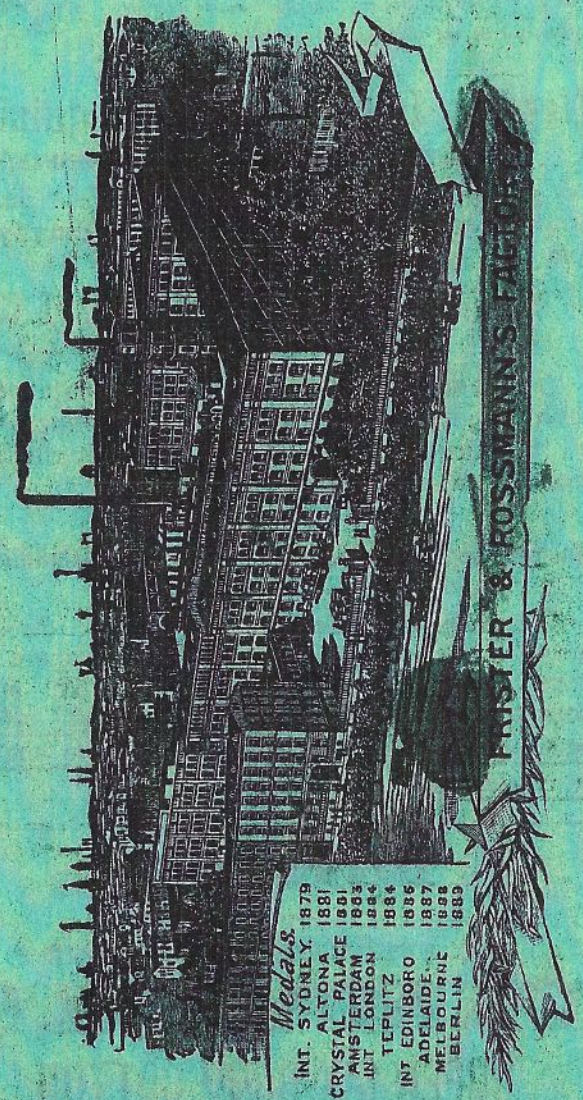

Instructions for Working

FRISTER & ROSSMANN'S

. . NEW . .

Vibrating-Shuttle Sewing Machine

(LOCKSTITCH)

With Automatic Bobbin-Winder.

Sole Agent

W. PIERSSENE,

49, Fore Street, . .

LONDON, E.C. . .

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THINGS TO BE REMEMBERED.

Every machine is perfectly adjusted and sent out in perfect working order. Should the learner therefore find a difficulty in working it at the outset, the fault usually lies in her inexperience. Under these circumstances it is advisable to see if the needle is properly set and the tension correctly adjusted, in accordance with the directions given in pages 1 and 5, before any alteration in the machine itself is attempted.

Should the thread break, it is either because :—

1. The tension is too great (see page 5) ; or
2. The needle is too fine ; or
3. The needle is not properly set, or does not move reely in its hole (see page 2) ; or
4. The eye of the needle is sharp, or the point blunt, which is almost sure to be the cause of the evil if the thread is found to be frayed at the place of breaking ; or
5. The feed-points do not push forward the work with regularity, or are impeded in their action by dirt, ends of threads, or want of oil ; or
6. The needle-plate is not properly secured.

NEEDLES.—In purchasing be sure to note that F. & R. TRADE MARK is on the packet, and take no others.

If stitches are dropped, it is due to one of the following causes :—

1. The needle is set too low, or is bent (see page 2) ; or
2. The needle is too fine ; or
3. The machine is dirty and not well oiled, so that it runs irregularly.

The presser-foot must rest on the feed ONLY WHEN THERE IS MATERIAL BETWEEN.

The back shuttle-slide must not be opened.

The shuttle-race must be kept perfectly clean.

Material must not be pulled or pushed through the machine : the feed-teeth need no assistance.

Do not allow any canvassers to touch your machine, as in all probability they will maliciously injure it.

As machines are rather heavy, we advise users not to carry them about by the handle on the walnut cover, as this produces undue strain upon the lock, which might give way, and cause damage to the machine.

If properly used, kept clean and regularly oiled, the machine will last a very long time. Should, in course of years, any part become spoilt, or break it can be immediately replaced by application to this office, and in most cases the parts can be refitted with ease. Should your machine seem to be so thoroughly out of order as to need alterations and repairs which you do not like to undertake personally, take it off the table and send it together with an explanation of the fault you find with it, to the place you bought it from, or direct to us for adjustment.

