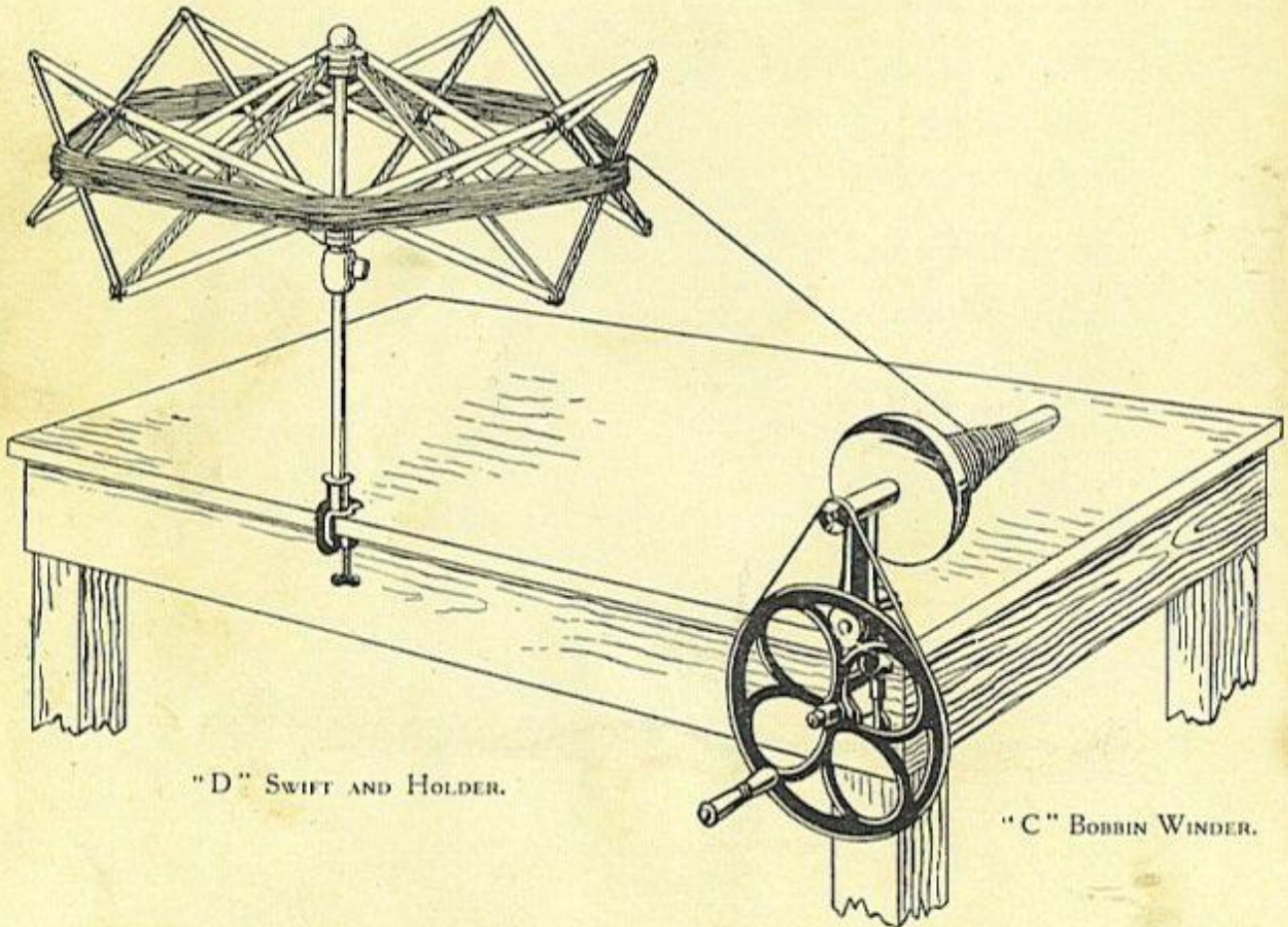


ILLUSTRATION OF CRESCENT NEEDLE RAISER.

H. Crescent Needle Raiser.—This tool is used for raising the needles in the back half of the Cylinder when making the heel or toe.

Small Metal Discs. Four small discs are supplied for placing underneath the clamp screws when clamping the machine to a bench or table. This prevents the screws damaging the wood.



"D" SWIFT AND HOLDER.

"C" BOBBIN WINDER.

D. Swift and its Holder.—As you will see from the above illustration, the use of the swift is to hold the hank of yarn while it is being wound on to the Bobbin. The above illustration should be quite self-explanatory in the use of both these Accessories.

C. Bobbin Winder.—As the yarn is usually supplied in hanks, it consequently has to be wound on to Bobbins. This accessory as you will readily see from the above illustration, enables the yarn to be spun on to the Bobbin quite quickly.

Section 8.

HOW TO WIND YARN ON BOBBIN.

Having become familiar with the various parts of the Machine and Accessories, and their various uses, a supply of yarn ready for use must be wound on to Bobbin before commencing to operate the Machine. This should be done exactly as shown in the previous illustration. It is necessary, however, to see that the Bobbins are wound correctly.

The yarn should always be wound on to the Bobbin in the shape of a cone, being wide at the bottom and tapering off at the top. Unless this is done correctly, and the yarn is wound reasonably tight on to the Bobbin, difficulty will be experienced by the yarn slipping off the Bobbin instead of gradually unwinding itself.

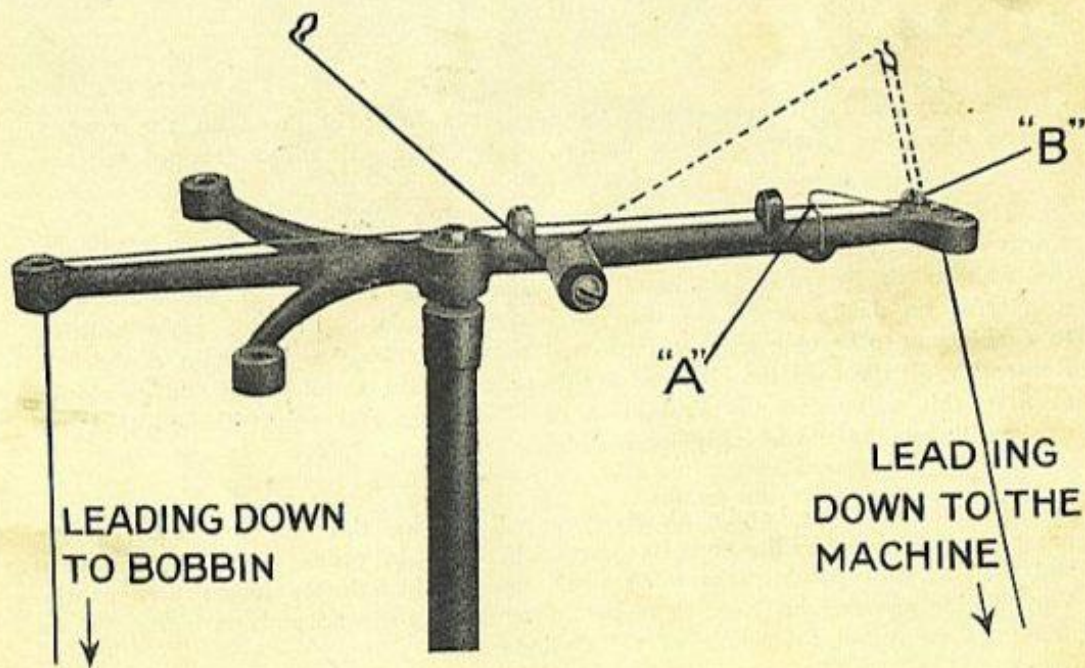
When winding the yarn on to the Bobbin, we advise passing the yarn through piece of paraffin wax or wax candle, this should be held in the left hand, which should guide the yarn to its proper place on the Bobbin. The practice of waxing yarn enables it to be worked far more easily.

Section 9.

THREADING THE MACHINE.

Another operation necessary before commencing to work the Machine is to thread the yarn from the Bobbin through the Yarn Stand Top, and tie same on to the end which has been left through the Yarn Guide. It is necessary to see that you always put the yarn underneath the Yarn Lock which is Fig. A. in the following illustration, and then pass it through the eye of same, which is Fig. B. in the illustration on page 14. This illustration shows the correct method of threading the yarn. It also shows the correct method of using the Heel Spring, the use of this, however, will be explained in a later Section No. 13 on "How to make the Heel."

If the yarn should have become unthreaded from the Yarn Guide, it will be necessary to set the Machine up afresh. How to do this is explained in Section No. 11: "How to set up the Machine when empty." If, however, you have been able to tie on the yarn from the Bobbin to the piece of yarn which is threaded through the yarn guide, you will then be ready to commence plain knitting.

