ILLUSTRATED

DIRECTIONS

FOR OPERATING

THE NEW HIGH ARM

DAVIS

VERTICAL FEED

SEWING MACHINE

AND ITS

ACCESSORIES AND ATTACHMENTS.

ILLUSTRATED DIRECTIONS

FOR USING THE

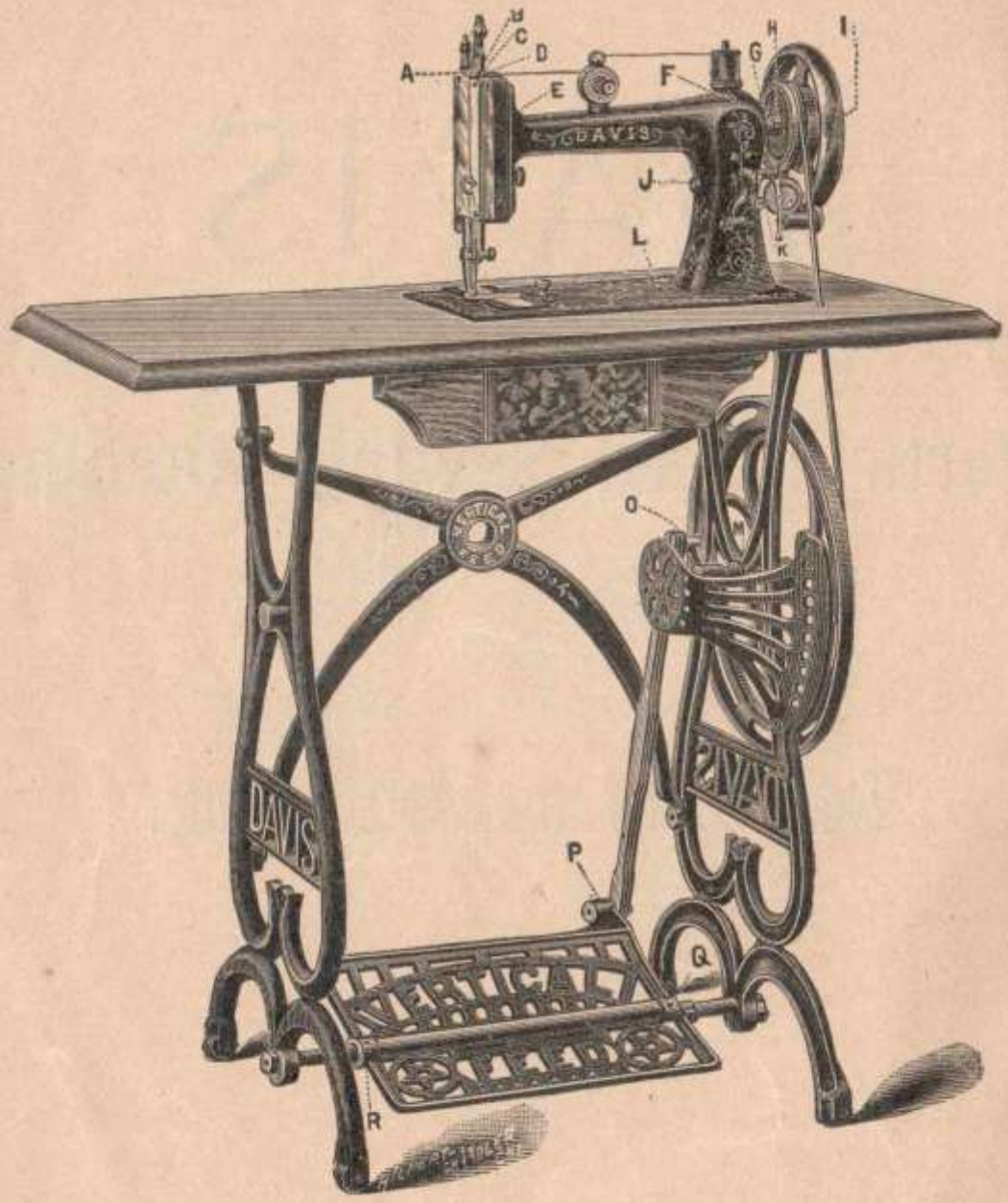
NEW HIGH ARM

DAVIS

Vertical Feed Sewing Machine

AND ITS

Accessories and Attachments.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DAVIS
VERTICAL FEED

DIRECTIONS FOR OPERATING

THE

NEW HIGH ARM DAVIS FAMILY SEWING MACHINE.

