

INSTRUCTIONS.



How to put up and use the Appliances.

Our machines have been tested, and have worked with eminent satisfaction for many years, both at home and abroad, earning world-wide reputation for simplicity of construction, correctness, and quality of workmanship and material. It is therefore to your interest to take only those machines bearing our trade-mark—"Wertheim Preciosa."

After the lid of the box is taken off, and all screws removed from outside the box, lift the machine out carefully. Take the large iron bar out of the box, and screw to a firm table. Then screw the machine to the bar. You must not force the thumb-screws with a hammer, as you are liable to break the clamps of the machine. Connect the crank bar with the machine slide, then fasten the screw with the washer and screw into the wooden handle.

To fix the Yarn-Guide on to Machine.

On the large machine we take the yarn-guide off, and place it in the appliance box for safety. If left on the machine it might get broken.

HOW TO FIX THE YARN-GUIDE.—Take it out of the box, and you will find on the top of the machine three screws; take these out. Before you fasten on the guide, make sure that the yarn-guide lever is fixed in the pin of the friction block. Then fasten the guide with the three screws. When you have it fixed, the yarn-guide lever must work in the direction of the machine.

To fix the Winder.

Take the fly-wheel out of the box. The winder frame you will find in the appliance box with the small handle. Take the screw out of the frame, then fasten to the fly-wheel, and fix your belt on. You can screw the winder to fit any table, by the thumb-screw.

To fix the Bobbin-Stand.

Take bottom part of stand, and screw on iron cross-bar until it is level with underneath part.

To Oil the Machine.

In beginning to work a new machine, care must be taken to oil it well once a day with the best sewing machine oil.

PARTS TO BE OILED.—Slides, Yarn-Guide Bar, Friction and Block, Needle and Feet, and all moveable parts.

It is advisable to clean the machine with a brush.



The Needle-Bed Plates.

The needle-bed plates have needles well-fitted, with moveable latches and feet. The last mentioned are kept in their place by the needle slide, and when removing a bent or broken needle, the slide must be pulled in the direction of the **Arrow** mark (on the end of machine).

You will find underneath the needle-beds some springs which must be pushed right up when working machine, and right down when not in use. In no case push the needle half-way up, as you will damage the lock cans.

The Needles.

All the needles must be of the same thickness and same length, so that they will wear equally, and the work will keep regular. If you have a bent needle, the hook or latch might be damaged. You can bend them into position again. The latch must run easily, and cover the hook of the needle. If it is impossible to straighten the latch, replace it with a new one. In removing the needle, pull the needle slide in direction of the **Arrow**.

All the needles must not be removed at once when cleaning the machine, because the lock cans will have worn the individual needles to fit them, and if they should be re-fitted out of their order, they are likely to cause trouble.

The Slide.

In removing the slide for cleaning the locks, take off the friction bar, which is fastened with two screws on the top of the needle bed. Before taking the bar off, take particular notice how it is fixed. Unscrew the racking lever, which is fastened with a large screw on the left of machine. Take out the screw which fastens the handle-bar lever, and the slide can then be removed.

How to Regulate the Stitch.

You regulate the stitch of the work by altering the four indicators marked 1, 2, 3, 4. The little screw which fastens the scale must not be touched. It will cause trouble. To make the work tighter, move the hand in the direction of "1." To loosen the work, move the hand in direction of "25."

Never alter the stitch when you have once made a start and the needles are high. Always push the handle to the end of machine you started from.

Latch-Opener.

The latch-opener is to open the latches, and must slide along without touching the needles. The right height to place the openers is within one-sixteenth of an inch from the needle hooks.

To adjust the Yarn-Guide.

The **Yarn-Guide** must be adjusted so that the guide will not touch the needle latches. If it should do so, it will break or not take up the wool. Adjust it so that the needles will catch the wool easily. For thinner wool or silk, lower the guide by degrees.

Tension.

The tension acts specially on the ends of the work, to take up the loose wool and loops. If you find the machine looping the end of the work, give the little wire more tension, by turning the thumb-screw from you.

The Counter.

The counter counts across and back as one row; therefore moving from right to left, or from left to right, is reckoned as half row.

The Movement of the Needle-Beds (or Racking).

The front needle-bed can be moved by the racking lever. If you pull the lever on your left to and from you, that is for racking.

The bed-plate can be left down by the centre lever, which you will find underneath the needle-bed. This is used when you are picking on work, or in case of dropping stitches.

Winding the Wool.

Place the skein of wool on the umbrella (or swift). Fasten the winders on the table, then place the bobbin on. You must take care how you wind the wool. Start at the bottom of the bobbin, and wind up and down to about five inches, then gradually to the point of the bobbin. Take great care of the wool. It might cut into the wool remaining on the bobbin; this causes breaking or heavy winding of the wool.

The Weights.

The use of the weights is to pull down the loops from the needles. The more needles worked, and the heavier the wool, the more weight will be required. Fine wool or silk, the weight required would be less. The weights will affect the stitch; the looser the stitch, the less weight required, and the tighter the stitch the more weight required.