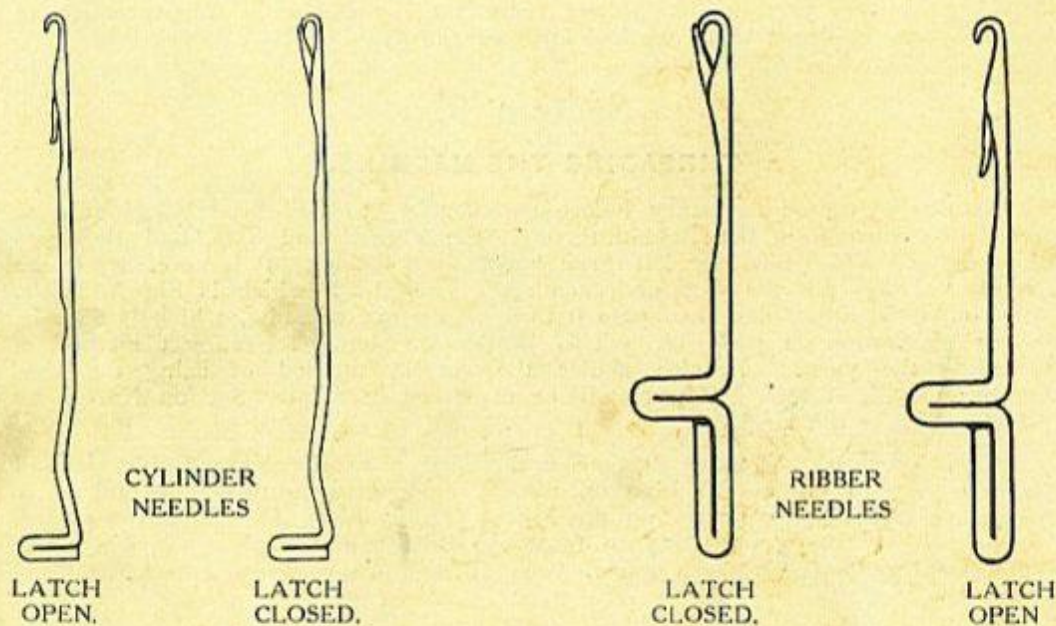


Section 10.

COMMENCING PLAIN KNITTING.

Before commencing plain knitting see that the ribber attachment is taken out of the Machine and is placed in the socket provided at the back of the base. It is unnecessary to have this on the Machine when doing plain knitting.

Be very careful to see that all the latches of the needles are open. The following is an illustration of a needle latch open and closed.



Be very careful to see that all the stitches are held down on the needles. If you allow the stitches to ride up to the top, you will cause dropped stitches.

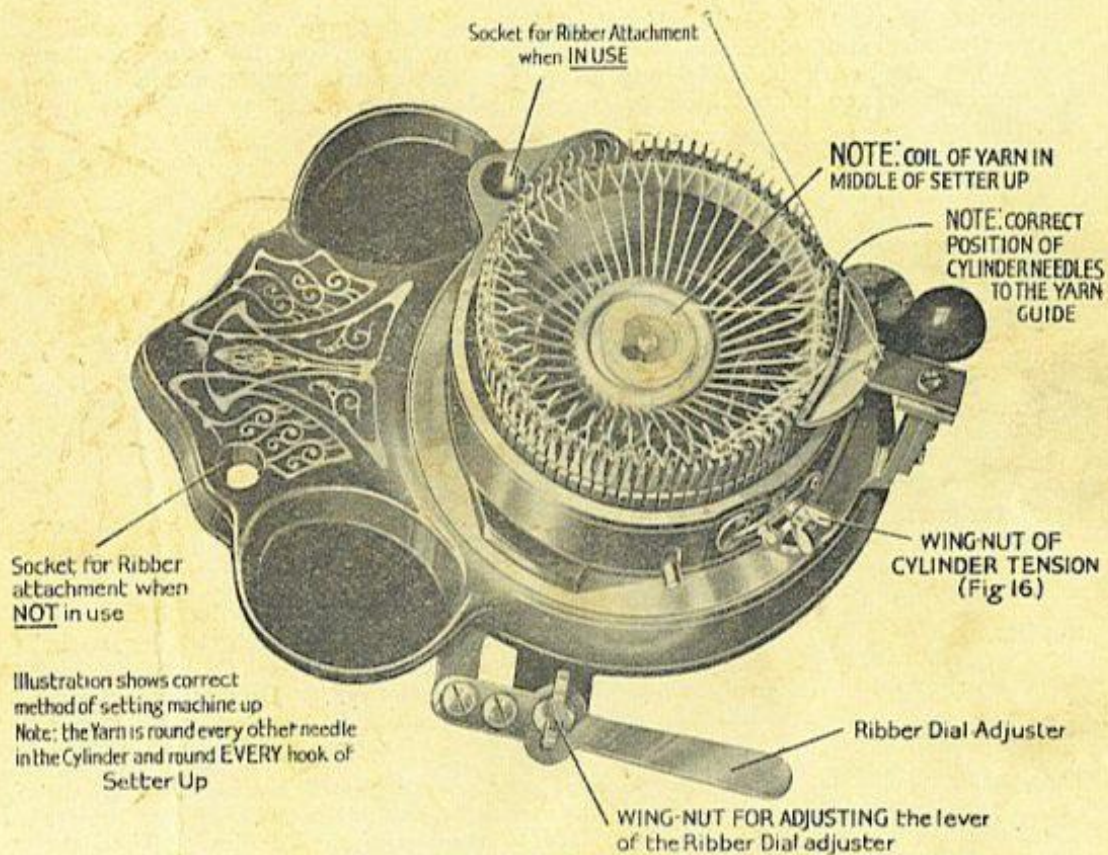
The handle should then be slowly turned to the right, or, in other words, upwards and away from you. As you do this see that the work is held down either by the weights or by your left hand, you should then be able to see with what wonderful regularity and ease the stitches are made. Practice plain knitting to enable you to become more accustomed to the Machine and to gain confidence. Remember all the time that it is advisable to watch the small points and go slowly at first, this will mean an elimination of all trouble and you will find that the work will become absorbingly interesting.

If you turn the handle slowly you will notice that as the Yarn Guide passes round the Needles on its approach, rise, in order to catch the yarn and then they drop while the latch rises, and so the stitches form; then as the Yarn Guide passes, the Needles come up again to their normal position, and so this goes on round the whole of the Cylinder.

Section 11.

HOW TO SET UP THE MACHINE WHEN EMPTY.

Supposing the yarn has become unthreaded and you are unable to commence plain knitting as instructed in the previous paragraph, or that the Machine is empty and you wish to set up again; the following illustration should be studied and the instructions on page 16 should be carefully followed.



The Setter Up (Fig. A.) among the accessories must be opened, and placed inside the Cylinder from underneath. About four or five feet of yarn should be pulled through the yarn guide and the end of the yarn nearest the guide should be placed round the hook of the nearest needle, and then placed round the nearest hook in the Setter Up. It should then be placed round the hook of every other needle, and placed round every hook of the Setter Up. The number of hooks on the Setter Up is 42, and the number of needles in the Cylinder is 84, so that you will readily see that there will be one hook in the Setter Up for every other

needle in the Cylinder. When you have done this, the end of the yarn should be placed in the middle of the Setter Up as shown in illustration. The Setter Up should then be held firmly or a Set of Weights hooked on, and after seeing that all the latches of the Needles are open, turn the handle slowly and you will find that every needle in its turn makes a stitch.

If any of the needles have not made a stitch, it will probably be because the latch was not down, so therefore, always see that the latches are open, and that the needles have not been bent. For the first few rows, turn handle slowly, be careful not to break the loops of yarn which hold on to the Setter Up. You can then proceed with plain knitting as instructed in the previous chapter.

It is always advisable when commencing to set the Machine up, to use either waste wool or cotton, and not to use good wool until you intend starting the garment which you wish to make.

Another method of Setting Up the Machine is to have every other needle in the Cylinder, and after you have commenced working, put the other needles in. When the work is sufficiently long, you can attach Buckle and weights. We now advise you to continue practising plain knitting, and to memorise the following:—

Section 12.

POINTS OF GENERAL INFORMATION.

- New Machines.** (a) Machines when new always work somewhat stiffly, but after two or three days use, and frequent oiling, the Machine should work quite freely.
- Needles.** (b) If a needle is not making a stitch, look to the latch. This may be bent or stiff. If stiff—oil, if bent—either straighten with fingers or discard. Do not spoil good work for the sake of a damaged needle.
- Tensions.** (c) Each Machine is correctly adjusted before leaving the factory, and the tensions should not be altered unless the knitting rises to the top of the needles. Then the tension is too tight, therefore lower the pointer to loosen the Cylinder Tension. If the Knitting is too loose, raise the Cylinder Tension Pointer, which will tighten the stitches. The Ribber Tension, Fig. 9, hardly ever needs altering.
- Yarn Guide.** (d) The yarn guide should operate so that the Cylinder needles rise quite close to it but do not touch. This, however, should not require alteration. Illustration for this will be found on page 21.
- Oiling.** (h) From time to time the Machine may probably get clogged with fluff from the yarn used. Clean the Machine thoroughly with paraffin frequently, and oil all parts where friction occurs.

Dropped Stitches. (j) To pick up a dropped stitch it is necessary to take the weights off the work, and lift the work to the top of the needles. The loop of the dropped stitch should then be picked up either with a work hook or a spare cylinder needle, and placed on to the hook of the needle from which it has dropped off. If you find that the stitch has dropped off some time previously, and a ladder has formed in the knitting, it is not advisable to attempt to pick the stitch up, as it can be picked up when the work is taken from the Machine.

In the case of ribbed knitting it will be necessary to take out the needles from the grooves in the dial, and to leave the needles hanging outside on their stitches. The Ribber attachment can then be taken off. This, however, will be found rather a tedious job. The easiest method is to see that the needle forms its stitch properly when the yarn guide next comes round to it, and then when the article is finished the dropped stitch can be picked up by hand.

