

Directions for Working
Frister & Rossmann's

New Model
**Vibrating Shuttle
Sewing Machine**

(LOCK STITCH)

Sewing Backwards and Forwards

With Automatic Bobbin-Winder



SOLELY REPRESENTED BY

E. & O. Quitmann

18, City Road, Finsbury Square

London E.C. 1

PURCHASERS OF NEEDLES

are particularly requested to see that

F. & R.'s

TRADE MARK, thus:



is on all Packets of Needles they purchase, as inferior needles that do not work properly are being offered!!

Needles, Parts, Specially Prepared Oil, and all Requisites

For FRISTER & ROSSMANN'S SEWING MACHINES may be obtained from our Agents (the leading Drapers and Stores throughout the country).

A Staff of skilled mechanics is kept at our wholesale depôt, 18, City Road, Finsbury Square, London, E. C. 2. Repairs are attended to in the most efficient manner at the lowest cost.

All Machines sent for Repair must be forwarded **CARRIAGE PAID**, and should be sent **WITHOUT** the attachments.

Repairs may be forwarded either direct or through our Agents, the leading Drapers and Stores throughout the country. To ensure prompt attention, senders's name and address, together with full instructions, must be enclosed with machine.

CAUTION. — Purchasers of Needles are cautioned to insist on having packets of Needles with F. & R.'s Trade Mark on, as none others are the same needles, made on our own dies of the best quality and finish for F. & R. Machines. Do not be put off with inferior needles stated to be just as good, which frequently break the cotton and cause missing of stitches.

Directions for working the Vibrating shuttle sewing machine (sewing backwards and forwards).



The following directions will be found sufficient to enable anyone to acquire a perfect knowledge of the management of this machine without any personal instruction. The best plan for the learner to pursue is to carry out practically on the machine all the instructions given in each paragraph.

Before being sent out from the factory every machine is carefully examined in all parts, threaded and quite ready for use, so that there is no delay in starting to work. In order to avoid rusting in transit all parts are well greased before the machine is packed.

Having carefully taken the machine out of the box, wipe away the grease in case any dirt should have got into the machine from the packing material, pour a little parafin on such places, and remove the dirt with a soft cloth.

Be careful to note the guiding of the upper thread, and the thread round the winder in order to follow more easily the following descriptions.

Before starting to use the machine see that all parts are well cleaned and oiled.

§ 1. The Cleaning and Oiling of the machine.

To clean and oil the machine lift up the presser-bar A, by the lever D (see fig. 4) and let the needle bar B go up, then wipe all open parts above and beneath the bed plate, with a soft cloth, (the lacquered preferably with a soft leather), take the oil can filled with the best machine oil between your first and second finger, and press putting the spout into the oiling points, pressing

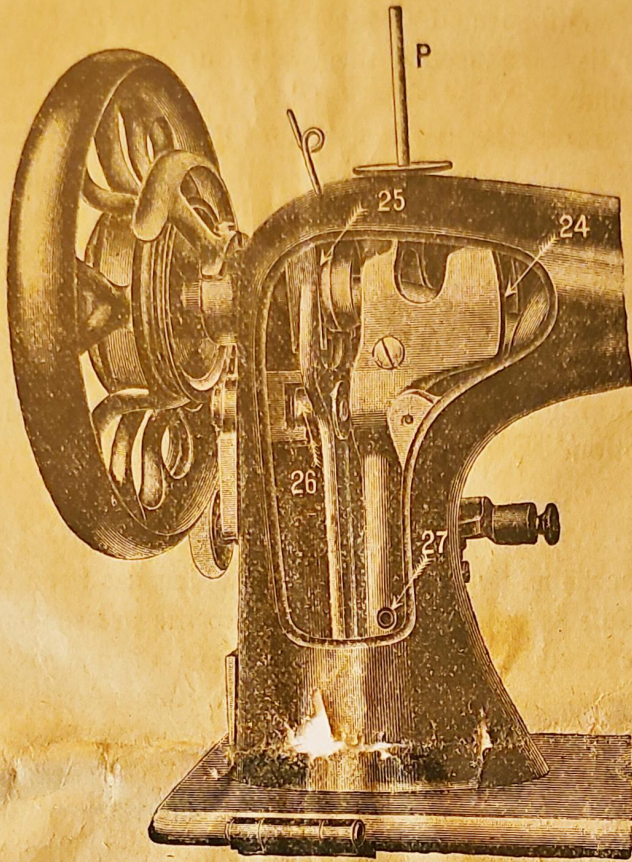


Fig. 3

The shuttle-race should be kept clean and when constantly in use should be well oiled.

Having oiled every necessary part put the machine in motion lifting up the presser-foot, so that the oil can easily penetrate into all the mechanism. Any oil that may overflow, must be carefully wiped away, in order not to soil the material.