How to Begin Work.

After you have examined the mechanism of the machine, practice turning the machine regularly until you are sure of it. The needles must be down and out of work.

Pull all the stops down, push up the number of needles you wish to work with by the springs. Put all hands to 15, turn the handle once to open the latches. If you find that some of the latches do not open, open them with the work hook.

How to Thread the Machine.

Place your bobbin on the stand. Thread through the eye of the stand, then through the eyes of the yarn-guide, then through the lever guide. Take a long end of wool down through the needle beds. Your handle must be to the right.

When starting work, hold the under end of the wool with your hand, and turn the handle to the left, so that all the needles will catch the loops. Take the large comb and pull the wire out, then place between the loops. Place the wire through the eyes of the comb, then attach weight to the comb underneath.



Put the end of your wool between the weights, then attach the top wool to the wire spring, and the machine will be ready for work. Usually when beginning to work you do one or two rounds of round knitting. The hands must be thus—1 and 2 at 15, and 3 and 4 at 15. Push the right hand front stop up, and the left hand back stop up.

How to put Machine in Order.

Our machines are sent out well tested. We give hereunder a few hints how to manage in case of anything going out of order:—

1. If you find the machine dropping stitches, or making long loops, tighten the tension spring (which you will find at the top of the yarn-guide attached to the fine wire) by turning the thumb-screw from you.
2. If the machine runs heavily or stiffly, oil it well, and see that the wool runs freely from the bobbin.
3. If your work rises up from the needles and the stitches come up, put more weight on the comb underneath.
4. If your needles come up high, and the loops do not slip behind the latches, you are knitting too tightly, and must alter the hands to a looser stitch.
5. If you find one needle always dropping stitches, examine the latch of that needle. It may be working too heavily or perhaps it is bent. Replace the needle with a new one.
6. If the machine stops very suddenly, examine it. The needles which are not in use may be working up. They must be down in their place.
7. If the machine knits irregularly when all the hands are at the same number, one of the scales has shifted, and this can only be adjusted by an experienced mechanic.
8. The breaking of the wool may be caused either by poor wool, the tension may be too tight, or the gauge of the machine is too fine or too coarse.
9. If you find some holes in your knitting, and the wool breaks, perhaps you have too much weight on, or not enough.
10. You get irregular work if the lock cams are worn out, if the needles are bad, and the little rivets stick out on the latches, or you are using needles not of our make.

Man's Sock.

FOR RIB.—Set up 38 needles in centre of machine on both sides. Put all hands at 15. Slide all bolts down. Thread machine from right hand side. When threaded, drop end of wool between needle beds. Work half row. Take setting up comb, draw out wire, place comb underneath machine, and push through stitches. Then slide thin wire through comb, this will hold the stitches. Then put the weights on comb underneath. Place end of wool under weights. Thread tension slide up No. 1 and 2 bolts, work 1 row. Slide down 1 and 2 bolts. Set counter and work 20 rows. Break wool close to needles, hold work with left hand, and work 1 row to take out. Press rib top.

FOR LEG.—Set hands 3 and 4 at 1, 1 and 2 at 17. Slide up 1 and 2 bolts. Have crank on left hand side. Open the bed by pulling down bar under the machine. Take first stitch of rib and place on centre needle at back of machine. Draw wool between each stitch before placing on needle. When finished on back needles, turn work round, and pick on along front needles. When at end turn work round, and place two stitches on back end needles. Draw work along to centre back needle, and pick on. Bring wool through stitches to finish on left-hand side. Close the bed, thread machine, tie wool, fix tension on. Attach buckle to rib. Put on weights and set counter. Work 75 rows.

FOR HEEL.—Set hand 1 at 5, 3 at 17. Slide up front bolts, back bolts down. Hold work down at back, and work 2 rows. Put in triangle wire—straight piece place on top of sock, pull down underneath. Attach angle underneath to straight piece. Take weights off buckle, and attach to triangle. Hold work down with left hand, and work 9 rows. Push up 11 needles on right hand side of back as high as they will go, then place finger over top of needles, and push down to close latches. Lower the bed. Take right hand heel comb, pick 11 stitches on to heel comb, place comb on front bed of machine. Push down 11 empty needles to be out of use. Hold work down and work half row. Push up 11 needles on left hand side, push down again, pick 11 stitches on to left hand heel comb, place on front bed, push down empty needles. Place heel weight on needles in centre of machine to hold down work. Work half row. Then proceed by taking one stitch off each heel comb and place same on each end needle at back. Work 1 row between. Do same till finished. Do not work a row after last stitch. Take out triangle wire, attach weights to buckle. Set No. 1 hand at 17, 3 at 1. Slide down No. 4 bolt, slide up No. 2 bolt. Push up 11 needles on right side of machine at back. Pick on selvage, work half row. Push up 11 needles on left hand side of back, pick on selvage. Push up the bed. Set counter, and work 65 rows for foot.