Before the machine leaves our hands it has been minutely inspected, and every mechanical defect corrected; it has been tested with various sizes of thread, ranging from No. 40 linen to No. 150 cotton, and found to work satisfactorily in every respect.

When unpacked the machine should be found in complete running order, threaded ready for sewing, and with a sample of work under the presser foot, as it came from the hands of the inspector.

Parties who have never used "The Davis" before, should first observe how the machine is threaded; but if, from any cause, it should become unthreaded in transportation, the operator should follow the directions for threading, given hereafter.

OILING THE MACHINE.

This is the most important rule to be observed, for care in oiling the bearings insures durability and ease of motion, and prevents premature wear.

To oil the parts inside of the head, raise the needle bar to its highest point, and put one drop on each side of the needle and feed bars, one drop in each of the two holes in the top of the cam house, and the same quantity in the holes at each end of the arm; swing aside the arm plate (the plate at the back of the arm) and oil the bearings of the eccentric lever on the center screws, put one drop in the hole in the center of the bed plate, one on the journal of the balance wheel, and one on each of the bearings of the pitman and treadle.

To insure a free movement of the loose pulley (Hand Wheel) when winding bobbins, a little oil should occasionally be put in the holes H and I.

The places which should be oiled, as above described, are indicated by the letters A, B, C, D, E, F, G, H, I, J, K, L, M, O, P, Q and R, in Fig. 1.

Occasionally a little oil should be applied to the connection between the eccentric lever and the shuttle lever, to do this the head may be tipped back on the table.

Run the machine several revolutions swiftly to distribute the oil on the bearings; then wipe off all excess of oil, that it may not soil the work or clothing. If the machine runs hard because of the use of poor oil, or if it becomes gummy by long standing, use a little kerosene (which will soon remove the gum) after which apply good fresh oil.

Fig. 2.

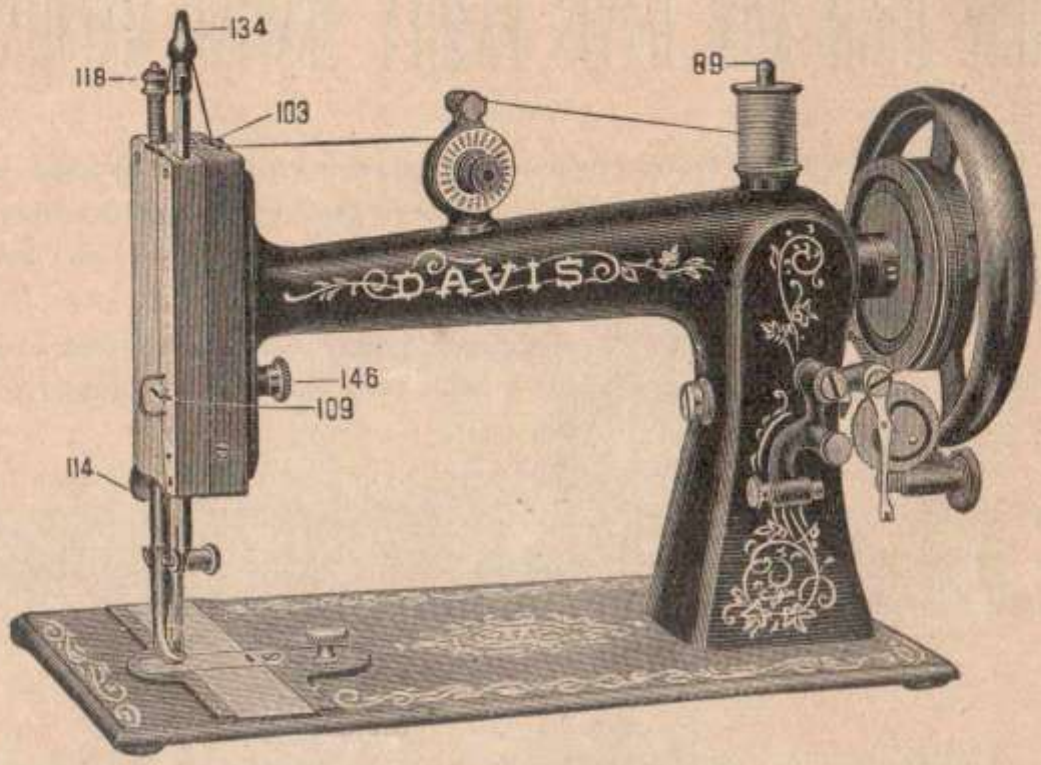


Fig. 3.