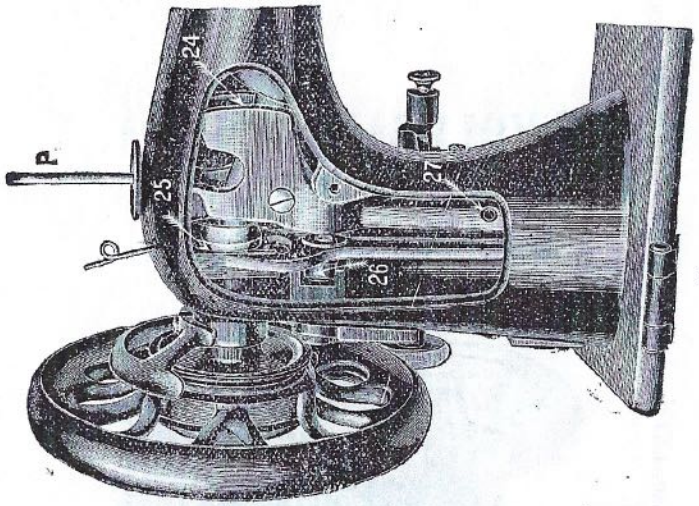


FIG. 3.

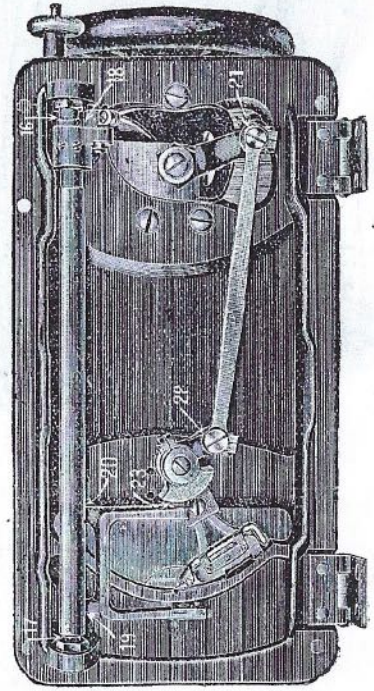


FIG. 2.

should closely follow whilst you are sewing the second. The third should be sewed whilst the gauge is following the second, and so on. The same with the cross rows. The best squares are made if the material is stitched on to the wadding itself, without lining.

AN EXTRA ATTACHMENT.—THE TUCK-MARKER.

(*This appliance is NOT included with the Attachments given gratis with each machine, but is charged for extra*, **price 2/- each.**)

DIRECTIONS FOR USING THE TUCK-MARKER.—Attach the marker to the machine by means of the thumb-screw, passing the needle through the eye in the wire upon the marker-lever. Adjust the guide to the desired width for the tuck, and the marker to the required distance from the line of stitching for the centre of the next tuck. Fix both thumb-screws firmly, then crease the first tuck, place it under the measure-bar, stitch the tuck, and the action of the marker will gauge and mark the next one ready for folding.

U.—CLEANING AND OILING.

When a machine is in CONSTANT use, it should be oiled frequently. The little holes which may be observed on it are oil-holes, and lead to those parts subject to friction. In starting to clean the machine, it would be well to put with the oil-can a few drops of kerosine or paraffin into all the oil-holes, then raise the presser foot and work the machine for a short time; this will send all the dirt and dirty oil down into the oil-pan underneath, so that it can all be cleaned off. Raise the cloth-presser (*e*) Fig. 4, by means of the lever (*d*) Fig. 4, and set needle at its highest; then remove carefully, with a soft rag, all old oil, dust, and dirt, and let a drop of lubricating oil trickle out of the oil-can on to the places numbered from 1 to 27 in Figs. 1, 2, and 3.

Machines must be constantly Oiled at holes 3, 4, and 5 (see fig. 1, page "A.")

Use only our specially prepared sewing machine oil, which combines all the requirements of a perfect lubricant free from all foreign and deleterious matter, and is *quite odourless and stainless*. See that our name is on the bottle. Vegetable oil must be strictly avoided, as it clogs the machine, and makes it run heavy, and at last stick fast.

HAND APPLIANCE.—The parts of the Hand Appliance being subject to considerable friction, it is therefore necessary that all its parts should be kept well oiled, especially the BOLT on which the large cog-wheel turns. A small hole is made for oiling this special part.

In the treadle-stand the following places have to be oiled:—The fly-wheel, where it turns on its axis; the two ends of the wooden pitman which moves the fly-wheel; and, lastly, each side of the foot-plate. **The shuttle-race must be kept very clean, and when continually used must be often oiled.**

S.—THE BINDER.

This attachment is used for binding articles of clothing, hats, etc., without it being necessary to tack on the binding first. Adjust the binder to the width of the binding by sliding the guide nearer to or farther from the hooks. Place the end of the binding in the binder with its edges in the hooks of the binder, so that it will pass easily through. Then attach the binder to the machine by means of the thumb-screw, so that the needle will pass as near the edge of the binding as may be required.

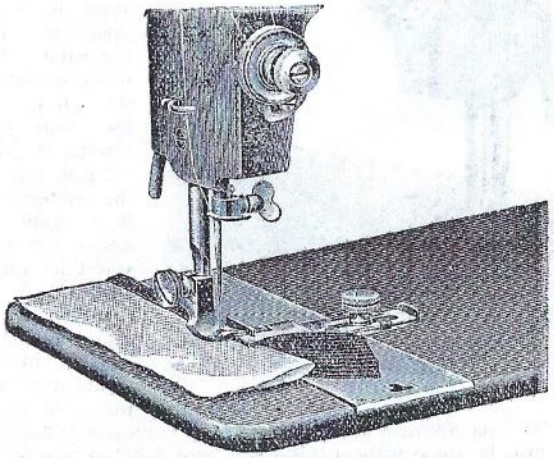


Fig 20.