FOR TOE.—Use two-decker, open latches on three end needles on 4 corners. Place decker on two end needles, draw up, push down again, pick over stitches to second and third needles. Then draw down empty needles. Do same on 4 corners, then work 2 rows between. Repeat this till 10 needles are left front and back. Then push up 10 needles on front. Push down to close latches, pick on 10 front stitches to 10 at back. Use a decker, hold wool in left hand, pull up end needle, put wool round needle between latch, pull down, put stitch on to next needle. Pull up. Put wool round, pull down, repeat till finished.

Gent's Singlet (3-ply.)

Set up 98 needles, hands 3 and 4 at 2, 1 and 2 at 18. All bolts down. Set up, put in comb, &c. Put 1 and 2 bolts up. Work 400 rows, run off. Neck and sleeve holes to be cut, bottom turned up and hemmed, and cut front open. Face both sides for buttons and button-holes.

SLEEVES.—Make rib, pick on same as sock, only start racking on at end of machine instead of centre. Work 150 rows, widen 4 times, 15 rows between, then work 20 rows.

COLLAR.—98 needles, all hands at 14, work 25 rows. All bolts down.



Men's Underpants (2 ply).

Set up 70 needles in 2 and 2 rib. All hands at 15. All bolts down. Set up and work 15 rows, push all needles up, to work plain. Put all hands at 16, work 65 rows, widen three times, 6 rows between. Then work 100 rows. Run off. Make 4 pieces, seam up, and put on shaped linen band.

GUSSET.—20 needles, hands the same, work 30 rows.

Ribbed Underpants (2-ply).

85 needles up. Set for 2 and 2 rib. All hands at 15. All bolts down. Set up and work 15 rows, push all needles up to work plain. Put hands 3 and 4 at 1, 2 at 20. Turn machine to right. Put hand 1 at 20. Work 190 rows, widen 6 times 10 rows between. Work 190 rows. Put all hands at 15, and work 6 rows. Run off. Make 2 pieces. Seam up, and put on shaped linen band.

GUSSET.—20 needles, hand the same, work 30 rows.

Gent's Bed Slipper (4 Skeins of 4-ply Wool).

50 needles up. Cardigan stitch. Work 50 rows racked. Sew up, &c.

Gent's Vest (1½ lb. 4-ply Wool).

90 needles up. Set Cardigan stitch. Rack for ¾ yard plain.

POCKETS.—26 needles up, work 30 rows. Cut up centre and neck, leaving 5 inches for shoulders.

Gent's Sweater (2-ply).

82 needles up. Hands 3 and 4 at 1, 1 and 2 at 20. All bolts down. Set up and work 50 rows, racked every second row. Then work 100 rows plain, 30 racked, 30 plain, 30 racked, 30 plain, 30 racked, then work 250 rows plain, 50 racked. Run off, halve material, and cut across for neck.

SLEEVES.—53 needles up, all hands at 13, all bolts down. Set up and work 35 rows. Change hands 3 and 4 to 1, 1 and 2 to 20. Work 30 rows racked, 150 plain.

COLLAR (turn down).—83 needles, hands same as body. Work 50 rows racked. Set all hands at 13. Do 8 rows.

COLLAR (stand up).—94 needles, all hands at 14, all bolts down. Work 50 rows.

Cardigan Jacket (3-ply).

BACK.—Set up 78 needles, hands 3 and 4 at 1, 1 and 2 at 21. All bolts out. Set up and work 25 rows racked ever second. Then work 250 rows, and run off.

FRONTS.—45 needles, hands the same, work the same. Do two pieces.

BAND FOR BUTTON HOLES.—15 needles, hands the same, work length required, racking every second row, about 300 rows.

POCKETS.—30 needles, hands same. Work 10 rows racked, 40 rows plain, run off.

Gent's Underpants.

Set up 64 needles in 2 and 2 rib. All hands at 14. Work 20 rows. Push all needles up. Put all hands at 16. Work 70 rows. Widen 4 times, 10 rows between. Work 280 rows. Make 2 pieces.

GUSSET.—Put up 30 needles, do 35 rows. Put on shaped linen band.

Gent's Bathing Pants (3-ply).

50 needles up. All hands at 14. All bolts down. Work 10 rows. Alter hands to 16 and work 15 rows. Widen 5 needles, work 3 rows between, work 30 rows, alter hands to 14. Work 10 rows, then run off. This forms one leg. Repeat and join up.

Ribbed Cycling Stockings (4 ply).

Set up 90 needles in 2 and 2 rib. Hands 3 and 4 at 1, 1 and 2 at 23. All bolts down. Set up and work 75 rows, racked every second row, then change all hands to 15, and work 150 rows. Run off. Pick on same as sock, hands and bolts the same, and work foot same as in sock. Pick on so that the fancy side turns over.

Sciatica Belt (2-ply).