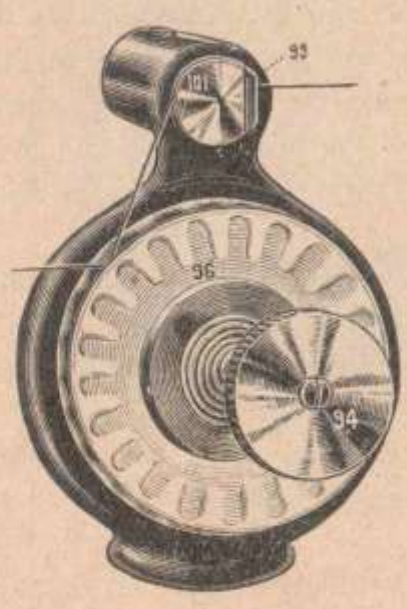


Fig. 4.

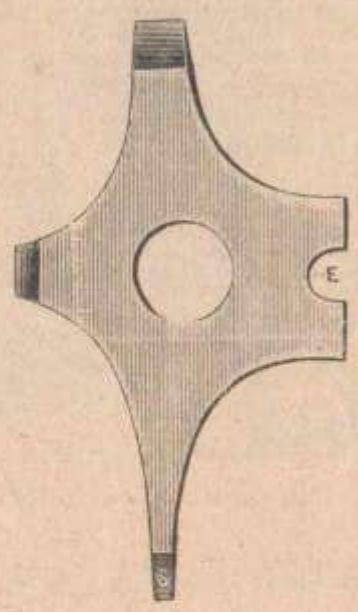
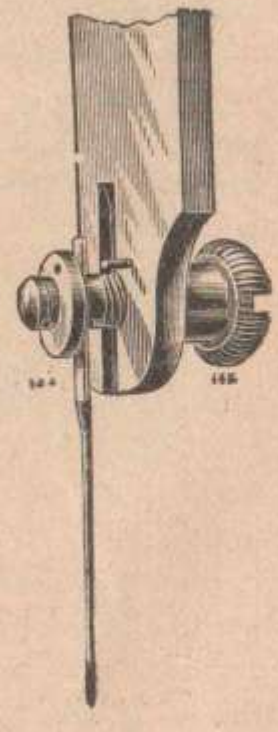


Fig. 5.



THREADING THE MACHINE.

See Figs. 2 and 3, Page 4.

First raise the needle bar to its highest point. Place the spool of thread on the spool pin 89 (Fig 2). Draw the thread up into the slot or hook, of the tension thread check 99 (Fig. 3), and between the check and the head of the stud 101 (Fig. 3); then once around the tension wheel 96 (Fig. 3); then under the thread guide 103 (Fig. 2); then through the slot in the needle bar top 134 (Fig. 2); then down back of the staple in the face plate, drawing the thread forward through the staple, and over the point of the thread controller 109 (take-up), as shown in Fig. 2; then through the hole in the needle yoke 144 (Fig. 5); then through the eye of the needle, leaving the thread about three inches long.

SETTING THE NEEDLE.

See Fig. 5, Page 4.

Hold the needle between the thumb and first finger of the left hand, and pass the point down through the slot in the throat plate; then pass the shank up through the hole in the needle yoke 144, with the flat side to the needle bar, until the end of the shank is a trifle above the head of the needle yoke. Secure the needle firmly by the nut 145. The side E of the combination screw driver (Fig. 4, page 4,) can be used to tighten the nut.

The bottom of the loop should be one-eighth of an inch below the point of the shuttle, just as it enters the loop.