If the machine has not been in use for some time and the oil has thickened, which shows itself by the heavy working, of the machine then act as when oiling, only instead of oil, paraffin should be used. Having in this manner loosened the thick oil, then re-oil the machine and carefully note that paraffin is only used for cleaning, but never for oiling purposes.

§ 2. Treadling.

In order to get well accustomed to the treadle, loosen the fly-wheel so that it does not injure the sewing mechanism un-

necessarily as illustrated C fig. 1 (page 2) in § 9, the fly-wheel C turns of its own accord then, without moving the other parts of the machine.

The nearer the person sits to the machine the easier the treading is. Raise the presser-foot E high, put both feet flat on the treadle and begin by turning the flywheel towards you with the right hand, and never in the opposite direction. with the instep in such a position as will enable the toes and heels to be used with equal power in treading, and have such control over the treadle as to be able to tread quickly or slowly at pleasure, stop and begin again until one has mastered the proper treadle motion.

§ 3. Guiding the material.

Connect the hand-wheel C fig. 1 which has been 'disconnected for the treadle purposes, having lifted up the presser-bar 4, remove the sample and in its place put a piece of material under the presser-foot E, now let the presser-bar down again, and thread the needle, and having opened the front slide F 1, fig. 1, and turned the hand-wheel until the shuttle carrier appears under the opening, take out the shuttle as illustrated (page 6) in § 7, then the slide F 1 must be closed again, now put the machine in motion, and guide the material in streight or uneven lines as required, until good results have been obtained.

Note:

The machine must not be put in motion without some material being put under the presser-foot, as otherwise the machine will get damaged, neither should the machine be put into motion while the shuttle and needle are threaded. Besides do not pull the material as this will cause the needle to bend, but let the machine feed without assistance.

§ 4. The stitch regulator and reversable feed.

The screw J to the right is for making the feed reserve from forwards to backwards. Adjusting the screw upwards the machine sews backwards, pressing it downwards it sews forwards, either way can be done while sewing without stopping the machine. To alter the size of the stitch adjust the screw J to the centre of the plate. By turning the screw to the left the stitch is

lengthened, by turning to the right it is shortened. After turning the screw it must be pressed either up or down. The backwards sewing is especially favourable for finishing off the ends of the thread, to avoid the seam coming undone. When starting a seam begin about an inch from the end, and sew backwards and then forwards to the end, after which backwards again, the ends of the thread can then be cut off and the seam will not come undone.

Should the work require extra strengthening and be cumbersome in turning on account of size, the backward sewing can be applied very favourably.

§ 5. To set the needle.

First raise the needle-bar B fig. 4 to its highest point, and pass the needle with the left hand into the slit of the needle bar

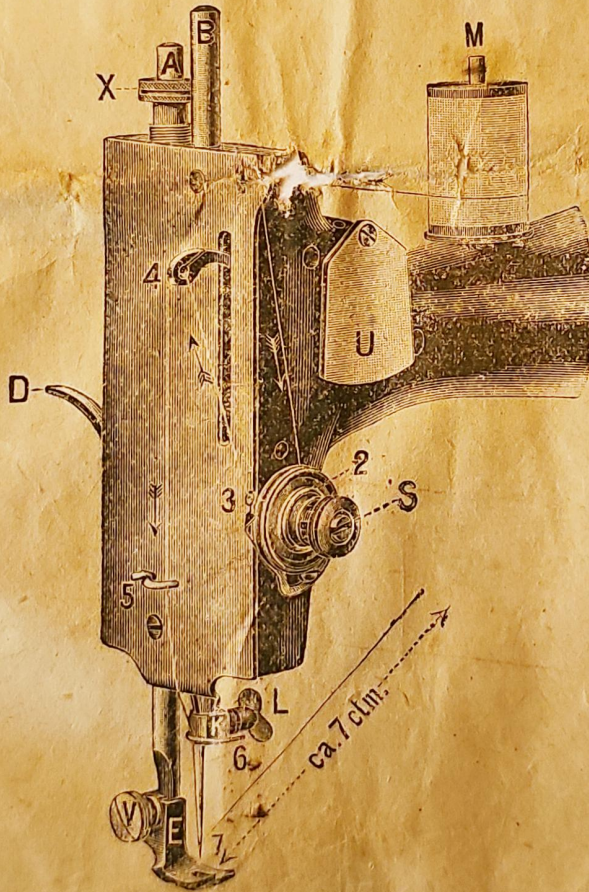


Fig. 4

so that the long groove of the needle is placed to the left. After the needle is placed as high as it will go under the clamp, tighten

the clamp screw L fig. 4. Inferior, bent, or blunt needles must not be used to sew satisfactorily. Choose the size of needles according to the work and size of cotton (see page 11).

§ 6. Guiding thread and threading needle.