60 needles up, all bolts out. All hands at 14. Work 15 rows. Change hands 3 and 4 to 1, 1 and 2 to 20. Work 120 rows. Change all hands to 14, and work 15 rows. Run off. Make two pieces and join up.

Knee-Pads (3 skeins 4 ply wool.)

Set up 80 needles, 2 and 2 rib. Work 20 rows. Widen by pushing up 2 needles in centre of machine back and front. Work 2 rows. Repeat same until all needles are up, then narrow 1 needle each end of machine back and front. Work 2 rows, repeat until 2 and 2 rib again. Work 20 rows.

Tam O'Shanter.

Set up 36 needles. All hands at 12. All bolts down. Thread machine, &c. Work 10 rows. Fix 1 and 2 hands at 23, 3 and 4 at 1. Widen 4 needles, do 20 rows, narrow down to a point, 2 rows between each narrowing. Work 5 pieces, then join all together. For children's repeat, only use less needles and rows, according to size.

Fisher Cap.

Set up 52 needles, all bolts down. Hands 3 and 4 at 1, 1 and 2 at 20. Thread machine, &c. Slide up 1 and 2 bolts, and work 150 rows. Then slide down 1 and 2 bolts, and work 2 rows. Break wool and run out work. Make a hem about one inch wide, sew around, and gather in at top, and fix tassel on.

Boy's Sweater (2-ply, 6 years).

60 needles up. All bolts down. Hands 3 and 4 at 1, 1 and 2 at 22. Set up and work 25 rows racked. Work 100 plain, 10 racked, 10 plain, 10 racked, 10 plain. Then work 25 rows racked. Run off, and cut neck.

shoulder 13 needles

COLLAR.—Same needles, hands the same. Work 50 rows racked.

SLEEVES.—42 needles up. All hands at 13. All bolts down. Set up and work 15 rows. Change hands same as body. Work 10 rows racked, 100 rows plain. Run off.

Jersey (4-ply, 12 years).

82 needles. Hands 3 and 4 at 1, 1 and 2 at 22. All bolts down. Set up. Put in combs, &c. Move 1 and 2 bolts up. Work 250 rows, then run off. Cut sleeve holes and neck, turn up and hem.

SLEEVES.—36 needles, pick on rib same as for sock, and work 80 rows.

Boy's Stockings (4-ply, 12 years).

Make rib, and pick on same as for sock. Hands 3 and 4 at 1, 1 and 2 at 17. Bolts same as sock. 32 needles. Pick on and work 65 rows.

Narrow 3 times, 5 rows between. Work 65 rows, then do heel same as sock, 6 rows, 8 needles up, and for foot work 44 rows.

Girl's Petticoat

Set up 70 needles each side of machine. All bolts down. Hands 3 and 4 at 1, and 1 and 2 at 23. Thread machine from right, work half row, attach comb and weights. Fix tension on, then slide up 1 and 2 bolts, and work 1 row, slide down 1 and 2 bolts, work 10 rows, then work 10 rows racked every second row, then do 10 rows, then 10 rows racked every second row. Work 200 rows, run work out. Do three pieces the same.

BODY.—Set up 60 needles each side of machine, all bolts down, all hands at 14. Work 55 rows, do top like neck of singlet, then set up and work 55 rows the other side. Join bottom portion to top.

Little Girl's Dress.

Set up 60 needles each side of machine, all bolts down. Hands 3 and 4 at 1, 1 and 2 at 23. Thread machine from right, work half row, attach comb and weights, and fix tension on. Then slide up 1 and 2 bolts, slide down 1 and 2 bolts, and work 10 rows, racking every half row. Then miss half row not racked. Then do 10 more rows, racking every half row, then miss. Repeat until you have width of skirt.

BODY.—Set up 60 needles each side of machine, all bolts down. Thread up, &c. Work 60 rows, break wool, run off, work 2 pieces the same, and join up sides, leaving spaces for armholes.

SLEEVES.—Set up 40 needles each side of machine. Thread machine, &c. All hands at 14, all bolts down. Work 10 rows, then change 3 and 4 to 1, 1 and 2 to 23. Work 50 rows, racked every row. Do 10 rows, widen 10 times, work 5 rows between each widening. Then do 20 rows, break wool, run work out, make two sleeves the same.

COLLAR (turn-down).—Set up 20 needles. Thread machine, &c. Work 10 rows racked every half row, then miss racking for half row, work 10 more rows racked half every row, then miss racking, repeat until you have length of collar.

Child's Petticoat (6 year).

80 needles, hands 3 and 4 at 1, 1 and 2 at 22. All bolts down. Thread machine from right, take machine to left, then put in comb and weights. Put wool under weights, thread tension, work 200 rows, then work 20 rows, racked every second row. Change all hands to 15 and work 60 rows. Shape neck same as singlet. Put in comb, &c. Work 60 rows. Change hands 3 and 4 at 1, 2 at 22. Turn machine to right, put hand No. 1 at 22. Work 20 rows, racked every second row. Work 200 rows plain. Break wool and run off to finish.