Tying of Knots. (k) When tying yarn, do so with as small a knot as possible. A reef knot, or sailor's knot is the best. Do not cut the ends off. These work in and are not seen or noticed in the finished work. Turn handle slowly when a knot is passing through the Machine.

Changing from one Cylinder to Another. (l) Take the Ribber attachment off the Machine, see that the needles are out of the Cylinder. Unloosen the two screws underneath which hold the cylinder in the Machine, the Cylinder may then be removed and the new one replaced, and the screws tightened again.

Changing from one Dial to Another. (m) The Dials are changed by loosening the screw in the ribber arm, so that the pin can be taken out. This will allow the tappet plate and the dial to be taken off the pin, a new dial can then be placed on the pin, and the tappet plate placed on top, and pin replaced in the ribber arm. Be careful to see that there is not too much play left between the dial and the tappet plate, at the same time you must be able to revolve the tappet plate quite easily with the finger.

What to do when working for the Company. (n) IF YOU WISH TO WORK FOR THE COMPANY, OBTAIN A DOCKET SETTING OUT THE DETAILS OF THE GOODS REQUIRED BY US. THEN SUBMIT A SAMPLE, AND IF IT IS PASSED AS O.K., YOU CAN THEN PROCEED TO KNIT ALL THE WOOL YOU HAVE, UP TO THE STANDARD OF THE SAMPLE. THEN FORWARD THEM TO OUR **HOSIERY DEPT.** USE IMPERIA HOSIERY CANVAS BAGS FOR SENDING YOUR GOODS. IT WILL SAVE WRAPPING, AND LOSS IN TRANSIT. DO NOT PRESS HOSIERY WHICH YOU SEND IN TO THE COMPANY. ALWAYS OBTAIN A WORK DOCKET.

Yarns to Use. (o) ALWAYS USE THE CORRECT YARN, NEVER RISK DISAPPOINTMENT BY USING OTHER THAN PROPER MACHINE YARNS. WE SUPPLY A FULL RANGE OF THICKNESSES AND COLOURS OF YARNS BOTH WOOL, SILK AND COTTON, AT PRICES MUCH LESS THAN RETAIL. FULL SET OF SAMPLES AND PRICES WILL GLADLY BE SENT ON RECEIPT OF P.C. AN ORDER BY POST WILL BE SENT PER RETURN. WE GIVE A PROMPT SERVICE.

Section 13.

HOW TO MAKE THE HEEL.

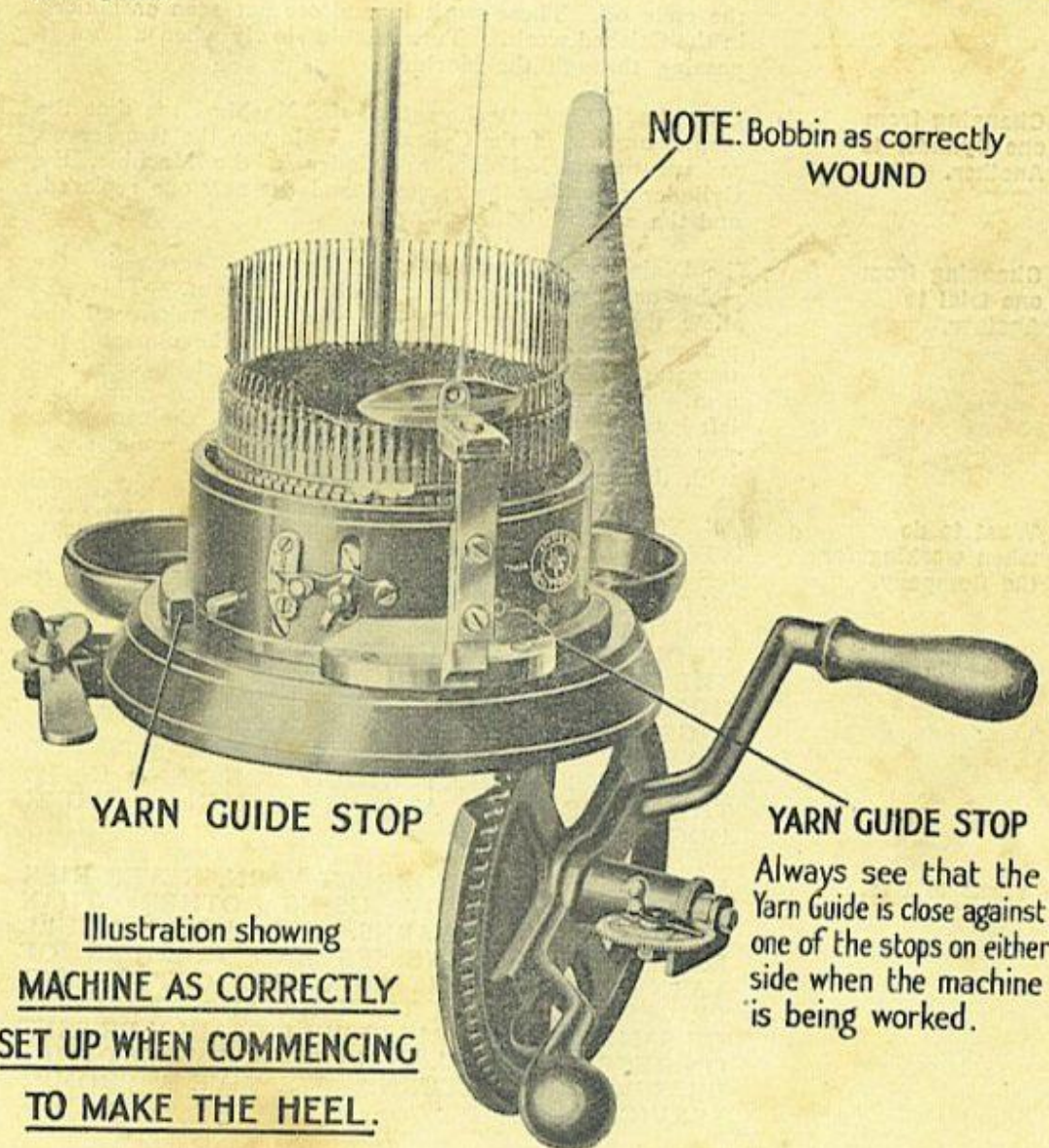
Having become familiar with plain knitting, and having memorised the points of general information given in the previous paragraph, you should now commence making the heel.

The first thing to do is to bring the heel spring forward as shown in the illustration on page 14. Then take the yarn from in front of the eye of the Yarn Lock (Fig. B. on page 14) and place it in the loop of the heel spring. The Yarn must be taken from the front, otherwise the heel spring will go back to its original position, taking with it the yarn from the Bobbin, and consequently will not be able to serve its purpose of taking up any slack yarn whilst making the heel.

Having satisfied yourself that the heel spring has been correctly threaded, stop the handle of the Machine so that the yarn guide is in front, as shown in the illustration. Then raise all the needles in the back half of the cylinder until the foot of the needle comes into contact with the clasp band.

You will find that two of the sections dividing the needle grooves have been filed down and have been enamelled red. These two sections are known as the half-way marks. It is all the needles which are behind these two marks which should be raised.

The following illustration shows the proper position of the needles and the yarn guide:—



NOTE: Bobbin as correctly
WOUND

YARN GUIDE STOP

YARN GUIDE STOP

Always see that the
Yarn Guide is close against
one of the stops on either
side when the machine
is being worked.

Illustration showing
MACHINE AS CORRECTLY
SET UP WHEN COMMENCING
TO MAKE THE HEEL.

After you have done this turn the handle forward, stopping the yarn guide at the back of the machine, then raise the first needle on the right-hand side. Then bring the handle of the Machine backwards so that the yarn guide is brought round to the back of the Machine again, then raise the first needle on the left-hand side, push the handle forward again until the yarn guide is at the back of the Machine, then raise the next needle on the right-hand side, take the handle back, raise the next needle on the left-hand side, and carry on in this manner until you have only 16 needles left down in action. This has then completed the first half of the heel.

While you have been doing this you will doubtless have observed the necessity for placing the yarn in the heel spring correctly. If this was not done, loops would be formed at either side and dropped stitches would probably occur.

Second Half of Heel. The yarn guide should be at the back of the Machine, and the first needle on the right hand side should be pushed down into action, then bring the handle back again and push down the first needle on the left hand side, then bring the handle back again and continue this process until you have only one needle on the left hand side and one needle on the right hand side, up out of action in front of the half-way marks. Then press down into action the first needle in front of the half-way mark and the first needle behind the half-way mark on the right hand side, put the yarn behind both needles, raise up out of action the needle behind the half-way mark, turn handle to the back of the Machine, then do exactly the same thing with the two needles in front and behind the half-way mark on the left hand side of the Machine.

The object of putting down the first needle at the back of the half-way mark and putting the yarn round, and then raising it, is to prevent small holes appearing in the corners of the heel or toe.

EVERY TIME A NEEDLE IS PRESSED DOWN INTO ACTION WHILE MAKING THE SECOND HALF OF HEEL, SEE THAT THE LATCH OF THE NEEDLE IS OPEN AND THAT THE YARN IS PUT BEHIND THE NEEDLE. To do this quickly, the work hook should be employed to lift the yarn behind.

This has then completed the second half of the heel, therefore push all the needles in the back half down into action again and then you can carry on with the plain knitting, the heel having been entirely finished.