Place the edge of the article to be bound between the hooks of the binder and close to the guide, and proceed to sew it on. The distance of the stitching from the edge of the binding may be varied by moving the guide of the binder nearer to or farther from the needle.

T.—THE QUILTING GAUGE.

The quilting guage is an exceedingly useful attachment, as by its help, rows of equal breadth and symmetrical corners may be sewed without being necessary to first draw them on the material. Attach the gauge to the braider, Fig 19; make first of all an ordinary straight seam, then push your material as far to the right from the needle as you wish the width to be between the two rows, and place the gauge so that its lower part is just on the first row of stitching which it

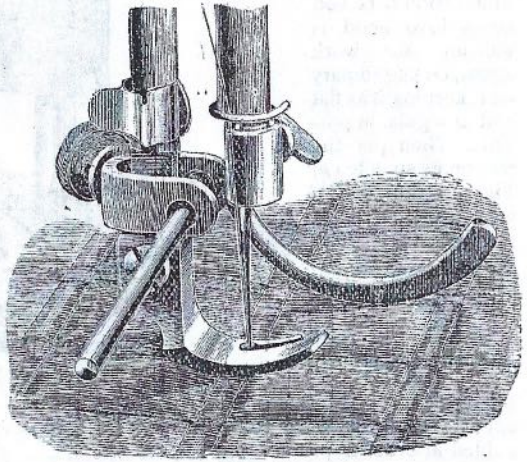
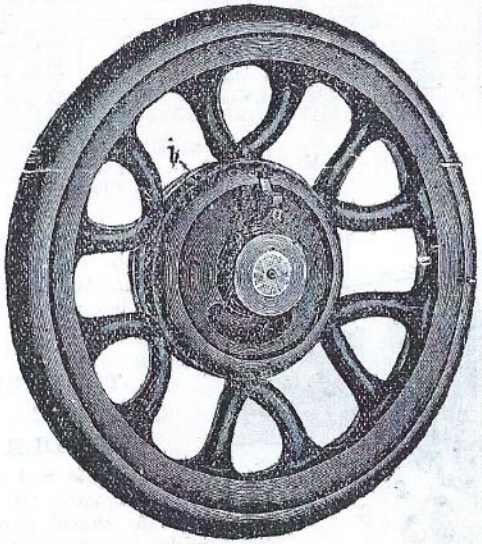


FIG. 21.

FRISTER & ROSSMANN'S

New VIBRATING-SHUTTLE Sewing Machines.

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, one by one, all the instructions given in each paragraph, whilst another person reads them aloud. Never be in a hurry, but master one paragraph thoroughly before proceeding to the next. Before starting to work the machine, the learner should note carefully both how the needle is set, and also the way in which it is threaded up. Each machine is thoroughly tested and threaded up before leaving the warehouse, so that it can be used immediately by the purchaser.



A.— THE PATENT LOOSE WHEEL ACTION.

To prevent accidents to the working parts, the fly-wheel is disconnected from the shaft in the arm To connect the fly-wheel, push the steel connector (*a*), which you will find on the outside of the fly-wheel, into slot (*b*).

B.—SETTING THE NEEDLE.

To set the needle, turn the fly-wheel slowly towards you until the needle bar (*b*), Fig. 4, see page 2, is at its highest point. Now loosen screw (*l*), Fig. 4, see page 2, take the needle between the thumb and forefinger of the left hand, and from below push it as high as possible into the slot in the needle-yoke, so that the flat shank of the needle is facing the fly-wheel, and thus the long groove in the needle will face in the opposite direction. Screw the needle firmly in this position, care being taken that it ascends and descends exactly in the middle of the needle-plate hole. If the needle is set too low, stitches are dropped, or the needle may be broken. It will thus be seen that the adjustment of the needle is of the highest importance

Great care must be taken that none but Frister & Rossmann's Needles, which are of the very best quality and finish, are used. See that F. & R. TRADE MARK is on each packet, as these are the only genuine needles made for F. & R. Machines.

We mention this as we find that much inferior Needles, which do not work properly, are being offered for sale, and cause users of F. & R. Machines a great amount of unnecessary trouble. Always ask for Needles for F. & R. *Vibrator*.

When the machine is continually in use, the position and motion of the needle should be examined daily. If the point is blunt, or rough, it would be advisable to take the needle out and put in a fresh one. It is especially to be recommended that needle and thread always match one another—*i.e.*, that the latter is just thick enough to completely fill up the groove of the needle when it passes through the work, and we therefore give you below a table shewing the numbers of the needles and the cottons to be used with same.

RELATIVE SIZES OF NEEDLES AND THREADS.