Child's Sock (4-ply, 4 years).

28 needles up. Make rib. Hands 3 and 4 at 1, 1 and 2 at 17. Pick on and work 40 rows. Narrow once. Work 40 rows, do heel the same as in sock, 7 rows, 8 needles up. Foot 30 rows.

Child's Sock (2 years).

24 needles up. Make rib and pick on. Hands and bolts same as above. Work 26 rows, narrow once. Work 25 rows. Heel 6 rows, 7 needles up. Foot 25 rows.

Child's Sock (first size).

20 needles up. Hands and bolts same as above. Work 20 rows, narrow once, work 15 rows, heel 5 rows, 6 needles up. Foot 18 rows. Work toe.

Boy's Suit.

Set up 40 needles, all hands at 15. All bolts down. Work 10 rows, then run off. Pick on rib, hands 3 and 4 at 1, 1 and 2 at 18. Bolts same as for sock. Work 10 rows. Widen right side only, 20 needles, and work 2 rows between. Work till 25 inches are done, then run off. This forms one leg. Cut 10 inches and join both legs together.

COAT.—60 needles up. Hands same as for leg. Work 250 rows, making about 26 inches. Run off. Cut up front, bind, and put on buttons.

COLLAR.—30 needles up, all hands at 15. Work 20 rows, sew on coat, leave about 6 inches on sides for shoulders, cut 8 inches for sleeve-holes.

SLEEVES.—30 needles up. Rib same as for pants. Pick on, hands same as for leg. Work 40 rows, widen 6 needles right side. Work 3 rows between, do 10 rows, then run off. This forms the sleeve.

Child's Bonnet.

Set up 70 needles each side of machine, then put 5 up and 5 down, 5 up and 5 down. All bolts down. Hands 3 and 4 at 1, 1 and 2 at 23. Thread machine, &c. Work 12 rows racked every row, then miss 1 row, work 12 rows racked every row, miss racking 1 row. Repeat until you have the length required, 130 rows. Then join up back, turn back piece in front, and thread ribbon through cross wool.

Tam O'Shanter (3-ply).

78 needles. All hands at 14. Set all bolts down, and work 25 rows. Change hands 3 and 4 to 1, 1 and 2 to 21. Work 60 rows. Put hands 1 and 2 at 19, work 20 rows. Narrow till you have 40 needles left, 1 row between. Join up. Press on card-board shape, then put on tassel.

Baby's Bootee.

Rack at back. All hands 14. Set up 38 needles, arrange them 2 up and 1 down (making 13 twos). Work 12 rows 2 and 2 rib. Set 1 and 2 hands 20, 3 and 4 at 18. Do 40 rows racked every second row. Take off weights. Push up 5 twos on right side, draw needles right down again (letting stitches drop). Work across. Push up 5 twos on left side. Draw down again. Work 15 rows racked for instep. Take out and crochet foot in.

Baby's Gaiters.

Set up 18 twos, same as 2 and 2 rib. All hands at 14. Work 10 rows. Change hands 3 and 4 to 1, 1 and 2 to 19. Work 100 rows racked. Take off weights. Push up at each end, back and front 6 twos, then drop stitches off, pull needles right down. Work 20 rows racked. Change all hands to 12. Work 5 rows. Join up, and put elastic under instep.

Baby's Fisher Cap (3-ply).

64 needles up. Hands 3 and 4 at 1, 1 and 2 at 18. All bolts down. Set up, put in comb. Work 160 rows. Run off. Turn up hem, gather in top, and put on tassel.

Baby's Dress (2-ply).

Set up 94 needles in 3 up and 1 down stitch. Hands at Cardigan stitch, all bolts down. Set up and work 225 rows, racked every second row. Push all needles up to work plain, work 2 rows, push up, and pull right down, so as to drop stitches. Be sure it is the needles you push up to work plain. Put hands 1 and 2 at 18, and work 250 rows racked same as the other part. Change hands 1 and 2 at 20, push up needles, and work same as other side, then work 225 rows.

SLEEVES.—60 needles, 3 up and 1 down. All hands at 14. Set up and work 20 rows. Change hands same as body, work 100 rows racked. Run off.

Cape for Baby's Dress (2-ply).

24 needles, 3 up and 1 down. Hands same as body. Set up and work 150 rows. Where needles are dropped in body, run ribbon round for sash.

Baby's Petticoat (2-ply).

70 needles, hands 3 and 4 at 1, 1 and 2 at 22. All bolts down. Set up and work 110 rows. Back every twelfth row. Change all hands to 15. Work 45 rows. Shape neck like singlet. Have 13 needles for strap, 10 rows. Put in comb after neck is done. Work 45 rows. Change hands 3 and 4 to 1, 1 and 2 to 22. Work 110 rows, racked every twelfth row.

Baby's Sock.