Place a reel of cotton on spindle M fig. 4 and guide the thread through the needle-eye 1 downwards, then between the tension-discs 2 from right to left, and upwards again through the hook of the check spring 3. Then upwards into the slot of the thread lifter 4. downwards through the eyelet 5 on the head plate and under the hook of the needle holder 6, and finally from left to right through the needle eye 7. When the threadlifter is at its highest point then the thread must be pulled through the needle eye, about four inches, before starting to sew.

§ 7. Putting the shuttle into the machine and threading shuttle.

Before threading the shuttle, see carefully the position of the thread. The following description is easier to follow. In doing

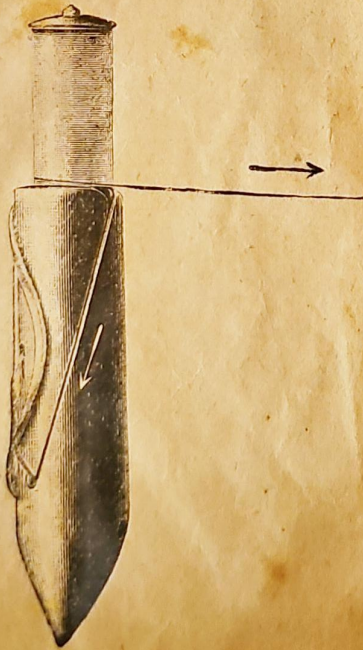


Fig 5



Fig. 6



Fig. 7

so take out the shuttle from the machine, raise the needle-bar to its highest point, draw the front lever as far as possible towards you, press down the shuttle lever on the shuttle carrier on the right hand. In doing so the shuttle will be lifted so far that one can easily take it out with the left hand, place it in a vertical position with the open end below. this will cause the bobbin to fall out. To fix a new bobbin take the shuttle between the thumb and finger of the left hand with the pointed end towards you and put the bobbin in the shuttle. so that the end with the hole in the metal disc shows upwards, fig. 5, then pull the end

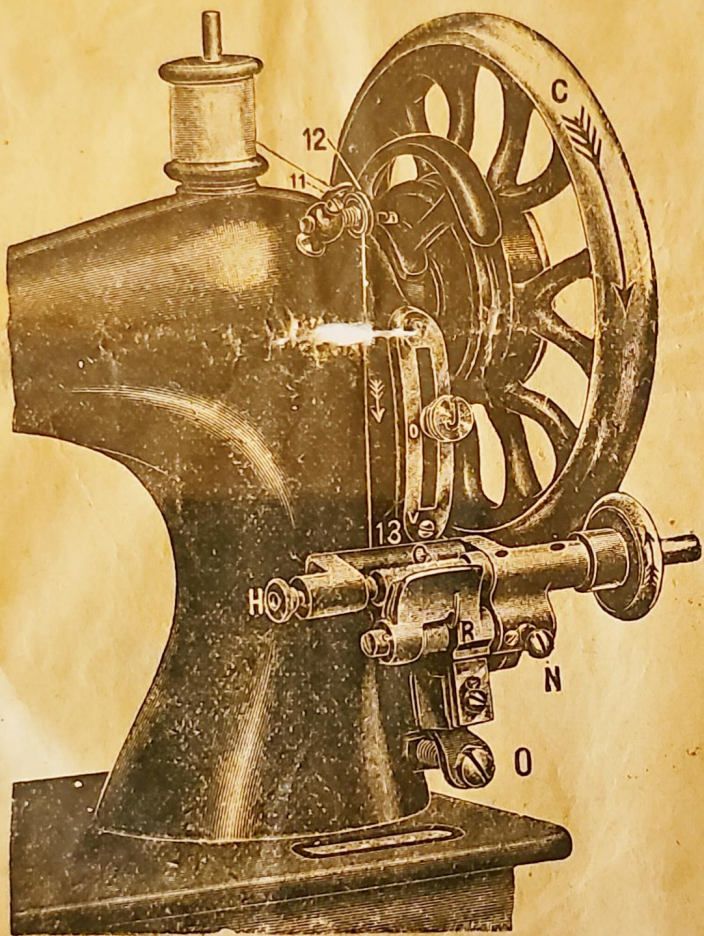


Fig. 8

of the thread through the slanting slot towards the point of the shuttle, as illustrated fig. 6, and then towards the open end under the tension spring of the shuttle fig. 7, this completes the threading of the bobbin which then is ready to be put into the shuttle.

Attention should be paid that the thread must unwind to the right when the shuttle is in a position as fig. 5. To regulate the tension turn the little screw near the pointed end of the shuttle to the right if you want to increase, and to the left if you want to diminish the tension. Before commencing to sew close the slide F, and the loose thread must be pulled up. For the latter purpose take hold of the upper thread with the left hand and with the right hand turn the flywheel once round, until needle-bar is at its highest point. The lower thread then appears as a small loop above the stitch hole, and must now be pulled out with the assistance of a pointed tool.