Sizes of Needles Vibrator.	Class of Work to Sew.	Size of Cotton.
7	Very thin Muslin, Cambrics, etc.	100 to 200 Cotton
8	Linens, very fine Calicos and Silk Goods	80 to 100 Cotton
9	Muslins, Silks, and general Domestic Goods	60 to 100 Cotton
10	Sheetings, Shirtings, Bleached Calicos, etc.	40 to 80 Cotton
11	Light Woollen Goods, heavy Silks, Seaming, etc.	36 to 50 Cotton
12	Heavy Calicos, Woollen Goods, Cloaks, Mantles.	30 to 40 Cotton
13	Tickings, heavy Woollens and heavy Clothing generally	20 to 40 Cotton

NOTE.—Glazed threads should not be used, but always good cotton, such as Chadwick's.

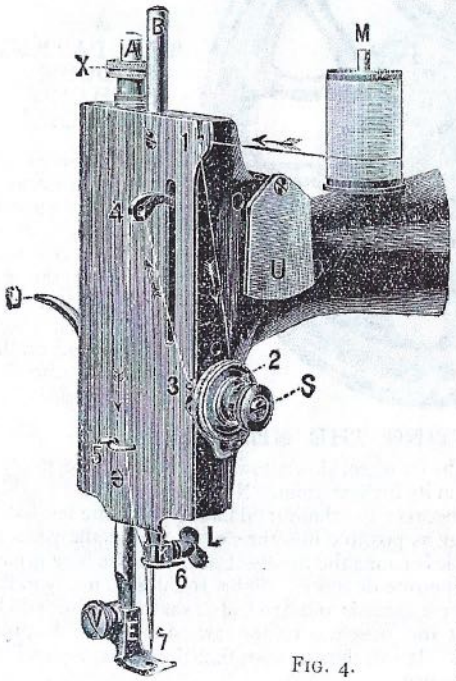


FIG. 4.

If greater strength is required for seams, use same thread in both shuttle and needle, but threads as above table make a prettier stitch.

C.—THREADING THE NEEDLE.

Place the reel of cotton on the spindle (*m*) Fig. 4, take the thread through the eyelet (1), then between the tension-discs (2) from right to left, pass it through the hook of the spring (3), now take it upwards over the hook (4), and behind the hooks (5 and 6), and finally from left to right through the eye of the needle (7). About two inches of thread should be drawn through the needle before commencing to sew.

Q.—THE GATHERER.

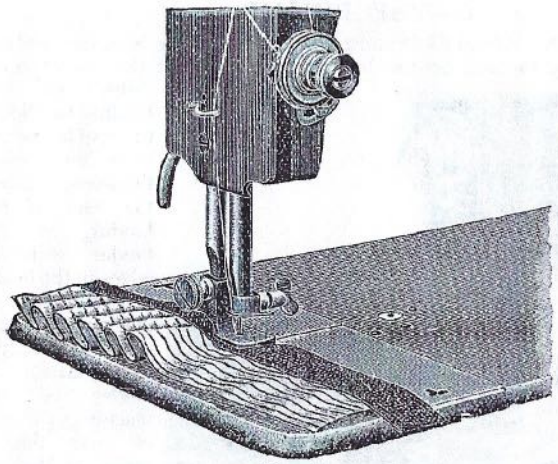


FIG 18.

With the aid of this simple little accessory, a piece of stuff may be frilled and a band sewn on at one operation. Place the material to be frilled underneath the foot, and the band above through the slit in the gatherer. As the feed-teeth work only upon the under material, whilst the upper is shielded from them by the slit, the under is gathered in small pleats; the longer the stitch the fuller the pleat. The management of this apparatus requires some practice.

Frilling can also be done without this attachment, both on two-fold and single-fold stuff, in the following way:—Set a long stitch and a loose upper tension, so that the lower thread lies straight along the fabric; then pull the end of this lower thread, push the work together from both sides, as is done in performing the same operation by hand, and the frill is ready.

R.—THE BRAIDER.

Wind your braid, which should be soft (as a hard braid is difficult to work upon), on an ordinary reel, keeping it as flat and as regular as possible. Then put the reel on its spindle (*p*) Fig. 1. The braiding attachment shewn above has an opening in it, in front of the needle-hole, through which the braid is drawn so as to pass right under the needle. The size of the opening may be adjusted by means of the screw at the side. The work has now only to be guided in order to produce any required design.

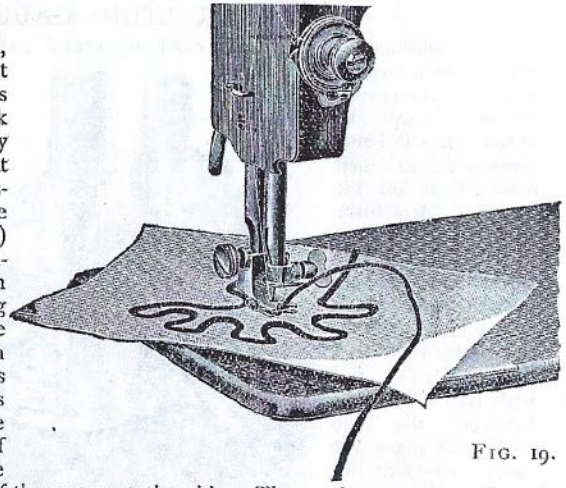


FIG. 19.