It will be very necessary to see that while you are making the heel, that the heel hook has sufficient weights attached; or that you hold the heel down with your left hand. If this is not done, the work will rise to the top of the needles and cause dropped stitches.

See that the yarn guide is in front when the needles in back half of the cylinder are pushed down into action.

When making the heel on a 72 needle cylinder, 10 needles should be left down instead of 16.

When using the 108 needle cylinder, 20 needles should be left down, instead of 16.

Before commencing to turn the handle after having completed the heel, be very careful to see that the latches of all the needles in the back part of the cylinder are open.

Section 14.

HOW TO KNIT THE TOE.

This is knitted in exactly the same way as the heel, so that we now advise you to practice well, making both heels and toes.

Section 15.

SPLICING HEEL AND TOE.

Splicing is necessary when making hosiery for the Company, also you will no doubt appreciate that having a double thread in the heel and toe, adds to the value of your hosiery, and it is appreciated both by buyers and wearers, and thus it will help you to secure orders.

The Splicing Yarn is a thin single twist which you pass through one of the three eyelets of the Yarn Stand Top, and tie on to the ordinary yarn before commencing to knit the heel or toe. You then proceed in the ordinary way.

Break off the Splicing Yarn when the heel is finished and repeat the same method as above when you are about to knit the toe. You will remember that the heel spring is used when knitting heel and toe; put the Splicing Yarn through this also.

Section 16.

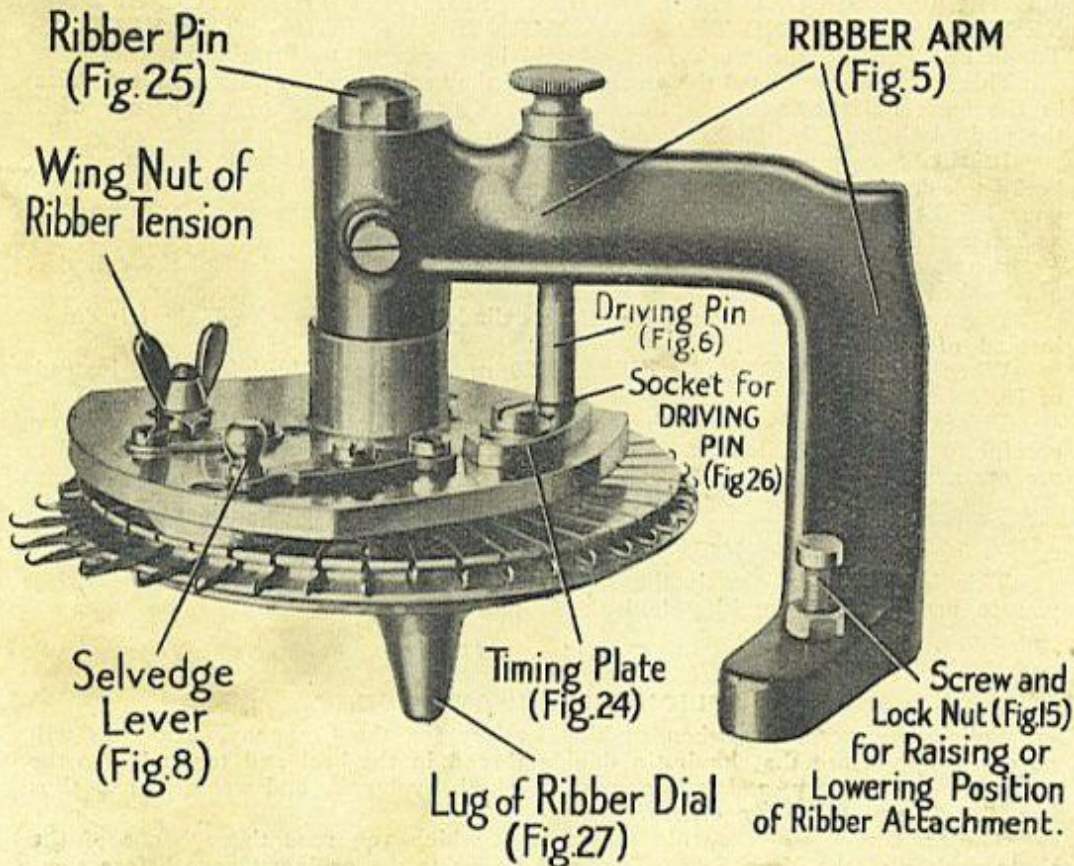
RIBBED KNITTING.

Ribbed stitches are the equivalent to purl stitches in hand knitting. Ribbed knitting should not be attempted until you have become thoroughly accustomed to plain knitting, and have become familiar with all the points necessary to be observed such as: Seeing that the latches of the needles are always down, and that the yarn is always in heel spring when making heel or toe; that the tension is correct; that the work does not ride to the top of the needles; and that you know how to pick up dropped stitches. It is advisable to be quite confident with the Machine in regard to plain knitting before commencing to use the ribbing attachment.

When you are satisfied that you are ready to commence with Ribbing, set up the Machine for plain knitting with only 42 needles in the cylinder, every other groove being empty, then knit a length of plain knitting sufficiently long to attach the buckle and weights.

Then take the complete ribber attachment, as shown in the following illustration, but without the needles in the grooves, and place this in its socket in the Cam Shell. See that it is as far down in the socket as it is possible to go.

Note from the following illustration the correct position of the Selvedge Lever (Fig. 8), this should be right out. See that the Driving Pin (Fig. 6) is in its socket (Fig. 26). Do not alter the Timing Plate No. 24. For further illustration of Selvedge Lever see Tappet Plates on Page 22.



When you have done this, turn the dial round so that the lug under Ribber Dial (Fig. 27) is firmly resting against the Ribber Post inside the Cylinder. (The following diagram is an illustration of the Ribber Post).

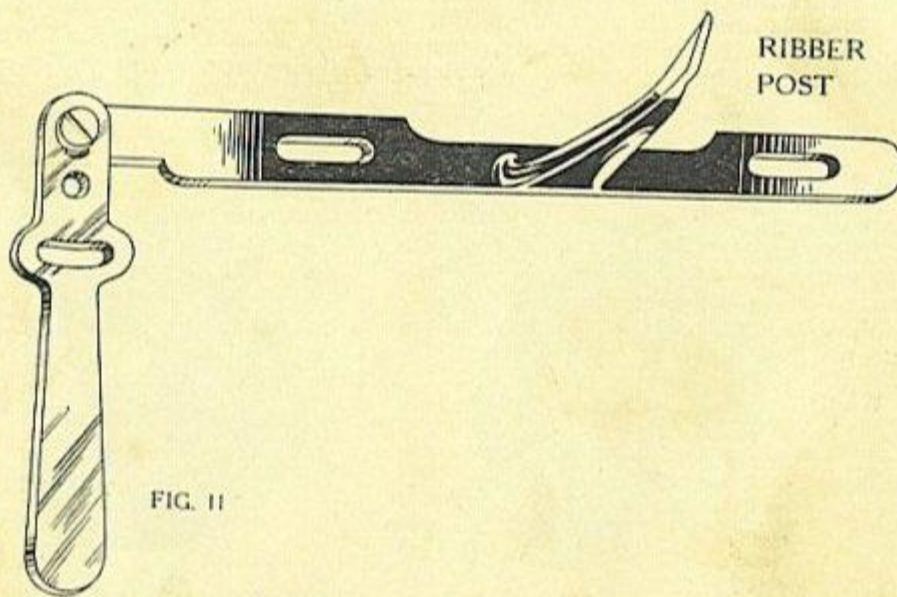
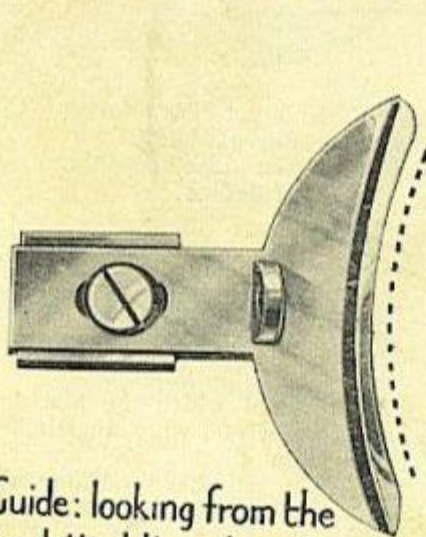


FIG. 11

Then adjust the Ribbing Dial with the Ribber Dial Adjuster, No. 11 on above illustration, until the grooves in the ribbing dial are exactly over the empty cylinder grooves. See that the wing nut of the Ribber Dial Adjuster is fastened so that the Dial cannot alter its position when being worked.

You then commence at the left-hand side of the Machine, and insert a Ribber needle into every groove of the Ribbing Dial. See that the latch of the needle is open, otherwise you will get a dropped stitch. As the needles are placed into the grooves, the handle must be turned round slowly in order to move the tappet plate so as to allow the needles to be placed in the grooves. Never attempt to force a ribber needle into its groove, it must slide in quite easily. See that the ribber needles are as far back in the groove as they will go, if this is not done they will jam in the tappet plate.

It is important to see that the Ribber Needles can slide out of their groove about one eighth of an inch above the top of the cylinder. Also that they do not touch the bottom of the yarn guide.



Yarn Guide: looking from the top. The dotted line shows how far the Cylinder Needles should be away from the Yarn Guide.