If linen, or silk, or very coarse cotton is used, the needle should be set a little lower than the directions indicate; and a little higher for very fine thread.

TO REMOVE THE NEEDLE.

Loosen the needle nut 145, and the needle can readily be taken out.

THE THROAT PLATE.

The throat plate is provided with two slots. The larger one is adapted to the use of a No. 3 or No. 4 needle; the smaller one for all finer needles. To adjust the throat plate, loosen the screws which hold it in place and remove the plate; reverse and replace the plate, taking care to have it in such position that the needle, when going down will, pass *close* to the right hand side of the slot, but without touching it.

The needle should pass perfectly straight down through the front end of the slot, *without touching* the end or either side.

Fig. 6.

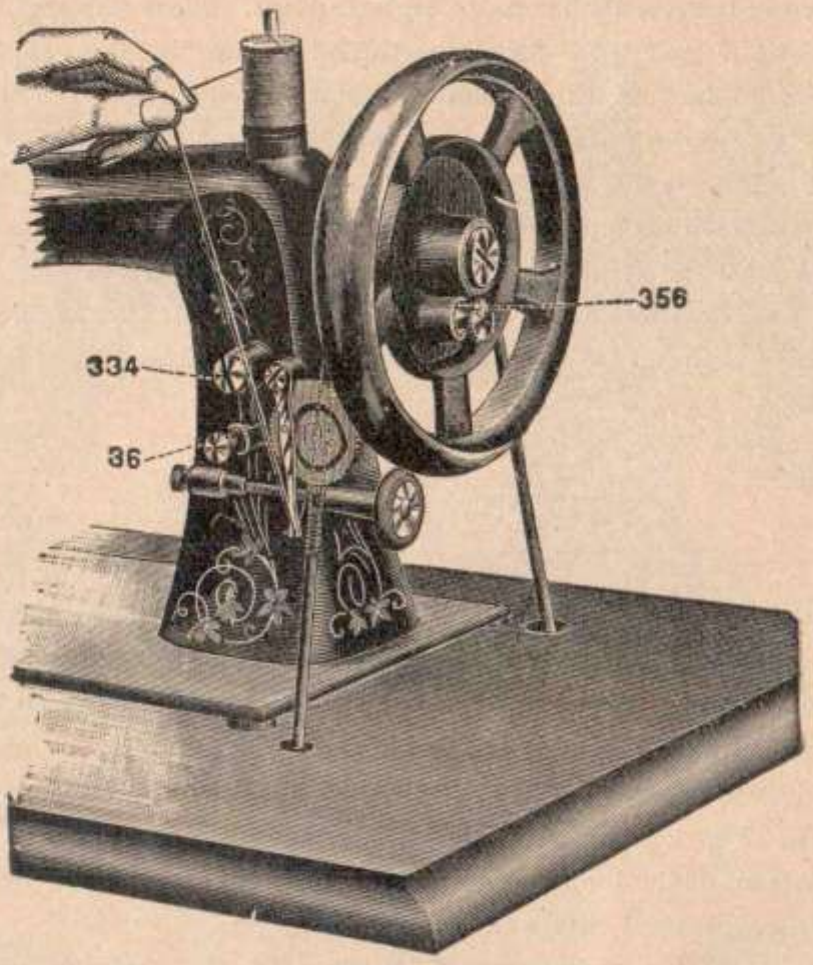
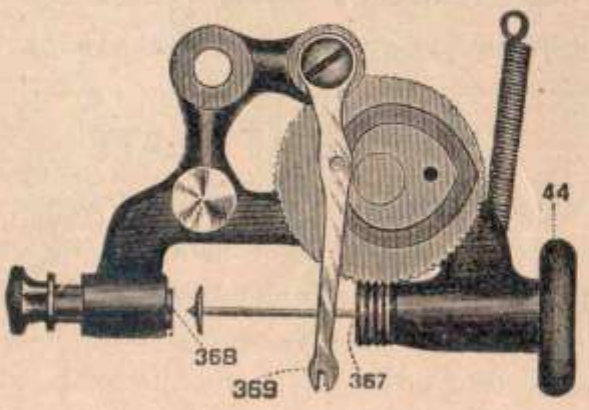


Fig. 7.



WINDING BOBBINS.