O.—THE CORDER, No. 1.

The corder is used for sewing cord in collars, cuffs, etc. It has two grooves on its under surface, which guide the cord and also press the upper material round it, so that the work has a beautiful raised appearance.

Make a row of stitching along the material, then spread the material open and place the cord against the seams, close the material and make a mark down beside the cord with any sharp instrument, and stitch in the mark. See that it always runs in that groove of the corder which is next the needle, that is, which lies immediately under the needle. In sewing several rows of cord parallel to one another, the row last sewed goes in the right-hand groove, the one to be sewed in the left.

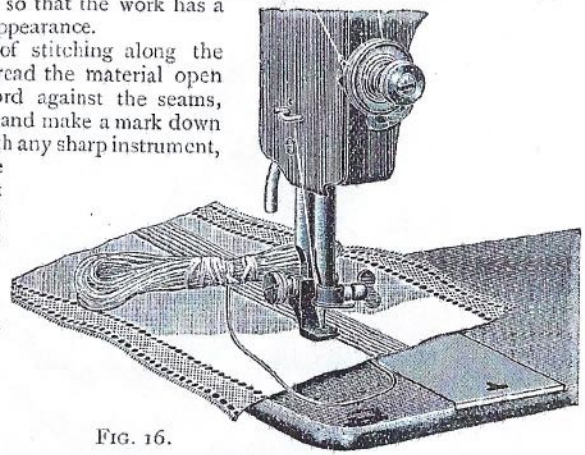


FIG. 16.

P.—THE CORDER, No. 2.

This corder, which is fastened in the usual way to the machine, is furnished with one large groove on its under surface, its object being to sew a cord round the skirt of a dress, etc. After the dress material and the lining have been sewed together in the usual way, spread them out with the right side uppermost, then lay the cord in groove of the presser and sew it with rather large stitches exactly over the seam, that is to say, between lining and dress. When the lining is turned up, the cord will be at the edge of the skirt.

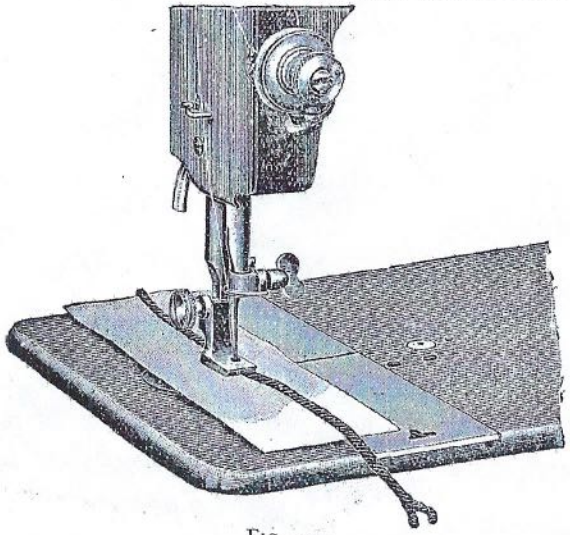


FIG. 17.

D.—WINDING THE BOBBIN.

When winding the bobbins, disconnect the upper fly-wheel from the machine proper by pulling out the steel connector, which you will find on the outside of the fly-wheel; this done, the upper fly-wheel can be driven without moving the whole mechanism. The connection can be re-established by pushing in the steel connector, as shewn on page 1. Place the reel on the spindle nearest the fly-wheel, pass the cotton, as it comes from the reel, through the eyelet (11) Fig. 5, between the two tension-discs (12), then under the bar (13), and then into the hole at the end of the bobbin from the inside; now press down the gate (*r*), and insert the bobbin in the winder so that the hole at the end fits over the pin (*q*); draw out the piston (*h*) and place the other end of the bobbin in position; then push up firmly the knob on winder at point (*n*), and that will connect the winder with the fly-wheel, and proceed to wind the bobbin by turning the handle of the machine. If needed, the bobbin can be wound whilst the machine is being worked, as it requires no attention, and disconnects itself when full.