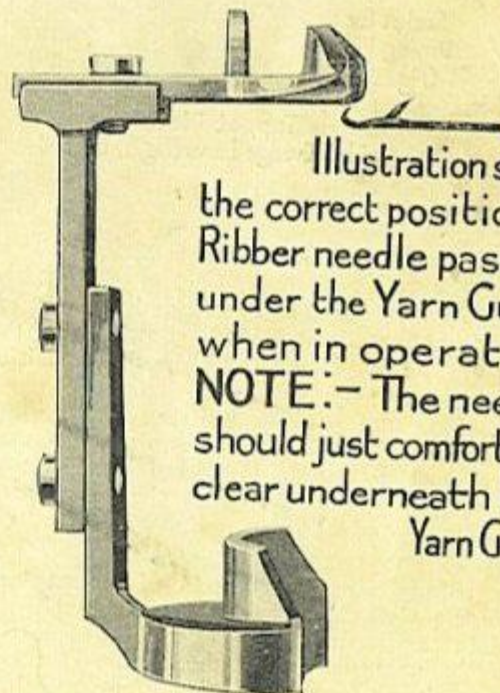
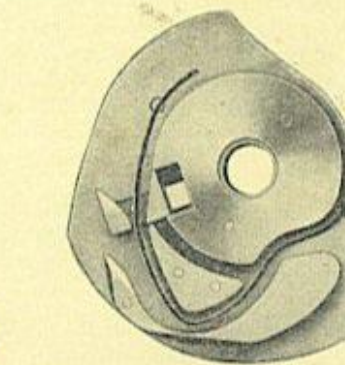
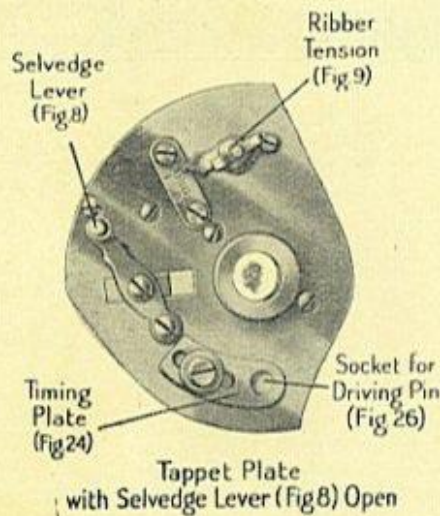


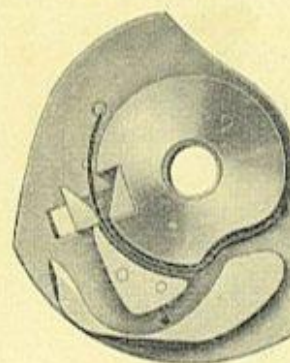
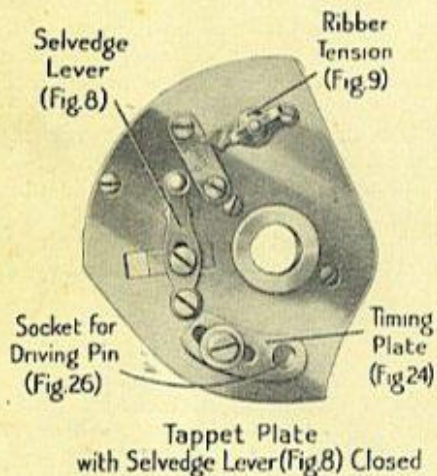
Illustration shows the correct position of Ribber needle passing under the Yarn Guide when in operation. **NOTE:**— The needle should just comfortably clear underneath the Yarn Guide

When this has been done and a needle has been placed into every groove of the ribber you may commence knitting.

This knitting is one rib stitch and one plain stitch, and is known as 1 and 1 rib. This is always the type of knitting which is used for the top or the welt of a sock. We advise you to continue this type of rib knitting until you have become quite familiar with the manner in which the ribbing attachment works.



Underneath Tappet Plate, showing position of Cams when Selvedge Lever is open. The Black Line shows the course of the Feet of the Ribber Needles.



Underneath the Tappet Plate, showing position of Cams when Selvedge Lever is Closed. The Black Line shows the course of the Needles.

Always see that the Selvedge Lever (Fig. 8) is pulled out as far as it will go. The above illustrations show when the Selvedge Lever is open and closed; also you will notice the respective positions of the Cams.

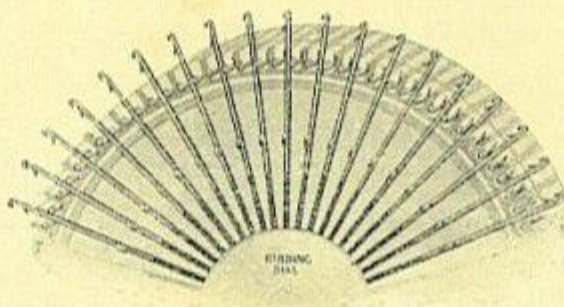
One and one rib knitting is not the only rib knitting of which the Machine is capable, but it is the simplest. Other variations consist of two plain stitches and one rib stitch (2 and 1 rib); another is three plain stitches and one rib stitch (3 and 1 rib); further examples are four plain stitches and one rib stitch (4 and 1 rib); and five plain stitches and one rib stitch (5 and 1 rib).

Many other variations of ribbed knitting can be done, particularly on 108 Needle Cylinder when many fancy ribs, such as nine plain and one rib and one plain, can be incorporated with one another, but once you have learned the principle of the arrangement of the needles for ribbed knitting, it is a very simple matter to work out for oneself the different variations and positions of the needles. Below we give particulars of the arrangements of the needles up to five and one rib.

Section 17.

TWO AND ONE RIB.

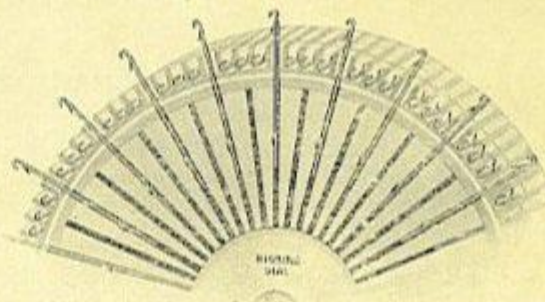
For two and one rib every needle in the cylinder should be operating. Also every needle in the Ribbing Dial should be operating. THE GROOVES OF THE RIBBING DIALS SHOULD BE ADJUSTED SO THAT THE RIBBING NEEDLES OPERATE BETWEEN THE CYLINDER NEEDLES. The Diagram illustrates the position of the needles.



Section 18.

THREE AND ONE RIB.

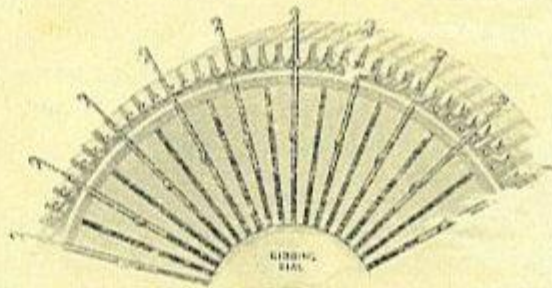
To obtain three plain and one rib stitch, the needles must be arranged in the following manner: every fourth groove in the cylinder should be empty and a ribbing needle should be in every other groove of the Ribbing Dial. THE GROOVES OF THE RIBBING DIAL CONTAINING THE NEEDLES SHOULD BE ADJUSTED SO THAT THEY ARE EXACTLY OVER THE EMPTY GROOVES IN THE CYLINDER. The diagram illustrates the position of the needles.



Section 19.

FOUR AND ONE RIB.

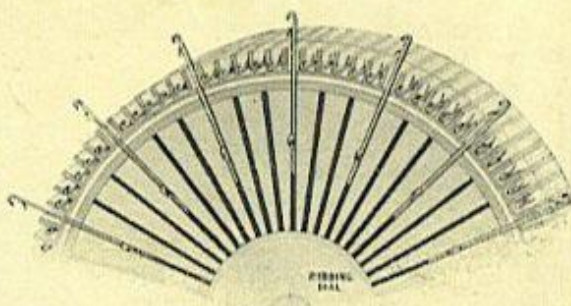
The arrangement of the needles should be as follows:—Every needle should be in the cylinder, and a needle in every other groove of the ribbing dial. ADJUST THE DIAL SO THAT THE GROOVES CONTAINING THE NEEDLES OPERATE BETWEEN THE CYLINDER NEEDLES. The diagram illustrates the position of the needles.



Section 20.

FIVE AND ONE RIB.

The arrangement of the needles should be as follows:—Every sixth needle in the cylinder should be empty, and a ribbing needle should be in every third groove of the ribbing dial. ADJUST THE DIAL SO THAT THE GROOVE CONTAINING THE RIBBING NEEDLE OPERATES OVER THE EMPTY GROOVE OF THE CYLINDER. The diagram illustrates the position of the needles.



We strongly advise that you now practice not only plain knitting and the making of heels and toes, but the various types of rib knitting, as per the instructions given in previous paragraphs. This practice will not only make you more confident in handling the Machine, but will also be extremely conducive to speed when you seriously commence making articles. In addition to this, the study of the various ways in which the Machine works and the various types of stitches which it makes must undoubtedly prove very fascinating.

Section 21.

HOW TO MAKE THE SELVEDGE.

Before commencing to make hosiery it is necessary that a selvedge should be made. A selvedge is a method of locking stitches together at the edge or end of a piece of knitting, so that the stitches do not unravel. It is, in other words, a woven border.