§ 8. Winding the bobbin.

Observe carefully the threading of the machine when sent from the factory, guide the thread to the bobbin from the reel through the eyelet 11, and the two tension discs 12 to the lower part of the bobbin 13, under the well of the spindle to the front

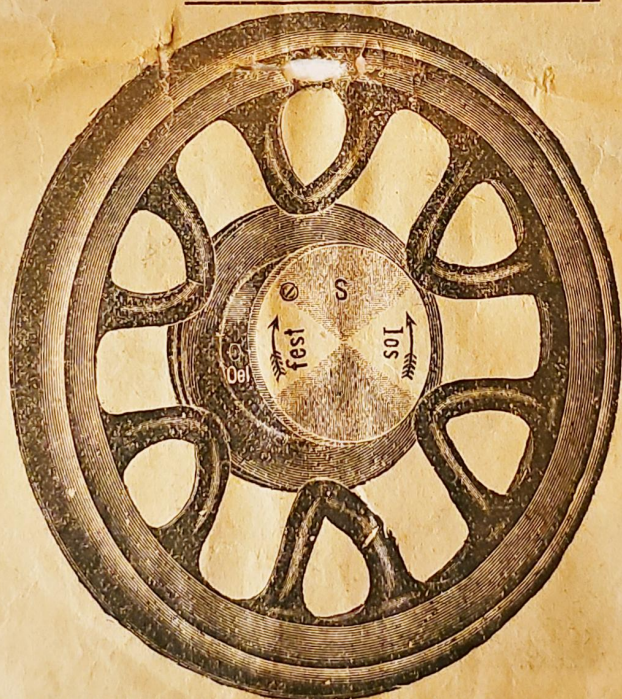


Fig. 9

bobbin G. The bobbin G must be put into such a position into the well of the spindle Q that the pin fits into the hole of the metal disc, by pulling the piston H out and guiding the left point of the bobbin into the centre of the bobbin H. Put the end of the thread

between Q and the right brass disc of the bobbin. Push up the winder N and set the flywheel C into motion which causes the threading of the bobbin. The winding of the bobbin is done automatically while sewing. When the bobbin is filled it jumps out automatically. Should the bobbin not work of its own account owing to the india-rubber ring being worn, tighten same by screwing the screw O at the lower end of the winder so far backwards until the rubber ring is pressed firmly against the hand-wheel.

§ 9. Loosening the hand-wheel whilst winding.

In order to disconnect the fly-wheel hold the wheel with the left hand, and turn the friction screw which is on the right side, to the left (loose). By turning the screw to the right (firmly) the machine is again connected with the fly-wheel. The disconnection of the fly-wheel shall be made use of

Whilst practising to treadle.

Whilst winding the bobbin.

As long as the machine is not in use.

§ 10. Sewing.

Having now made all the preparations according to the instructions given, one should start sewing. Place a piece of material (laid double) on the needle plate, so that it covers the stitch-hole, let down gently the presser-foot, put the two ends backwards under the presser-foot, slowly turning the small fly-wheel, and then sew treading with the feet. The material should only be guided, on no account should it be pulled or drawn, the machine itself does this. Now sew in different directions, slowly turning the material to the left or right, at times quickly, at others slowly, for the sake of practice, changing the length of stitch.

Having finished the sample, and in order to remove same from the machine turn the fly-wheel so that the needle is at its highest point, lift up the presser-foot, this releases the tension automatically with lever D fig. 4, draw out backwards the material with both hands under the presser-foot, and cut off two thread ends, on the thread cutter fixed on the presser-bar. Try samples in layers of different thicknesses, also in cloth and silks, etc. When sewing across seam tread slowly, and slightly lift the presser-foot.

In the case of sewing sharp corners let the needle remain in the stitch that is to form a corner. When the needle is in its lowest position lift up the presser-foot a little, turn the material by using the needle as turning point to the angle required, let down the presser-foot and begin sewing.

§ 11. The regulation of tension.

By drawing the 2 threads together at each stitch the machine produces the double stitch which will not come undone. In order to sew a straight seam the threads must be placed cross-ways (loops) as illustrated in fig. 10, the stitch is at its best when it appears the same on both sides of the material without being puckered. This can only be done by regulating the tension of both threads and by using the correct size needle and cotton.