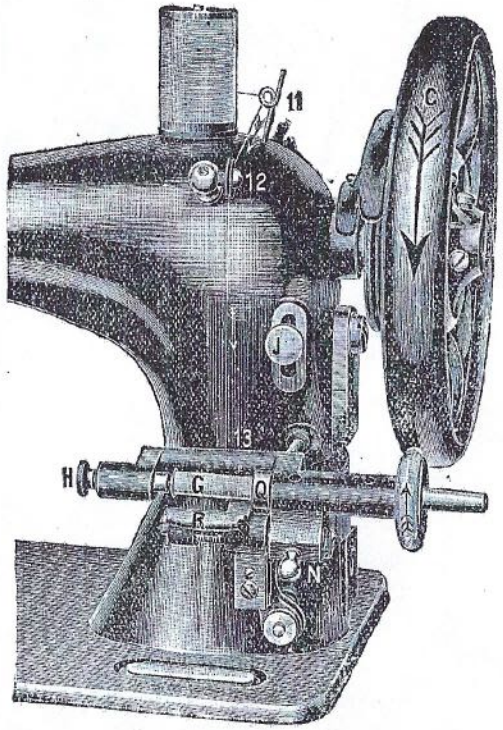


FIG 5.

E.—THREADING THE SHUTTLE.

Having taken the shuttle out of the machine, 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 fingers of the left hand, with the pointed end towards you, now put the bobbin in the shuttle so that the end with the hole is shewing, Fig. 6, then pull the free end of the thread through the slanting slot towards the point of the shuttle, Fig. 7, and then towards the open end of the shuttle, Fig. 8. The end of the bobbin should be pressed by the first finger whilst the shuttle is being threaded.

The tension of the shuttle is obtained by turning the little screw on the tension-spring by means of the smaller screw-driver given with the machine; the deeper it is screwed the tighter the tension will be. A half-turn at the time is advisable.

FIG 6.

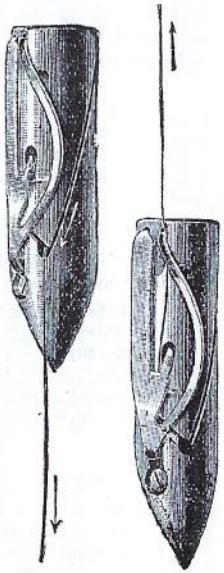


FIG 7.

FIG 8.

OILING OF SHUTTLE-RACE.

This should be constantly oiled when machine is being used continually and to do this properly a small piece of muslin should be moistened with oil and rubbed over the face of the shuttle-race, and also put a few drops of oil on the wad in the shuttle-race oil hole under the front shuttle slide, at least once a day when constantly used.

Caution—Do not allow lint or dust to accumulate in the shuttle or under the shuttle-tension spring, as any foreign substance inside the shuttle (particularly in the inner end) will prevent the proper action of the bobbin; and under the tension spring, will render the shuttle tension inoperative.

F.– SEWING.

Both threads having been properly arranged, observe the following directions:—Draw out the slide (*f* 1), Fig. 1, see page A, and place the shuttle in its carrier so that the point is towards you, and the tension spring is shewing; now pull the thread out about two inches and draw the upper thread about two inches through the eye of the needle. Hold the end of the upper thread with the left hand, whilst with the right you turn the upper fly-wheel ONCE ROUND, so that the needle descends and ascends again to its highest position, by which means the under thread is drawn through the needle-plate in a loop, which must be drawn out. Raise the presser-foot (*e*), Fig. 4, by means of the lever (*d*), Fig. 4, see page 2, put both ends of the cotton behind, and take care to close the slide (*f* 1), Fig. 1. This being done, place the work under the presser, lower the latter, then set

M.—THE ADJUSTABLE HEMMER.

The adjustable hemmer is screwed to the cloth-plate in the same way as the tucking-gauge. To introduce the material, turn down its edge about three-eighths of an inch, and then draw it, according to the width of hem required, through the hemmer under the needle, in doing which care must be taken always to allow sufficient material to enter for the hem to be turned down double.

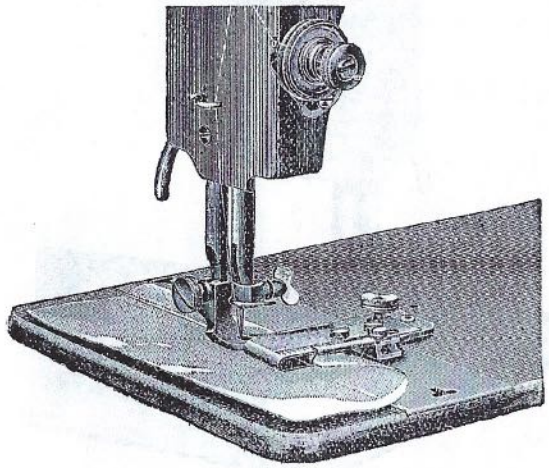


FIG. 14.

To adjust this hemmer to hems of different widths, loosen the screw in the slit a little, which will release the graduated plate. The smallest hem is made when the index is at the right-hand end of scale. The screw must be secured again before sewing.

N.—THE SEAM-FELLER.

The seam-feller is screwed on to the machine in the same way as the narrow hemmer. In felling a seam, lay the two materials together, but 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 seam-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.