This effect is obtained in the following manner:—Set up the Machine for one and one rib, using preferably, waste wool or cotton, knit a sufficient length to allow the buckle and weights to be attached, then join on the material which you wish to use. Knit one round, then push the Selvedge Lever (Fig. 8 on page 22) inwards, this has the effect of stopping the Ribbing Needles from making any more stitches, knit four rounds then pull the Selvedge Lever out to its original position so that the Ribber Needles once again operate. Then continue to knit in the ordinary way.

To ensure that the Selvedge is firmly made, always place the yarn into the heel spring when knitting the four rounds of Selvedge, this has the effect of taking up any slackness of yarn.

Section 22.

TRANSFERING STITCHES.

It will be found necessary when making hosiery or when changing from one type of rib knitting to another, or when changing from rib knitting to entirely plain knitting, or from plain knitting to rib knitting, that it will be necessary to transfer stitches from one needle to another.

The simplest manner in which to transfer stitches is as follows:—

(a) From Rib Stitches to Plain Stitches.—Before transferring stitches on to cylinder needles, put spare needles into the empty grooves of the Cylinder.

Then pull the ribbing needle straight out so that the stitch slips over the latch, and taking the foot of the ribbing needle between the finger and thumb of the right hand engage its hook with that of the cylinder hook to which you wish to transfer the stitch. Hold the ribber needle straight up and the stitch should then slip off on to the hook of the cylinder needle. Before doing so, see that the latch of the cylinder needle is down.

(b) From Plain Stitches to Ribbing Stitches.—Before transferring stitches on to ribbing needles take off the clasp band.

Take a spare ribber needle between the finger and thumb of the right hand engage its hook with that of the cylinder needle from which you wish to transfer the stitch, pull the cylinder needle up until the stitch has slipped past the latch of the cylinder needle, then taking hold of the foot of the cylinder needle with the finger and thumb of the left hand and pull it down so that the stitch slips on to the ribbing needle, which can then be placed into its groove.

See that the latch of the ribber needle is open, otherwise the stitch will slip over it and then drop off when commencing to knit.

Section 23.

GARMENTS.

This has now completed the instructions for all the operations necessary for making the simplest garments. We therefore give in this section, instructions for making Men's Socks—practice these well before attempting any of the more complicated articles.

INSTRUCTIONS FOR MAKING MEN'S HALF HOSE.

(a) Plain Socks.—Set up the Machine for one and one rib, make Selvedge as instructed in Section 21, then knit five and a half inches of one and one rib, then transfer all the rib stitches to cylinder needles, first placing spare cylinder needles into the empty grooves. Then knit seven inches of plain knitting, and make heel, not forgetting to use splicing yarn. Knit six and a half inches of plain knitting for the foot, then make the toe, again using splicing yarn. After the toe, knit two or three rounds, then join on waste wool or cotton, and knit about four or five rounds. Remember that eight to ten rounds of knitting make an inch in length.

(b) Men's Standard Ribbed Hose.—Set the Machine as for one and one rib, then make the Selvedge. Knit five and a half inches of one and one rib for the welt, then transfer the stitches carefully so that you have Machine set for five plain stitches and one rib stitch. Knit six inches of five and one rib, **TRANSFER ALL THE STITCHES IN THE FRONT HALF OF THE RIBBING DIAL ON TO CYLINDER NEEDLES.** Knit ten rounds, then knit the heel, not forgetting to use splicing yarn and to see that the yarn guide is in front of the Machine before raising the needles in the back half of the cylinder.

IT IS IMPORTANT to always remember when making the heel of a ribbed sock to take out the driving pin while the yarn guide is still in the front of the Machine. Unless you do this, the stitches will all drop off the ribber needles when you take the yarn guide round to the back of the Machine.

When you have finished the heel, bring the Yarn Guide to front of the Machine, and put the Driving Pin into its Socket in the Timing Plate, then press down into action all the needles in the back half of the cylinder. Knit six and a half inches of foot, then knit the toe, not forgetting to again take out Driving Pin, also to use Splicing Yarn.

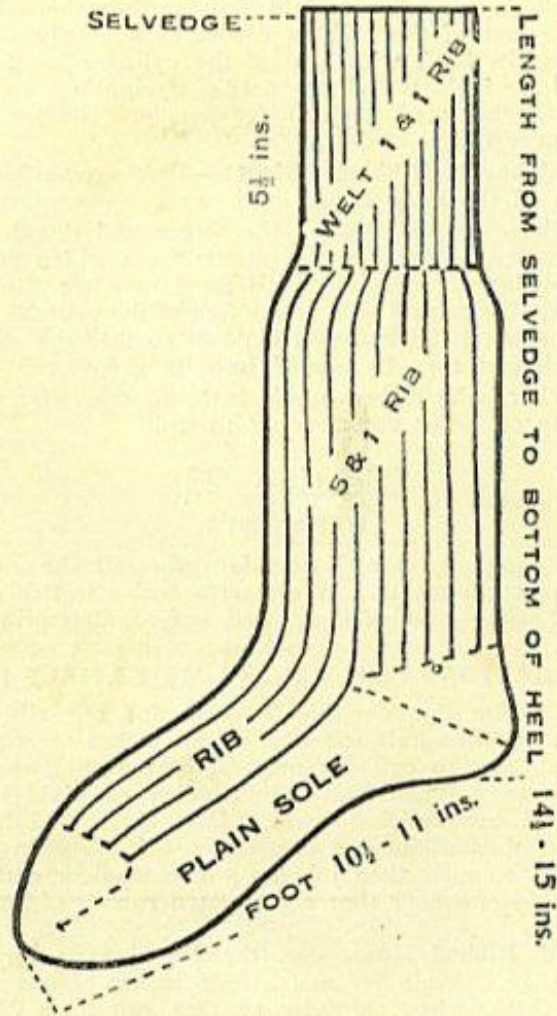
After finishing the toe, knit two or three rounds, then join on waste wool and knit four or five rounds of waste. The Sock is then finished and you can alter the stitches so as to start another Sock or another garment.

The object of knitting four or five rounds of waste is for the purpose of separating the Socks made.

The easiest and quickest way to check your measurements is to place the Socks on a hosiery board. We strongly advise the use of hosiery boards. Prices will be seen on back page of cover. These boards are also used for pressing the hosiery.

You will have noticed that by not putting the Ribber Needles back into the front half of the Dial, after finishing the heel, that the Sole of the foot has been knitted entirely plain. This is the correct method.

50 well
54 leg
60 foot



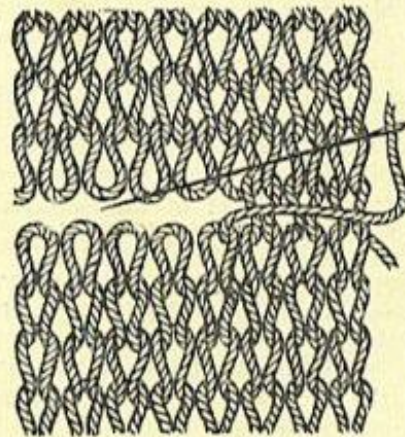
The only operation now remaining to complete the sock is.—

Section 24.

TO CLOSE THE TOE.

After separating the Sock by cutting through the waste yarn, press the toe with a hot iron and damp cloth, this will make the stitches stand out firm.

Then unravel down to where the stitches start to turn back, this will be the finish of the toe; then thread the Yarn through a darning needle and proceed to close the toe as per the following illustration. You will observe that each stitch has the yarn placed through it twice, and where a ribbed stitch is concerned this is also taken up at the same time. It is very necessary that this operation be done very carefully, if not you will spoil what would otherwise be a good Sock, and incidentally it will cause considerable discomfort to the wearer; and it may mean that your work will be refused by our Hosiery Dept.



Section 25.

INSTRUCTIONS FOR MAKING BOYS' TURN-OVER TOP STOCKINGS.

(Striped Top).

Arrange Machine one and one rib, make Selvedge, and then knit about four to four and a half inches one and one rib for turn-over top. This turn-over can be divided into three or four stripes of different colours or it may have two wide stripes similar to that shown in the illustration. To obtain this effect, knit ten to twelve rounds with ordinary yarn, break off and tie on the coloured yarn as near as possible to the yarn guide, knit about seven rounds coloured wool, break off, join on ordinary wool; again near the yarn guide, then knit ten to twelve rounds, then join on coloured wool again, and knit another seven rounds, then join on ordinary wool and knit about fourteen to fifteen rounds.

It is always necessary to knit a larger number of rounds at the end to allow for the turn-over.

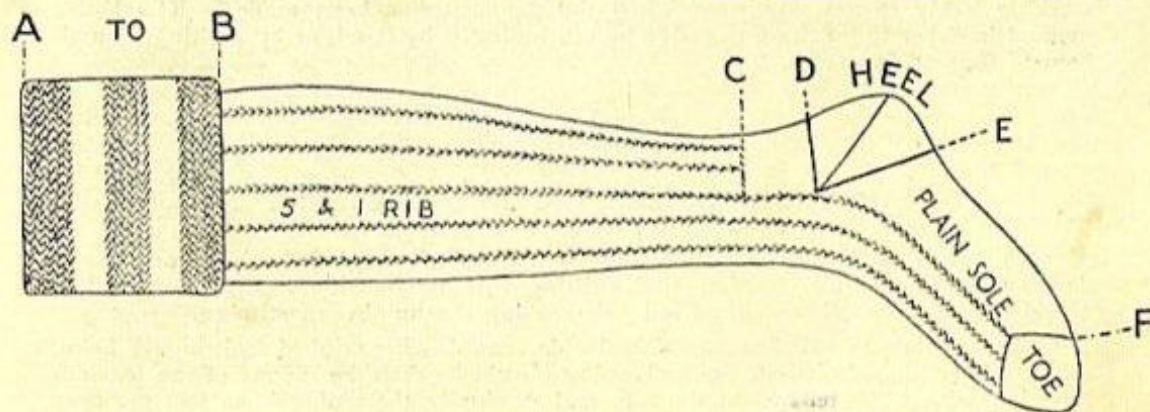
When you have finished the top, change the needles to either three and one rib, or five and one rib, whichever may be desired, then knit the leg. Then transfer the ribbing stitches from the front part of the dial on to cylinder needles, knit ten rounds, and make heel. Then knit the foot, and then knit the toe, not forgetting to splice the heel and toe.