Se Figs. 6 and 7, page 6.

The Bobbin Winder is attached to the front of the arm of the machine by the screw 334, upon which the winder is swung in or out of position. A spiral spring is attached *both* to the *winder* and *arm* for the purpose of holding the spooler rubber against the rim of the hand wheel, when the winder is in position for winding.

When you desire to use the winder, pull out the clutch knob 356, Fig. 6, and turn it to the left, so that it will rest upon the stop pin. This ha ing been done, the hand wheel can be turned without moving the other mechanism of the machine head.

To bring the winder in position for winding, pull out the nut 36; the action of the spiral spring now pulls the spooler rubber against the hand wheel. Turn the hand wheel in the same direction as when sewing, until the feed lever 369 reaches its right hand extremity as shown in Fig. 7.

Place one end of the bobbin in the socket of the revolving spindle 367, and the other end in the socket of the step 368, (Fig. 7).

Place the end of the thread between the brass head of the bobbin and the socket of the spindle 367; thence in the fork at the end of the feed lever 369.

Turn the hand wheel in the same direction as when sewing, holding the thread smoothly as shown in Fig. 6; or, if prefered, the thread may be delivered directly from the spool to the feed lever.

In winding bobbins place a little oil on the end of the bobbin which is inserted in the step 368 (Fig 7).

Before proceeding to sew push *down* on the spooler rubber. The stop stud then automatically catches and holds the spooler away from the hand wheel. Turn the hand wheel clutch knob 356 to the right until the stop pin is in the slot in the knob, then turn the hand wheel slowly until the clutch stud drops into the hole in the clutch hub. The machine is now ready to sew.

Fig. 8.

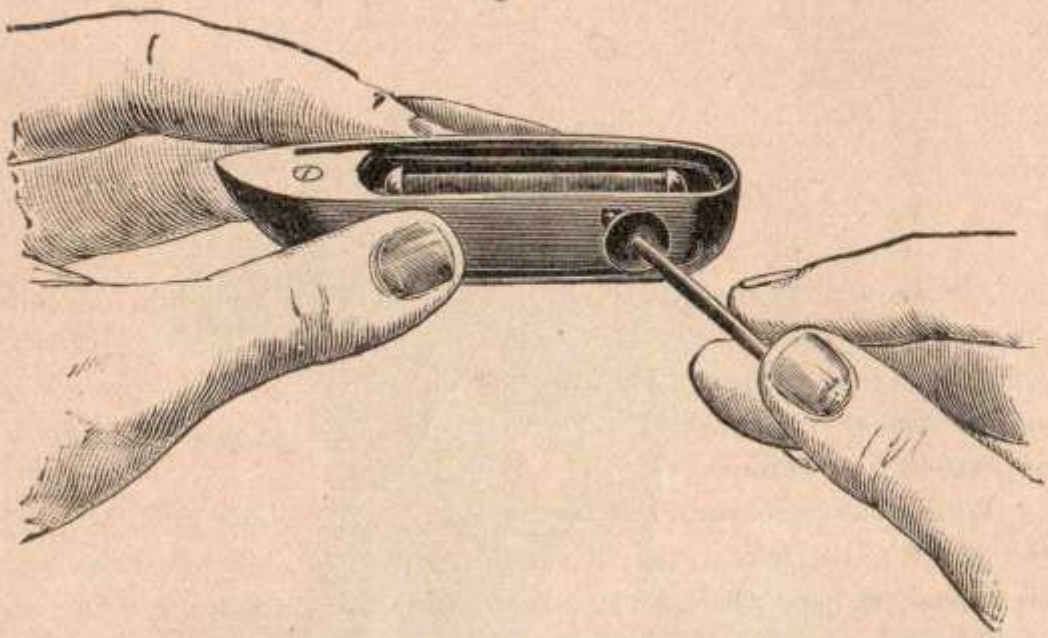


Fig. 9.