Drawing of thread in the middle of material



Correct tension of upper and lower thread

Fig. 10

Loop stitch on top, upper thread not drawn



Upper thread drawn too tight or lower thread too loose

Fig. 11

Underseam loops, under thread not drawn



Upper thread too loose, or under thread too tight

Fig. 12

If there are loops showing on the upper side of the material as in fig. 11, the tension of the upper thread is too tight, and if it shows on the surface of the material under as in fig. 12, then the tension of the upper thread is too loose. All this is regulated by the screw S fig. 1. By screwing to the right the tension of the upper thread becomes tighter, and by turning to the left the tension of the thread becomes looser. If the correct stitch cannot be obtained by regulating the upper thread, change the tension of the shuttle (lower thread) by regulating the screw of the shuttle. Usually the regulation of the tension of the upper thread is sufficient.

§ 12. The regulation of the cloth presser-bar.

If more pressure should be required on the material, turn the screw X, fig. 4, to the right, and if less pressure is required turn the screw X to the left. For ordinary work the cloth presser-bar should not be changed.

§ 13. Indicating size of needle and thread.

The thread must be placed so that it can easily be drawn through the eyelet, and that the loop formed by the stitch fills the hole caused by the needle. The size of the lower thread must be finer than the upper thread, should the latter be too fine for the needle it causes an uneven seam, and if too coarse loops appear on the under surface of the material, besides being drawn too much the material puckers and the thread breaks. It is natural that with thicker material a tighter tension is required than with a soft pliable material, and size of needle and cotton has also to be considered. When sewing thick calico the needle is liable to get warm through friction, to avoid this run a little dry soap on the sewing surface.

When buying needles ask for the Vibrating Shuttle Machine Needles, quality (691). Should same not be procurable order them at agents and enclose money order.

In order to choose the right size needle which is required for the material in use, it is advisable to follow the following table:

Table Indicating size of thread and needles
(to be used for Vibrating Shuttle Machine.)

No. Needle	No. Cotton	No. Thread silk	linen	CLASS OF WORK
10 or 0	150-100	000	—	Very fine linen, thin silk material, very fine muslin, voile and nett.
11 „ B	100-80	00	—	Linen, thin calico, very thin calico thin silks, thin whitte material.
12 „ 1/2	80-60	0	—	Calico, silks, muslin, sheeting, thin wool material, thick linen.
13 „ 1	60-50	A	—	Thick silk, thick calico, thin wool material, thicker Linen.
14 „ 1 1/2	50-40	B	80-60	Wool material, ticking, drill cloth boy suits, ladys coating, suiting.
15 „ 2	40-20	C	60-50	Thicker wool material, buckskin thick drill, thick dress material.
16 „ 3	—	D	50-40	Thick overcoat material, very thick winter material, thick taylors material.

§ 14. Hindrances and faults whilst sewing.

If the machine does not sew satisfactorily and skips some stitches, or the thread tears, the cause might be as follows

1. The needle is not according to directions (see § 5) and has not been properly set, it is either too low, blunt or bent, or has too sharp an eyelet for the size of cotton or material in use, or is of inferior quality and not suitable for the machine.
2. By not using the right cotton suitable for the needle and material (see § 13) or the cotton may be of uneven thickness or knotted, or of inferior quality.
3. The tension of the thread may not be regulated accordingly (see § 11).

When skipping stitches examine the needle first, the cause as a rule is easily rectified. Should the thread tear when the needle is properly set, the needle-eye may be too sharp (when tearing, the thread frays at the ^{place of break}) or the tension too tight, or the needle too fine for the cotton or material, or the shuttle may have a sharp edge. When the shuttle thread tears, the lower thread tension may be too tight, or the stitch hole in the needle plate may have become sharp through setting the needle. Should the carrier after constant use not act properly after sewing thick material, loosen the screw, raise the carrier, and tighten the screw again. When the driving belt has become slack, and slips off, remove same and cut a piece off, pierce a new hole for hook and connect both belt ends by means of the hooks. The belt must not be stretched too tightly so as to prevent the machine from working freely. Should the machine not work satisfactorily after following these instructions, refer to the firm where the machine was purchased, don't tamper with the machine as it may cause injury and the repairs of which may take long time.

§ 15. Attachments.

1. The Ordinary Presser.
2. The Straight Guide (Fig. 13).
3. The Quilter Guide (Fig. 14).
4. The Narrow Seam-feller foot (Fig. 15).

5. The Broad Seam-feller foot (Fig. 15).
6. The Seam Feller (Fig. 16).
7. The Corder No. 1 (Fig. 17).
8. The Gatherer (Fig. 18).
9. The Straight Guide Screw.
10. The Packet of Needles Assorted.
11. Four Extra Bobbins.
12. Screw Driver.
13. Shuttle Screw Driver.
14. One Oil Can.
15. One Instruction Book.

§ 16. Use of Appliances.

To get well into the working of the machine practice the use of the following appliances, for which directions as follows are given.

1. The Presser.

The presser is connected to every machine on the presser-bar A, by means of the screw 5 (see fig. 4) and is used for ordinary work. It is also used as follows

- with the straight guide.
- with the quilting guide,
- with the seam feller foot,
- with the binder.