Remember that Socks and Stockings when pressed will necessarily stretch slightly and you must knit accordingly. The usual sizes for Boys' Turn-over Top Stockings are sizes four to nine. We set out hereunder the various measurements necessary for any particular size.



Approximate No. of Rows
including the HEEL and TOE.

No. of Size	Length of T.O.T.	Length of Leg	Length of Foot	No. Rows T.O.T. A to B.	No. of Rows Leg B to C	No. of Rows C to D	No. of Rows E to F
4	4 to 4½ inches	14 inches	7½ inches	48	120	10	50
5	4½ inches	14½ inches	8½ inches	51	125	10	55
6	4½ inches	15 inches	8½ inches	51	130	10	60
7	4½ inches	15½ inches	9 inches	51	135	10	65
8	4½ inches	16 inches	9½ inches	51	140	10	70
9	4½ inches	17 inches	10 inches	51	150	10	75



We would point out that while the sizes in inches are correct, the number of rounds stated is only approximate, as the number of rounds to an inch varies somewhat with each Machine.

The Cylinder tension used when making sizes 4 and 5 should always be reasonably tight, so that the width of the leg is not out of proportion to the length.

It is also desirable to tighten the Cylinder tension slightly when knitting the end of the leg so as to give a good shape to the ankle. Care must, however, be taken to see that the tension is loosened again before commencing the heel.

NOTE.—Before proceeding to make any of the more complicated articles, we would advise you to become familiar with the additional operations of the Machine as set out in the following sections.

Section 26.

HOW TO MAKE A HEM.

It is necessary to make a hem upon numerous occasions, some of the more common being when making ladies' hosiery with a hem top, or boys' turn-over top stocking with a double hem top; also when making a child's toque, etc., etc.

To make a hem all the needles should be in the cylinder and a length of waste knitted. Then join on the good wool and knit a length exactly double that required for the hem. The ribbing attachment must not be used. The knitting should then be lifted up from inside the cylinder and the first row of stitches made of the material which you are using should be placed on the needles. This is quite a simple operation, but the most important part lies in seeing that the first stitch which you place on to a needle is that which has come from that particular needle. If care is not taken in doing this or the stitch is placed on to any other needle you will find that the hem will be crooked and unsightly.

Section 27.

KNITTING FLAT WEB.

Set up the Cylinder with all needles in, except about 25, at the back of the Cylinder. Put Yarn into the heel Spring. Commence knitting with waste yarn, and when you have knitted sufficient to enable you to attach buckle and weights, join on the good wool, then work the handle backwards and forwards in the same way as if making the heel, and knit whatever length is required.

The easiest manner in which to stop the stitches unravelling at the end is to run a thread of yarn through the loose stitches after having pressed same, seeing, of course, that the ends are tidily run into the work.

This, however, is not a very permanent finish, particularly if this edge of the work is likely to get any wear when the garment has been made. The better method is either to finish off the edge by crocheting it by hand, or by making a small hem of four or five rows.

Section 28.

METHODS OF SHAPING OR DECREASING.

(a) Shaping Hosiery.—There are two ways of shaping hosiery, one is by decreasing the Cylinder tension, and knitting with the tension as tight as possible round the ankle, another method is by decreasing the number of stitches.

The number of stitches can only be decreased when ribbed knitting is being made. For plain knitting, the fashioning should be done by means of the tension. Knitting with loose tension at the top, and gradually tightening it as you get near the ankle.

Decreasing of stitches is best done with four and one rib or five and one rib. The following is the method to adopt.

Knit one third of the length of the leg, then commencing with the cylinder needles situated in the front of the Cylinder mid-way between the half-way marks; transfer the stitch on the second needle away from the Middle Ribbing Needle, and place it on to the next Cylinder needle which should be the third needle of the rib, this is done by means of the work hook. The second needle, from which you have just taken the stitch, is then discarded, and the first needle together with its stitch is moved into the empty groove from which you have just taken the second needle.

When we say first, second and third needles, we mean the first, second and third cylinder needles to the right of the middle ribbing needle.

When you have done this, knit five rows, then perform exactly the same operation with the second and third cylinder needles in both the rib to the left and to the right of the centre one which has just been decreased, knit another five rows, then perform the same operation in the ribs to the right and to the left of those previously decreased.

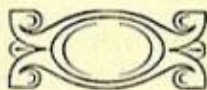
If the rib is four and one we advise you to continue the decreasing right the way round the cylinder.

If the rib is five and one, we advise you only to continue it round to the half-way mark. The reason for this being that with a four and one rib you have a larger number of needles operating and so a bigger decreasing is necessary, but with a five and one there is a smaller number of needles and it is not necessary to decrease so much. If you examine your work after you have done this you will notice that the effect has been to decrease the four and one rib to a three and one rib, and the five and one rib, to a four and one.

With ladies' hosiery it is advisable only to decrease half-way in any case.

(b) Shaping Garments.—When making garments with flat web it is quite a simple matter to fashion any part, all that is necessary is to transfer the stitch from the cylinder needle on the extreme right and extreme left to the next needles. Take out those needles from which you have taken a stitch, then knit four or five rows, or as many or as few rows as you wish; the number of rows being governed by whether you wish to decrease considerably and rapidly or whether you wish to decrease only slightly and slowly.

You then proceed to transfer the stitches from the needles at the side, as many or as few as you may desire.



FANCY STITCHES.

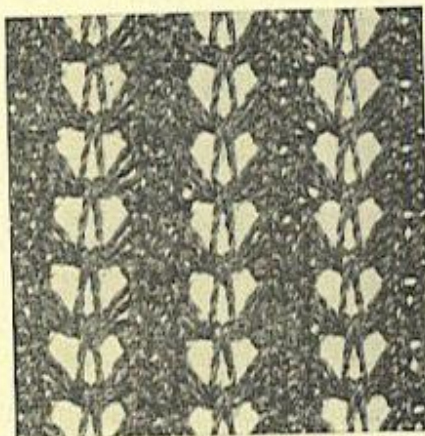
Section 29.

LACE PATTERN.

To obtain the fancy stitch shown in this illustration, set the Machine up as follows:—

Commence with Cylinder needles in the first two grooves, then leave an empty groove, place Cylinder needle in the next groove, and then leave the next groove empty, and then repeat this arrangement as far round the Cylinder as you wish to go according to whether you desire to knit flat or circular web.

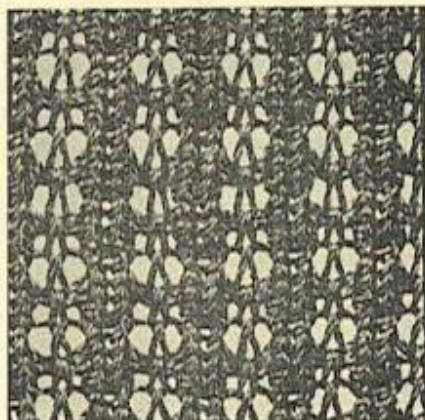
Before doing any knitting, raise up out of action those needles which stand by themselves and have an empty groove on either side. Knit three rows and then push down into action all needles. Knit one row and then raise those needles which you have just pushed down. Knit another three rows, then push down all needles. Knit one row and then raise the needles again, and continue this process until the length required is obtained.



Section 30.

LATTICE PATTERN.

Arrange needles as for lace pattern described in Section 29; and again, before knitting, lift up out of action those needles which have an empty groove on either side. Knit three rows, and push down all needles. Knit two rows and then raise those needles which have just been pushed down. Knit three rows push all needles down into action again. Knit two rows and then repeat this process until the required length is obtained.



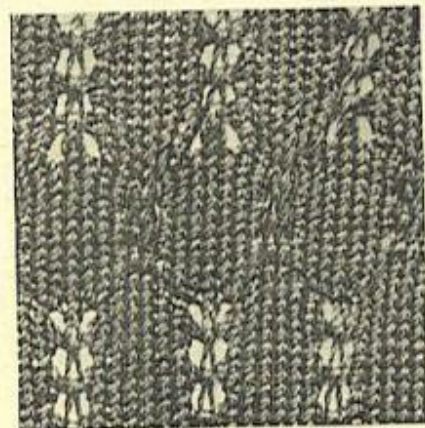
Section 31.

CHAIN PATTERN.

Open part of the pattern. Arrange needles as follows:—Six Cylinder needles, one empty groove, one cylinder needle, one empty groove. Then repeat this process until you have reached the end of the row. The row must end with six cylinder needles in action.