Set up 22 needles, all hands at 13, work 12 rows. Change hands 3 and 4 to 1, 1 and 2 to 20. Work 40 rows, rack every row. Run off and knit on foot. 22 needles, hands 3 and 4 at 1, 1 and 2 at 15. Bolts same as sock. Pick on and work 1 row, then work heel. Work 4 rows put up 6 needles, foot 20 rows, then do toe.

Baby's Singlet (Open Front, 2-ply).

50 needles, all hands at 15. All bolts out. Set up and work 60 rows. Push up centre needles back and front, leaving 12 needles each end for straps. Work 10½ rows for each strap, then run one strap off machine. Push up 34 needles, same side as remaining strap, take machine over. Put in comb, &c. Work 60 rows, then run off. Pick on other strap. Have 34 needles up, take machine over and repeat.

Baby's Jacket.

BACK.—Rack at back, 70 needles up. Arrange needles, 2 up and 1 down. Set 1 and 2 hands at 22, 3 and 4 at 1. All bolts down. Do 110 rows racked every second row. Set all hands at 14, have rack to front. Work 15 rows and take out.

FRONT.—Rack at back, 50 needles up. Arranged same as back. 1 and 2 hands at 22, 3 and 4 at 1. Do 110 rows, racked every second row. Set all hands at 14, have rack to front. Work 15 rows and take out.

SLEEVES.—All hands at 14. Needles same as for sleeves. Do 15 rows 2 and 2 rib. Set 1 and 2 hands at 22, 3 and 4 at 1. Do 80 rows racked every second row and take out.

Modiste.

62 needles up, all bolts out. All hands at 14. Work 10 rows, change hands 3 and 4 to 1, 1 and 2 to 22. Work 200 rows. Change all hands to 14. Work 15 rows.

GUSSET.—14 needles, work 30 rows. 1 and 2 hands at 22, 3 and 4 at 1.

Combinations.

38 needles up. Draw down third needle forming 2 and 2 rib. All hands at 14. All stops down. Do 25 rows. Push up needles to form plain rib. Widen at one side every 2 rows, till 70 rows are done. Then narrow 2 rows, till 66 rows are done. Form 2 and 2 rib again, for waist, and do 25 rows. Push up needles again, do 78 rows. Drop stitches for neck, leaving 24 needles for shoulder (on straight side). Do 15 rows for strap. Push up same needles again. Do 82 rows plain. Form 2 and 2 rib, 25 rows for waist. Set needles for plain, push up 36 extra needles for lap (on side that is shaped). Do 66 rows then narrow every 2 rows for 70 rows. Form 2 and 2 rib again. Do 27 rows and run out. Make 2 pieces.

BORDER FOR FRONT.—20 needles, 1 and 2 hands at 22, 3 and 4 at 1. Do length required (about 24 inches) racked every row.



Lady's Slip.

BACK.—70 needles, 2 and 2 rib. All hands at 13, do 20 rows. Push up needles. All hands at 15, do 80 rows. Narrow each end every second row, till 100 rows are done.

FRONT.—45 needles, 2 and 2 rib. All hands at 13, do 20 rows. Push up needles. All hands at 15, do 40 rows. Drop 4 stitches at one end. Draw down empty needles. Do 40 rows more. Then narrow every second row till 110 rows are done. Do 2 pieces.

SLEEVES.—60 needles, 2 and 2 rib, all hands at 13, do 25 rows. Push up needles. All hands at 15, do 90 rows.

Lady's Bloomers (2-ply, open side).

Set up 54 needles, all hands at 13. All bolts out. Work 40 rows. Change hands 3 and 4 to 1, 1 and 2 to 20. Work 130 rows. Widen 5 times, 10 rows between. Work 130 rows. Change all hands to 15, and work 20 rows. 20 needles plain at end. Work 5 rows, then run off. Make two pieces the same for the fronts.

For BACKS make two pieces all plain.

GUSSET.—24 needles. Hands the same, work 50 rows. Put on plain linen band for buttons.

Lady's Petticoat (3-ply).

Set up 85 needles, hands 3 and 4 at 1, 1 and 2 at 23. All bolts down. Set up and work 20 rows racked, 20 plain, 20 racked, 20 plain, 20 racked. Change all hands to 16. Work 130 rows. Change all hands to 14, and work 100 rows. Change all hands to 14, and work 130 rows. Run off. Make three pieces. Join up, and put on shaped linen band, to measure 46 inches on machine.

Lady's Singlet (2-ply, with or without Sleeves).

78 needles. All hands at 16. All bolts out. Set up and work 140 rows. Take off weights. Push up needles back and front in centre, leaving 18 needles each end for shoulder straps. Pull centre needles right down. Hold left hand strap underneath with hand, and work 15 rows. Do not go too far to the right. Take the machine to the centre. Pull wool down in centre, and work right hand strap the same, 15 rows. Push up centre needles back and front. Take machine over, put in comb, &c., and work 140 rows, then run off.

SLEEVES.—Same needles, hands the same. Bolts the same. Set needles for 2 and 2 rib. Set up and work 20 rows. Push needles up to work plain. Work 100 rows, then run off.