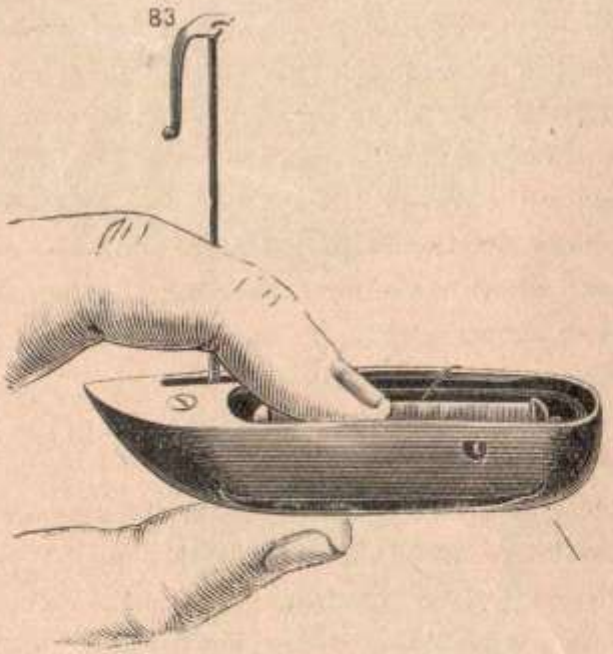
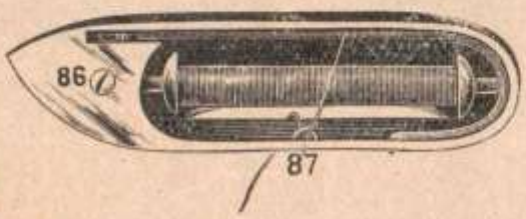


Fig. 10.



THREADING THE SHUTTLE.

See Figs. 8, 9 and 10, page 8.

Depress the end of the latch 83 (Fig. 9) with the point of a bobbin, as shown in Fig. 8, raising the latch to a perpendicular position, as shown in Fig. 9. Place one end of the bobbin in the hole in the front end of the shuttle, allowing a little loose thread from the bobbin to hang over that side of the shuttle to which the latch is attached. *The thread should draw from the lower side of the bobbin.*

Hold the bobbin in place as shown in Fig. 9, and close the latch, as shown in Fig. 10. The latch forms the distributing bar and holds the bobbin in place.

Pass the thread down through the staple 87 (Fig 10,) and out through the large slot, leaving the thread about three inches long.

NOTE. *Be sure that the latch is closed and fastened securely before placing the shuttle in the machine.*

When the machine leaves our hands the tension in the shuttle *has been set right for all ordinary kinds of work and thread*, and, therefore *needs no alteration.*

TO PLACE THE SHUTTLE IN THE MACHINE.

Withdraw the front race cover, and place the shuttle in the shuttle carrier, *point first* and *towards the operator*.

NOTE.—It is sometimes more convenient to withdraw the back race cover and put the shuttle in its place when the carrier is in the back part of the race. This is especially the case when some of the attachments are in use.

THE SHUTTLE RACE.

The face of the shuttle race must be kept clean, and free from dirt or gum. To do this, rub it occasionally with a piece of cloth having a drop of oil on it, afterwards wiping it with a dry, clean cloth. If, through neglect, the race has become very „gummy," first clean it with a cloth saturated with kerosene; then use an oiled cloth, and a clean dry cloth, as above. Breaking of threads and skipping of stitches, are frequently caused by failing to keep the shuttle race clean.

TO DRAW UP THE LOWER THREAD.

Hold the upper thread slack with the left hand; turn the hand wheel *towards you*, with the right hand, slowly, until the needle has passed down, and up again to its highest point. The upper thread will form a loop in the shuttle race, through which the shuttle will pass, and the needle, when it rises, will draw the lower thread up through the slot in the throat plate. Close the race cover (or covers, if both have been withdrawn), and draw the ends of the thread back.

NOTE—*Never run the machine with the race covers open*, except it is done with the hand, and *very slowly*.

COMMENCING TO SEW.

The machine being fully threaded above and below, the lower thread drawn up, as heretofore explained, the presser bar raised, and the needle bar at its highest point, you are ready to sew.

Place the goods under the presser bar and feed bars, with the needle directly over the point where you wish to begin the stitching. Lower the presser bar by the presser lifter 114 (see Fig. 2, page 4), and start the machine by turning the hand wheel *toward* you. In sewing heavy or hard fabrics greater pressure is required than for light goods. The pressure is regulated by the adjusting nut 118 (see Fig. 2, page 4). Turn the nut to the *right to increase* the pressure, or to the *left to decrease* it.