Then, before knitting, raise those cylinder needles between the empty grooves and knit three rows. Push needles down into action, knit one row, again raise needles and repeat the above process three times. You can then commence:—

Closed part of the pattern.—Place Cylinder needles into all the empty grooves, raise out of action the third cylinder needle from the end, then raise the ninth needle from the end, after that raise every sixth needle, knit three rows, press needles down and knit one row. Repeat this process three times, then commence knitting the first part again.



NOTE.—After you have practised these three fancy stitches, you should be able to see the principle of making fancy patterns in knitting, and so be able to devise many different kinds of fancy stitches by arranging the needles as you wish.

IN OUR INSTRUCTION BOOK No. 2 full instructions are given for making many other types of fancy stitches, and the patterns obtained by making those fancy stitches are illustrated. The price of this book is 2s. 6d. post free. We strongly advise that you send for this without delay, in order that you may be able to make the fullest possible use of your Machine.

Section 32.

LADIES' STOCKINGS.

These can be made on either an 84 needle Cylinder, 108 Needle Cylinder, or the 120 Needle Cylinder. We would advise either the 108 or the 120 Needle Cylinder. The 120 Needle Cylinder is, of course, preferable, as it makes the finer stitch. If you have not got a Cylinder with 120 Needles, we advise you to get one. For prices see inside the back cover. The following are the instructions for:—

(a) Plain Stockings.—Set the Machine up with every needle in the Cylinder, knit twenty rows, pick up the first row, place the stitches on to the needles, and so make a hem approximately one inch in width. If a wider or narrower hem is desired, increase or decrease the number of rows accordingly. For the leg two hundred and eighty rows should be knitted, in the following manner:—

One hundred rows with a loose tension.

Sixty rows with a slightly tighter tension.

Sixty rows with tension tighter still.

Another sixty rows with the tension quite tight.

Then place the yarn into the heel spring and knit twenty rows with the tension as tight as possible. Be very careful when knitting with the tension tight, to see that the yarn does not break and that the stitches do not ride up to the top of the needles.

Then make the heel. Then the foot should be knitted, then the toe. The following are the particulars for knitting the foot to obtain any of the following sizes:—

9½ in. Foot. Seventy to seventy-five rows should be knitted between the heel and the toe with a medium tension.

9 in. Foot. Sixty-five to seventy-two rows should be knitted with a slightly tighter tension and with the yarn in the heel spring.

8½ in. Foot. Sixty to Sixty-five rows should be knitted with the tension quite tight and the yarn should be in the heel spring.

You will see from the above that the method of shaping introduced has been the tightening of the tension.

The material you use may be All Wool, or Wool and Silk (the Wool being used for the top, heel and toe) or Mercerised Cotton and Silk can be used.

Ribbed Hose. All Needles should be in the Cylinder and the Hem made. (If desired a selvedge can be knitted and a few rows of one and one rib instead of a Hem).

Then set needles as for four and one or five and one rib, knit one hundred and eighty rows, then commence decreasing as instructed in section No. 28b, decreasing only in the front half of the Cylinder.

Then knit a further sixty rows with the tension tight and the yarn in the heel spring. Transfer all stitches on the ribber needles in the front half of the Cylinder needles, then knit a further twenty rows, still keeping the tension tight.

Then make heel, then knit the foot as per the instructions given for plain hosiery, then knit the toe.

Ladies' Hosiery can be knitted Flat Web and seamed at the back if desired, but this is rather a long process unless you have a proper seaming Machine.



Instruction Book No. 2.

Instructions for a complete range of garments and further types of fancy stitches are given in this book. We strongly advise that every possessor of an Imperia Knitter obtains one of these books. Price of same is 2s. 6d. post free. You will be surprised at the number of garments that can be made on the Imperia Circular Knitting Machine. Jumpers of all types and kinds, three-piece Suits, Underwear of all kinds and descriptions, Golf Hose, Kiddies Suits, Leggings, Frocks, Coats, Hats, Knickers, etc., all of these can be made quite easily by following the simple and explicit instructions given in this book.

YARNS.

We again emphasize the importance of working with the correct type of yarn. Difficulty is likely to be experienced unless you use yarn especially spun for Machine Knitting. All our yarns are especially selected and spun for us by some of the largest spinners in the country, and as we have special arrangements with our spinners, we are able to supply various types of yarns at exceedingly low prices. Send for samples, they will be sent post free. Remember we give prompt service. Every order receives immediate attention. All orders should be sent to:—

THE
Imperia
HOSIERY MFG. CO. LTD.

Central Offices and Showrooms :

245, TOTTENHAM COURT ROAD, W.1.
(Near Oxford Street.)

Tuition Parlours :

245, Tottenham Court Road
(Near OXFORD STREET)

Machine Warehouse :

6, Morwell Street,
W.C.1.

Hosiery Factory :

10-12, Phoenix Place,
W.C.1.

Branch :

97, Grays Inn Road, W.C.1.

PRICE LIST

OF

Spare Parts and Accessories.

Part No.											Price.		
											£	s.	d.
3	Heel Spring	...	...	...	...	...	...	...	...	...	0	0	6
4	Bobbins	...	...	...	...	...	...	...	...	...	0	0	6
5	Ribber Arm	...	...	...	...	...	...	...	...	...	0	10	0
6	Driving Pin	...	...	...	...	...	...	...	...	...	0	1	0
8	Selvedge Lever	...	...	...	...	...	...	...	...	...	0	1	0
8a	Clasp Band	...	...	...	...	...	...	...	...	...	0	1	0
10	Yarn Guide (Complete)	...	...	...	...	...	...	...	...	...	0	7	6
12	Ribbing Dial 36 Grooves (without Needles)	...	...	...	...	...	...	...	...	...	0	15	0
	" 42 "	"	"	"	"	"	"	"	"	"	0	17	0
	" 54 "	"	"	"	"	"	"	"	"	"	0	18	6
	" 60 "	"	"	"	"	"	"	"	"	"	1	0	0
14	Cylinders 72	"	"	"	"	"	"	"	"	"	1	5	0
	" 84 "	"	"	"	"	"	"	"	"	"	1	7	6
	" 108 "	"	"	"	"	"	"	"	"	"	1	10	0
	" 120 "	"	"	"	"	"	"	"	"	"	1	15	0
	72/36 Cylinder & Dial complete with Needles	...	...	...	...	...	...	...	...	...	2	12	6
	84/42 " " " " "	...	...	...	...	...	...	...	...	...	2	17	6
	108/54 " " " " "	...	...	...	...	...	...	...	...	...	3	7	6
	120/60 " " " " "	...	...	...	...	...	...	...	...	...	3	12	6
15	Screw and Lock Nut for Adjusting Ribber Arm	...	...	...	...	...	...	...	...	...	0	1	0
16	Cylinder Tension Pointer and Screw	...	...	...	...	...	...	...	...	...	0	1	0
18	Base of Machine	...	...	...	...	...	...	...	...	...	1	0	0
19	Buckle	...	...	...	...	...	...	...	...	...	0	1	0
21	Machine Handle with Spindle	...	...	...	...	...	...	...	...	...	0	1	6
22	Counting Dial and Pointer without Screw	...	...	...	...	...	...	...	...	...	0	2	6
23	Weights, per set	...	...	...	...	...	...	...	...	...	0	1	6
24	Timing Plate complete with Screw and Washer	...	...	...	...	...	...	...	...	...	0	1	6
A.	Setter Up	...	...	...	...	...	...	...	...	...	0	4	0
C.	Bobbin Winder, Complete	...	...	...	...	...	...	...	...	...	0	7	6
	" " Wheel and Handle with Screw	...	...	...	...	...	...	...	...	...	0	4	0
	" " Clamp and Bobbin Spindle	...	...	...	...	...	...	...	...	...	0	4	0
D.	Swift without holder	...	...	...	...	...	...	...	...	...	0	4	0
	" Holder	...	...	...	...	...	...	...	...	...	0	2	0
E.	Work Hook	...	...	...	...	...	...	...	...	...	0	0	6
F.	Heel Hook	...	...	...	...	...	...	...	...	...	0	1	0
H.	Crescent Needle Raiser	...	...	...	...	...	...	...	...	...	0	0	6
	Oil Can	...	...	...	...	...	...	...	...	...	0	0	6
	Three Bottles of Oil	...	...	...	...	...	...	...	...	...	0	1	0
	Spare Needles for Cylinders, each	...	...	...	...	...	...	...	...	...	0	0	2
	Spare Needles for Cylinders, per doz.	...	...	...	...	...	...	...	...	...	0	1	8
	Spare Needles for Ribber, each	...	...	...	...	...	...	...	...	...	0	0	2
	Per doz.	...	...	...	...	...	...	...	...	...	0	1	8
	Yarn Stop (on Yarn Stand Top)	...	...	...	...	...	...	...	...	...	0	1	0
	Clamp Screws for Holding Machine	...	...	...	...	...	...	...	...	...	0	0	6

SCREWS AND NUTS.—In the case of Screws and Nuts being lost or new ones being required, mention the particular part for which the Screw is required and forward 6d. for each screw, and an additional 3d. to cover cost of postage and packing.

BREAKAGES.—In the event of breakages, where a new part is not easily fitted, we advise that the broken part be sent to our Machine Warehouse. It will then be repaired and returned to you.

CAMS.—When the Cams in the Tappet Plate or the Cam Shell round the Cylinder are broken they should be returned to us. Always enclose your name and address when returning the broken part to us.

Service Department

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

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

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

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