Two Golf Blouses (Shirt Blouse and Crossover Blouse).

SLEEVES.—1 and 2 hands at 25, 3 and 4 at 1, bolts down, 70 needles. Do 170 rows. 2 pieces.

FRONTS.—Hands the same, 50 needles, 200 rows. 2 pieces.

BACK.—Hands the same, 55 needles, 140 rows.

FOR SHIRT BLOUSE (Turn-down Collar).—64 needles, 1 and 2 hands at 23, 3 and 4 at 1. All stops down, 35 rows. Then put 1 and 2 stops up. Do 6 rows.

BORDER.—64 needles, 1 and 2 hands at 20, 3 and 4 at 1, 30 rows.

CUFF.—30 needles, 1 and 2 hands at 22, 3 and 4 at 1. Do 15 rows racked at left end of machine, and 65 rows racked at right end.

FOR CROSSOVER BLOUSE (Stand-up Collar).—62 needles, 1 and 2 hands at 20, 3 and 4 at 1, 28 rows. Set all hands at 12, 28 rows.

BORDER.—18 needles, 1 and 2 hands at 20, 3 and 4 at 1. Vandyke stitch. Miss twenty-fourth row. Do 20 peaks.

CUFF.—35 needles, 1 and 2 hands at 20. Vandyke stitch. Miss thirty-sixth row 4 times.

VEST.—62 needles, 1 and 2 hands at 20, 100 rows. Make stand-up collar also.

Tucked Bonnet.

Set up 19 twos, 2 up and 1 down.

Front hands at 16.

Back hands at 17.

Do 3 rows with back stops up, 1 row with all stops down. Repeat till 35 tucks are done. Do 3 rows and run out.

BACK (to be made with brilliant or silk).—40 needles up, 1 and 2 hands at 22, 3 and 4 at 1. Do 4 rows. Form 2 up and 1 down, by putting down every third needle. Do 4 rows racked.

TURN-BACK (for front).—1 and 2 hands at 22, 3 and 4 at 1. 70 needles. Do 28 rows racked.

Child's Bloomers (4 years).

75 needles, 1 and 2 hands at 15, 3 and 4 at 1. Do 15 rows, with 1 and 2 stops up. Put all stops down. Change 1 and 2 hands to 22. Do 30 rows racked, 115 plain. Change all hands to 14. Form 6 twos at each end by putting down every third needle. Do 20 rows. Make 2 pieces like this.

GUSSET.—14 needles, 1 and 2 hands at 22, 3 and 4 at 1. Do 43 rows.

Lady's Blouse (2-ply, closed front).

Set up 70 needles, all bolts out. Hands 3 and 4 at 1, 1 and 2 at 19. Set up and work 200 rows. Rack every second, third, or fourth row. Make three pieces the same, 2 for sleeves, 1 for back.

FRONTS.—Same needles, work the same, only do 240 rows.

CUFF.—44 needles, all hands at 13, work 40 rows racked.

COLLAR.—74 needles, hands same as for body. Rack same, 50 rows. Change all hands to 14, and work 20 rows.

FANCY BAND FOR FRONT.—18 needles, hands same as for body. Vandyke stitch. Do length required.

WAIST BAND.—18 needles. All hands at 14. Work length required. The sleeves are gathered into the cuffs, fronts are gathered into collar and waist band. Join up the blouse on sewing machine. Put on fancy buttons.

Mittens.

Rib 36 needles, work 25 rows. Pick on rib same as in sock, starting at right side of machine. Set bolts and hands for plain stitch, work from left side, not in centre of machine. Work 3 rows, widen by pushing 1 needle up back and front, pick on cross stitch, work one row, repeat ten times, work 3 rows.

THUMB.—Draw down 10 needles at right side, letting stitches drop. Work 28 rows and take out. Press work. Pick on 10 stitches for thumb, and work 15 rows, then take out. Hem down thumb and hand part.

Gloves.

Same as mittens. First finger 9 needles up, work 25 rows. Second finger 10 needles up, work 28 rows. Third finger 9 needles up, work 25 rows. Fourth finger 8 needles up, work 20 rows.

Lady's Stockings (3-ply).

44 needles up. Make rib and pick on same as in sock. Then put 1 and 2 bolts up. Hands 3 and 4 at 1, 1 and 2 at 16. Work 100 rows, narrow 4 times, 6 rows between. Work 100 rows for leg. Make heel same as for sock. Foot 55 rows.

Motor Scarf (10 Balls Brilliant Cotton)

Rack at back. 60 needles up. All hands at 17. All bolts (or stops) down. Work length required (about 2 yards), racking every row.

Men's Ties.

12 needles up. 1 and 2 hands at 17, 3 and 4 at 1. All stops down. After putting in comb and weight, &c., put up 1 and 2 stops, and work length required.

Fancy Stitches.