2. The straight guide.

The straight guide (fig. 13) serves to guide the material in a straight line. The straight guide is fastened to the plate by the guide screw, and the edge parallel with the guide as illustrated in (fig. 13). The guide can be fixed in various distances from the stitch hole. In connection with the straight guide the presser-foot is used. Should a long narrow seam be required, continue to turn down the already started seam, and guide the material by means of the straight guide.

3. The quilter guide.

The quilter guide is used for quilting padded materials if straight lines and squares are required. It is attached by a screw on the presser bar by means of the gauge arm as illustration

(fig. 14). The gauge arm can be adjusted to the required distance from the stitch hole according to the size of the squares required. After having tacked the material on the wadding, so as to keep it

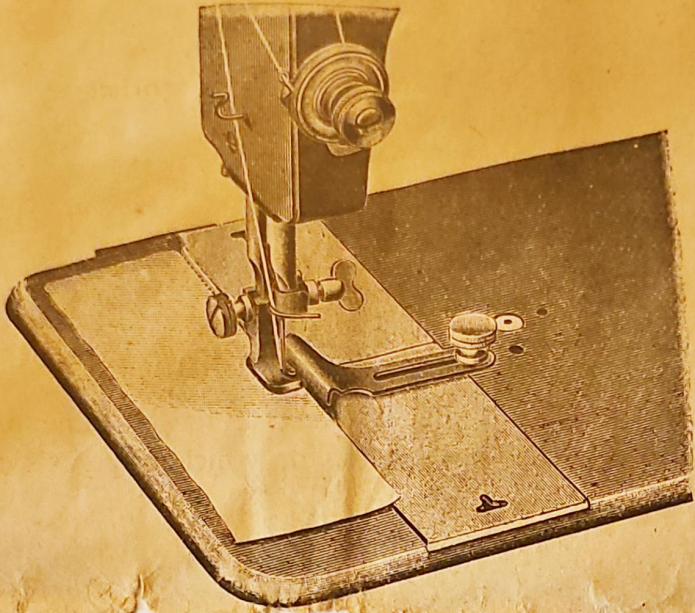


Fig. 13

firm, sew the first seam so as to obtain a straight line, as illustrated. After having fixed the appliance by means of the screw, adjust the

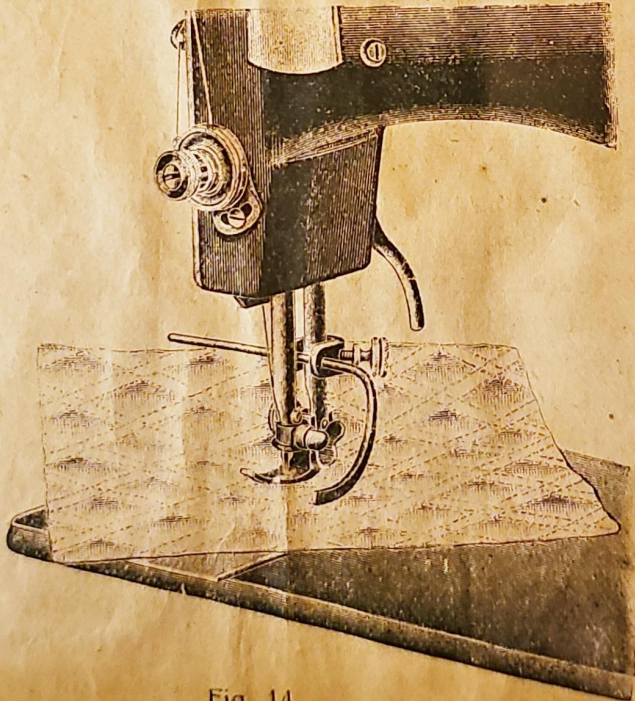


Fig. 14

gauge arm to the required distance for the next line of stitching, and guide the material with the line already sewn directly under the gauge arm. This second line serves in a like manner as a guide for a third and so on, thus forming the squares.

4. The narrow hemmer. ($2\frac{1}{2}$ mm seam)

5. The wide hemmer. (4 mm seam)

The hemmer figure 15 is attached in place of the ordinary presser foot on the presser-bar. For starting seam turn down the edge of the material and draw it according to the width of hem required, through the hemmer under the needle allowing sufficient material for the hem to be turned down double. Guide the folded seam by means of the thread with one hand and the