NOTE.—If it is found difficult to get a regular and easy motion to the treadle, it should be learned by running the machine *before it has been threaded*, with the *shuttle out* and with the *presser bar raised.*

TO REMOVE THE WORK FROM THE MACHINE.

Stop the machine with the needle at its highest point; take hold of the thread near the tension wheel, and draw two or three inches off from the tension and spool, leaving the thread slack; raise the presser bar, and draw the work straight back from you; cut the threads about two inches from the needle. Draw the work *directly back.* If the work is drawn to either side it will be liable to *bend the needle.*

Difficulties Which Learners Most Frequently Encounter.

BREAKING THE UPPER THREAD.

This may be caused by: improper threading of the machine; the upper tension being too tight; the needle being too small for the thread; the needle being set the wrong side out, or set crooked; the needle being set too high; or by a sharp edge of the shuttle.

BREAKING THE LOWER THREAD.

This may be caused by: the shuttle being wrongly threaded; the tension being too tight; the bobbin being wound too full, so it will not revolve freely; a rough or sharp place on the edge of the shuttle at the heel; or by failing to keep the shuttle race clean.

SKIPPED STITCHES.

Skipped stitches are caused by: the needle being set too low; the needle being bent; by dirt or gum on the face of the shuttle race (see page 11), or by too light pressure on the goods.

THE TENSIONS.

The object to be attained is to have the stitch alike on both sides of the fabric. This is accomplished by the tensions, or strain upon both threads. The tensions upon both threads should be as nearly alike as possible, and tight enough *only* to make a smooth, firm seam. If the threads are of the *proper* size for the material used, and both tensions right, the threads will be drawn and locked together *in the center of the goods* thus: 

If the upper tension is *too loose*, (or the lower one too tight) the lower thread will lie *straight along the under side of the goods* thus:  the upper thread showing in loops on the under side. On the contrary, if the upper tension is *too tight*, (or the shuttle tension too loose), the *upper thread will lie straight on the upper side* of the goods, thus:  the lower thread showing in loops on the upper side.

To *tighten the upper tension*, turn the tension nut 94 (see Fig. 3, page 4) *to the right*.

To *loosen the upper tension*, turn the tension nut *to the left*.

As the shuttle tension has been set right for general work when the machine leaves our hands, as before explained, any needed regulation of the stitch in this respect should ordinarily be made by changing the upper tension. If, however, when the upper tension is regulated so the lock is in the center of the goods, both threads appear to be loose, and the stitches and seam not smooth and firm, the *shuttle tension is too loose*, and should be *tightened* by turning the tension screw 86 to the right (see Fig. 10, page 8); then tighten the other tension correspondingly.

If the under thread cannot be properly drawn up without having the upper tension so tight that the thread breaks, or if when the tensions are evenly balanced, the goods are "drawn," or "puckered," (this will occur only in sewing very light and "slazy" fabrics,) the *shuttle tension is too tight*, and should be loosened by turning the shuttle tension screw to the left; then loosen the upper tension to correspond.

The above particular explanation is given that every operator may *fully understand the principles of the tensions*.

NOTE.—"The Davis" *requires less change of tension* than *any other machine*; in fact no change is necessary in any ordinary work.

LENGTH OF STITCH.

The length of stitch is regulated by turning the stitch adjuster screw 146 (see Fig 2, page 4) to the right or left. Turn the screw to the left to lengthen the stitch. Turn it to the right to shorten the stitch.

TO TIGHTEN THE BELT.

If the belt becomes too loose, cut a short piece off and hook the ends together again. It will be found necessary to shorten it several times, and until the "stretch" has all been taken out.

SIZES OF NEEDLES AND THREAD.