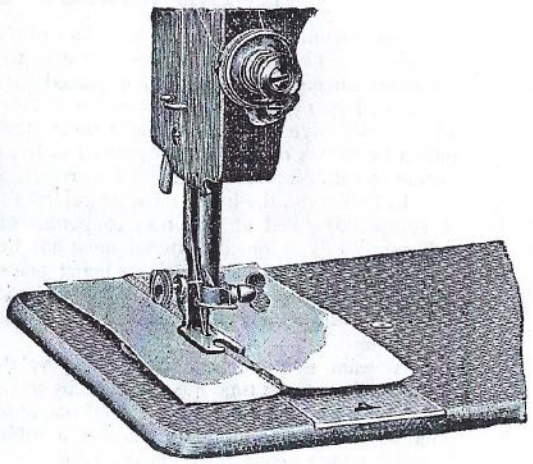


FIG. 15.

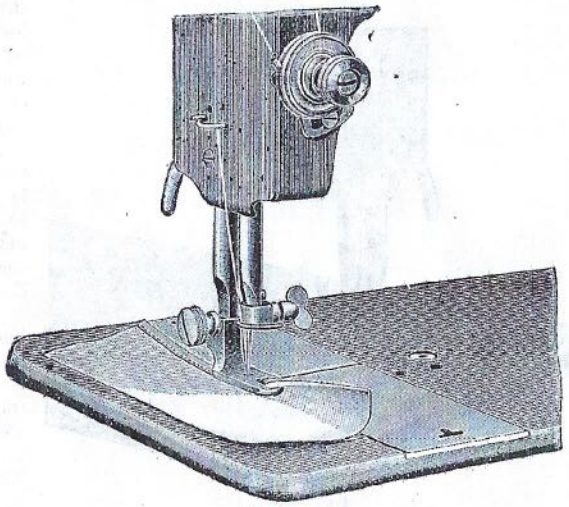


FIG. 13.

L.—THE NARROW HEMMER.

This hemmer is secured, in the place of the ordinary presser, by the screw (*v*), Fig. 4. The end of the fabric you wish to hem, after being turned down for about an eighth of an inch, is placed into the twist of the hemmer, as shewn in Fig. 13, and comes out with a double hem beautifully turned down, whose inner edge is guided straight under the needle. The fabric must be pulled by means of a thread, or pushed with a pin, far enough forward for the needle to catch it; then let down the presser, and begin to sew carefully.

In hemming, the fabric must be guided so that the mouth of the hemmer is completely filled up, in order to permit of the hem being turned down sufficiently. Too much material must not be allowed to enter; this defect would easily arise from the fabrics being pressed more or less inwards while entering the hemmer. A few trials will soon shew the right manipulation.

The hemmer must always cause the stitches to be made close to the edge of the hem.

A seam may be beautifully made by this hemmer, with a degree of precision for a long time not attained by any sewing machine. To do this, lay the two pieces of stuff to be joined one above the other, as is customary in hand-sewing, and sew them together at a sufficient distance from the edge to form later for a hem. Then cut the lower piece of stuff as close as possible to the seam, and let the upper pass through the hemmer, which can be done with such extreme accuracy as to need scarcely any guidance with the hand.

the machine regularly in motion, guiding the work, but taking great care not to pull or push it, as this might break the needle. In passing overhard parts, or across seams, sew slowly, and turn the fly-wheel carefully with the hand, so as not to bend or break the needle.

When you wish to remove the work, let the needle be at its highest point; then raise the presser-foot so that the cotton may run freely through the eye of the needle without bending it, and draw the material away TOWARDS THE BACK of the machine, at the same time pulling it slightly outwards to the left. Careful observance of this rule will prevent the breaking of many needles. Should the under thread break in removing the work, take the shuttle out, and loosen the tension by SLIGHTLY unscrewing the little screw of same; then draw the thread out about two inches and proceed as before.

Immediately the work is finished care should be taken to raise the presser-foot, otherwise the teeth of the feed would be damaged.

G.—TO ALTER THE LENGTH OF STITCH

At every stitch the work is moved forward by the FEED. The length of the stitch may be regulated, as required, by means of the thumb-screw (*f*) Fig. 5, see page 3, near the bobbin-winder. To alter the stitch, loosen the thumb-screw by turning it to the left once or twice (that is, towards the needle-arm), and if a larger stitch is required, push downwards; if smaller, push upwards. A few trials will shew the result immediately. As soon as the stitch is adjusted to the required size, secure the screw firmly by turning it round to the right

H.—THE TENSION.

The tension of the upper thread demands especial attention, because on it depends the perfection of the stitch. It should always be so regulated that both threads are uniformly drawn together and woven into the middle of the material.

FIG. 9.

FIG. 10.

FIG. 11

The stitch is at its best when it appears as near as possible the same on both sides of the material, as in Fig. 9.

The tension discs (*z*) Fig. 4, are regulated by the screw (*s*). If this be screwed up, that is by turning it to the right towards the fly-wheel, the tension becomes tighter; if unscrewed, that is by turning it away from the fly-wheel, it becomes looser. The screw must only be turned slightly, as the effect on the stitch is immediate.

The shuttle-thread tension, see page 4, must first be adjusted, and then that of the upper thread must be regulated in accordance with it.