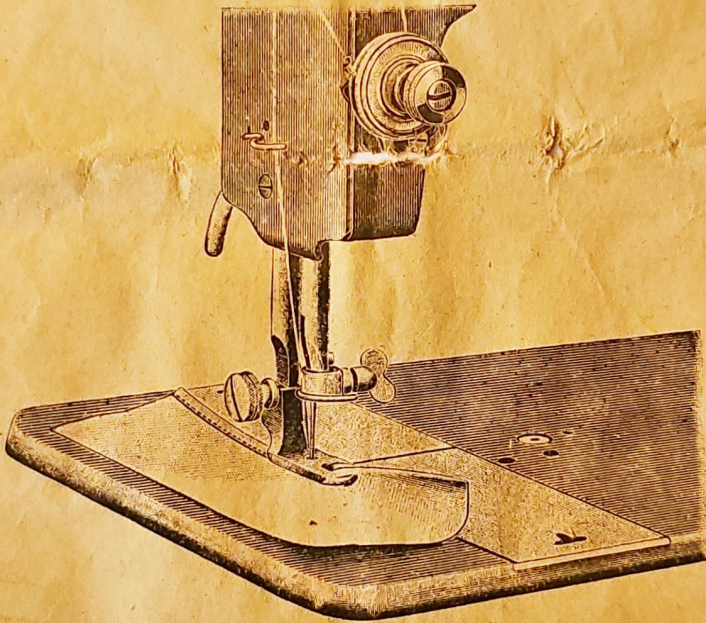


Fig. 15

material in the other, drawing it towards you. When the seam is prepared for hemming and is ready to be stitched down, drop the hemmer gently and start machine, by guiding the folded material with the left hand, several trials will soon show the manipulation as too much material must not be allowed to enter the hemmer thus causing the seam to pucker. The hemmer must always cause the stitches to be made close to the edge of the hem. After a little practice the guiding thread can be dispensed with by

cutting the lower piece of stuff as close as possible to the seam, which will pass it through the hemmer with scarcely any guidance of the hand.

6. The seam feller.

The seam feller differs from the seam hemmer by not having any spirals. In felling a seam lay the two materials together, but

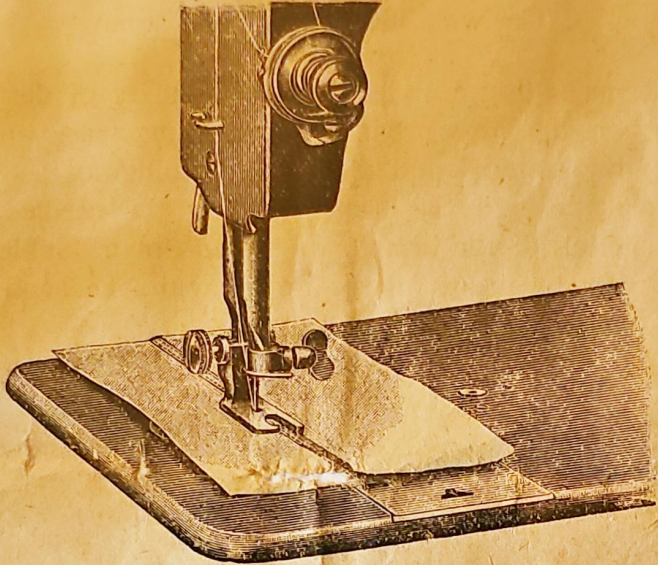


Fig. 16

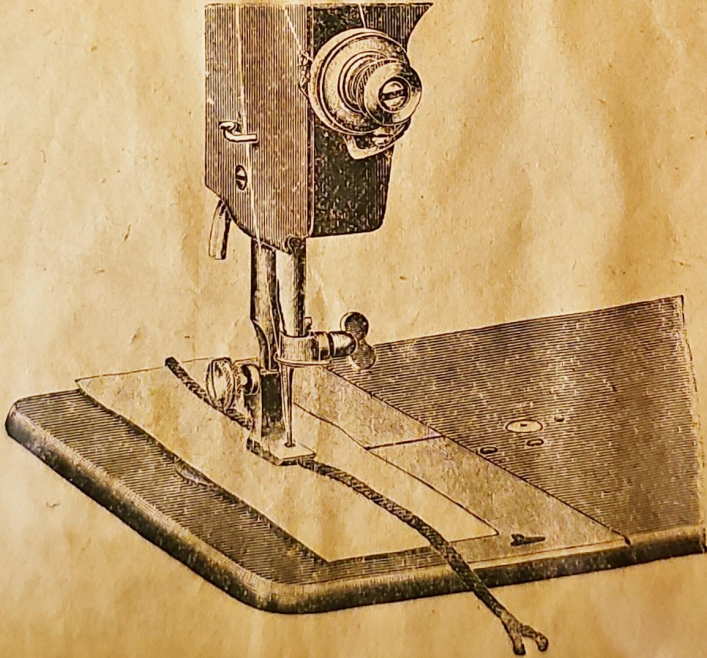


Fig. 17

let the edge of the lower piece project about a quarter of an inch, it is this projecting edge alone which must be run through the feller, and in this way the two pieces are joined. This done spread the stuff out, smooth the seam a little and pass the upright edge which is now formed again through the feller to be stitched down.