TRICOT STITCH.—3 needles up, 1 down, needles to come opposite the one that is down, whichever way the rack is moved. Rack every second or fourth row.

OPEN WORK FOR SOCKS OR STOCKINGS.—Set up and pick on same as for sock. Put every third stitch on to next needle on front. Do not pull down empty needles. Work 3 rows, and repeat. Start by putting second stitch on to next needle, then every third. Repeat.

For all Fancy Stitches, always have hands 3 and 4 at 1, 1 and 2 at 20 or 22. All bolts out.

VANDYKE STITCH.—Rack at back, 1 and 2 hands at 22, 3 and 4 at 1. Move rack at each end 20 times, miss once, rack 20, miss once, and so on for length required.

To make peaks smaller, rack 10 or 12 times, miss once, &c.

DOUBLE BABLE STITCH.—Set needles same as in 2 and 2 rib. Rack any way. 1 and 2 hands at 22, 3 and 4 at 1.

BASKET STITCH.—Set up needles plain, work 4 rows. Then drop 2 needles on back only. Have 10 up, 2 down, 10 up, 2 down. Repeat, then rack every second row for 20 rows. Then work 20 plain, 20 racked, and repeat.

TUCKING STITCH FOR BONNETS, &c.—All hands 16 or 17. Arrange needles any pattern. Do 2 rows, put up front bolts (or stops). Work 3 rows, put down front stops, work across, put up back stops, work 3 rows, put down back stops, work across, and so on reversing stops every 3 rows.



THREE AND THREE RIB FOR STOCKINGS.—Hands and bolts the same. Set all needles up plain. Set up and work 6 rows, then drop all back needles except 1 between each fourth needle on front, which is to be dropped also.

MOCK RIB.—Set needles 3 and 1 down. Pick rib on as usual and work same as for plain. For heel push up needles on back, so that all will be plain. Pick on cross stitches and do heel and foot, pushing needles in front before doing toe.

FANCY STITCH.—All bolts out. Hands 1 and 2 at 20, 3 and 4 at 1. Rack at back. Arrange needles any pattern. Thread machine, &c. Work whatever length is required, moving rack every second or third row.

Two and Two Rib.

Rack at back. All hands at 15. All bolts down. Arrange needles 2 up and 1 down. Thread up, &c. Draw rack to front after doing first row. Work length required.

Notes.

When the machine is knocking, or will not go across, see that all the needles are right up or right down.

If the machine will not work on front, see that the bed is closed.

If the wool is looping at one end, tighten tension by screwing same from you.

If one needle is dropping at the end pull it right down, or push one up on the other side.

If the machine is only stitching one side, see that all the bolts are right.

If the work is tighter at one side than the other, see that the hands are right.

If the machine will not work the end needles, take screw out of handle bar, and move up slide, so as to adjust handle. This attachment is only on the larger machines.

CARDIGAN means—Hands 3 and 4 at 1, 1 and 2 at 20. All bolts out.
HALF-CARDIGAN means—Hands 1, 2, and 3 at 18, 4 at 1. Bolts all out.

To remove broken needles, remove the bar or slide by pulling out with hook at corner of machine.

IN RACKING be sure to have the machine off the needles before moving the rack.

Do not try to move the rack or bolts with the machine in the centre.

If the machine jumps and drops 5 or 6 needles at end both sides, see that the block is right in the yarn-carrier, so that it moves freely.

If stitches are dropping without the wool breaking or knotting, undo the screw in yarn-carrier and lower it a little.

If it is knocking the latches of the needles, raise it a little.

The picking on of any stitches is made easy by pressing the work with a hot iron and wet cloth.

All work when finished should be well pressed. The sale of babies' things depends upon the finish. All work must be finished with a crochet edge.

The fancy stitches may be used for any of the patterns given.

If the stitches appear to be cut, see that all the latches are working well, or change the needle.

If the machine bumps when you get to a certain part, you will find the block of the needle broken at the bottom.

In changing hands from 15 to 3 and 4 at 1, and 1 and 2 at 20, change the hands always with the machine on the left hand side. Put hands 3 and 4 to 1, 2 to 20, turn machine to right, then put hand 1 at 20. In changing from this to all at 15, change hands 1, 2, and 4 to 15, turn machine to right, and put hand 3 at 15. Always finish with machine on left hand side.

FOR FOOTBALL STOCKINGS OR JERSEYS.—Tie on wools, work 30 rows for stripes. In setting up any rib, always move the rack. When you put in the comb, take the machine over, and put rack back.

Baby's Singlet.

50 needles up. All hands at 15. All stops down. Do 50 rows. Then push up all centre needles as high as possible leaving 12 on each side for shoulders. Take off weights and draw needles right down. Hold left shoulder and do $12\frac{1}{2}$ rows. Still hold shoulder strap, and draw down wool with hook, hold right strap, and work $12\frac{1}{2}$ rows for other shoulder. Push up centre needles from the springs, hold straps and work across. Put in comb and weights again and do 54 rows.