To test the tension of the shuttle-thread, draw it towards the blunt end of the shuttle. If it draws as tightly as it will bear without breaking, the tension is right for thick and closely woven fabrics; but for soft and thin

materials it is too tight, and must be loosened by the tension-screw in the shuttle being unscrewed.

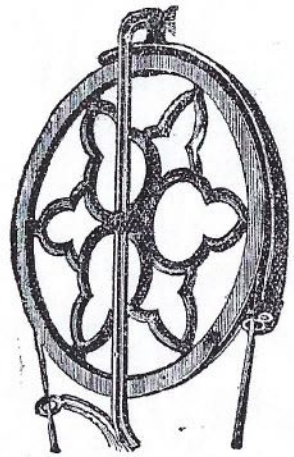
After stitching a little, examine both sides of the material. If loops appear on the under surface of the fabric, as in Fig. 11, or, if the lower thread lies flat upon it instead of being drawn up into it, the upper tension is too loose, and must be tightened by screwing up the tension screw (*s*), see Fig. 1, page A. If, on the other hand, the work is puckered, and the upper thread breaks or lies flat on the fabric, the upper tension is too tight, and must be loosened by unscrewing the tension screw. If the lower tension is right, it should not be altered in the cases just mentioned—any change required for same should be made in the upper tension.

I.—THE TREADLE ACTION.

Before working the machine, the learner should, by practice, obtain such control over the treadle as to be able to tread quickly or slowly at pleasure, and also to tread so that the fly-wheel always moves towards the operator. The feet should be placed flat on the treadle, with the instep in such a position as will enable the toes and heels to be used with equal power in treading. The upper fly-wheel is started with the right hand, by turning it TOWARDS the worker; NEVER in the opposite direction.

When the machine is set in motion without any stuff being under the needle, the presser-lifter (*d*), Fig. 4, must be raised, so that the teeth of the feed-bar do not rub against the cloth-presser (*e*), Fig. 4.

Having mastered the proper treadle-motion, the learner should take a piece of material and place it under the cloth-presser, which should then be lowered by means of the lever (*d*), Fig. 4. Without threading the needle, set the machine in motion in order to become accustomed to the guiding of the work, which should first be guided in straight, and then in curved lines.



F. & R.'s DRIVING BAND ADJUSTER.

This contrivance does away with the often troublesome task of throwing off and replacing the driving band, and is operated as follows: For throwing off the belt, press the small lever at the top of the dress-guard to the left with the forefinger, whilst still keeping the treadle in motion, and this lever will disengage the belt from the fly-wheel. To put on the belt, allow the lever to spring back again to its original position, and work the treadle as in sewing (with wheel turning towards you) and a single revolution of the wheel will bring back the belt to its place in the groove of fly-wheel.

J.—THE CLOTH-PRESSER.

The cloth-presser serves to press down on to the cloth-plate and feed the material to be sewn. It is moved by means of the lever (*d*) Fig. 4. At the lower end of the cloth-presser (*v*), are fastened the various attachments. When sewing thick materials it is often advisable to slightly tighten the screw (*x*), Fig. 4, so as to increase the pressure on the work.

THE IMPROVED ATTACHMENTS.

GIVEN WITH EACH MACHINE.

1. Twelve needles, assorted.
2. Six shuttle bobbins.
3. One tucking-gauge, with thumb-screw.
4. One adjustable hemmer.
5. One narrow ,,
6. One medium ,,
7. One seam-feller.
8. One ordinary presser.
9. One cording ,, No. 1.
10. One cording presser, No. 2.
11. One braider.
12. One adjustable binder.
13. One quilter.
14. One shuttle.
15. One extra needle-plate.
16. One screwdriver.
17. One oil can.
18. One gatherer.
19. One instruction book

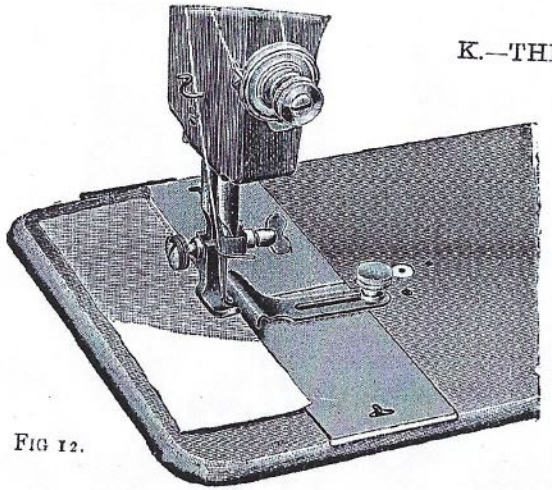


FIG 12.

K.—THE TUCKING GAUGE.

If a seam has to be made parallel to an edge, screw this apparatus to the cloth-plate and adjust its straight-edge to the same distance from the needle as you wish the seam to be from the edge of the work.

This attachment is used for making tucks, and also when it is desired to sew in a straight line, or when two parallel lines of stitching are required. The troublesome drawing of lines is thereby avoided.