7. The corder No. 1.

The corder fig. 17 is furnished with one large groove on its undersurface. After dress material and lining have been seamed together spread them out and lay the cord in groove of the presser, and sew it with rather large stitches, exactly over the seam.

8. The gatherer.

The gatherer fig. 18. When using the gatherer on double material the undersurface will be frilled or pleated while the upper surface remains firmly stitched. The lower material is placed as usual under the appliance, the upper guided into the slit of the

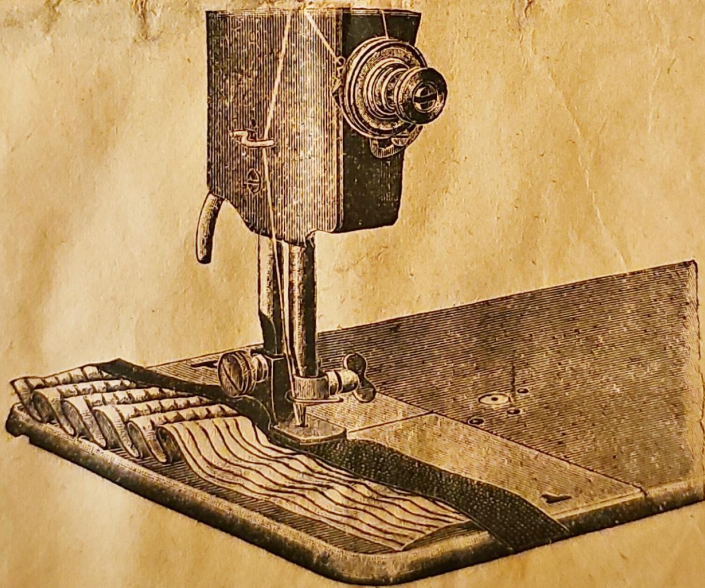


Fig. 18

gatherer. The upper material is guided when sewing by the slit, while the lower is pushed forward by every movement of the projecting part, and put into small pleats. The longer the stitch the fuller the pleat. There is more lower material required than for

the upper, the management of which will require some practice. Note that single material can be pleated or gathered by means of the ordinary presser, by taking stronger cotton making the stitch long and the tension of the upper thread very loose, which enables the operator to gage the seam on the lower thread.



NEEDLES



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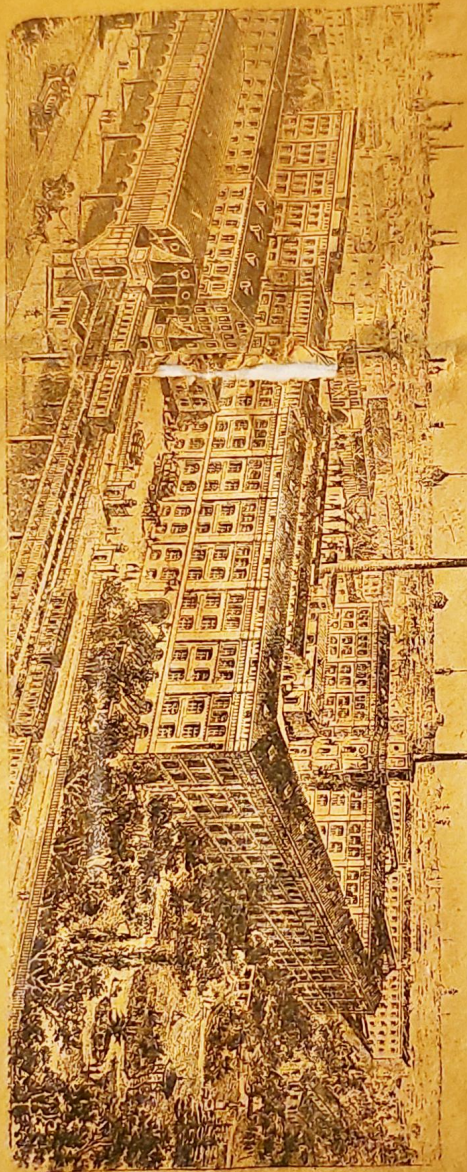
Needles  with
& R.'s TradeMark

on the Envelopes, as only Needles,
supplied in the Packets with the
Trade Mark on are the Genuine
Needles made on our own dies of
the Best Quality Steel, finished with
the greatest care and guaranteed
to give complete satisfaction



Medals

- INT. SYDNEY. 1879
- ALTONA 1881
- CRYSTAL PALACE 1881
- AMSTERDAM 1883
- INT. LONDON 1884
- TEPLITZ 1884
- INT. EDINBORO 1886
- ADELAIDE 1887
- MELBOURNE 1888
- BERLIN 1889



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