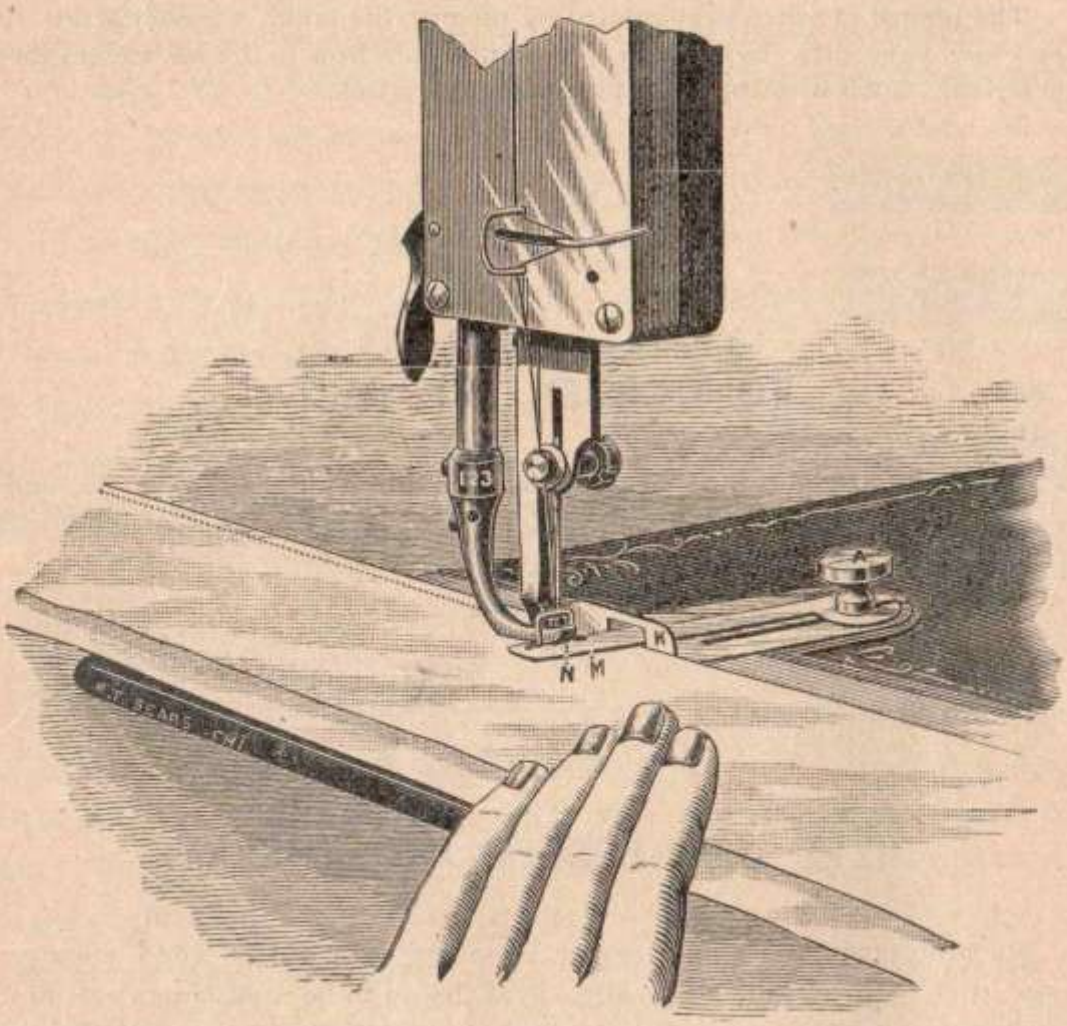
Machine sewing does not require so coarse a thread as hand sewing—every stitch being double. The size of the thread to be used must determine the size of the needle. The following sizes of silk, cotton and linen are used with the sizes of needles designated, viz: For—

200 to 100 Cotton............ }		.... use	00	Needle.
100 to 90 " or 000 to 00 silk }				
90 " 70	" or 00 " 0 "	.... "	0	"
70 " 50	" " 0 " B "	or 100 to 90 Linen.......... "	1	"
50 " 30	" " B " D "	" 90 " 70 " .... "	2	"
30 " 10	" " D " EE "	" 70 " 50 " .... "	3	"
10	" " E " FF "	" 50 " 40 " .... "	4	"

The foregoing may be varied slightly to suit the fabric used. *Good threads are essential to good work.*

"The Davis" *will run coarser thread in a fine needle* than any other machine in the market. This fact is frequently of great advantage, especially in leather stitching.

Fig. 13.



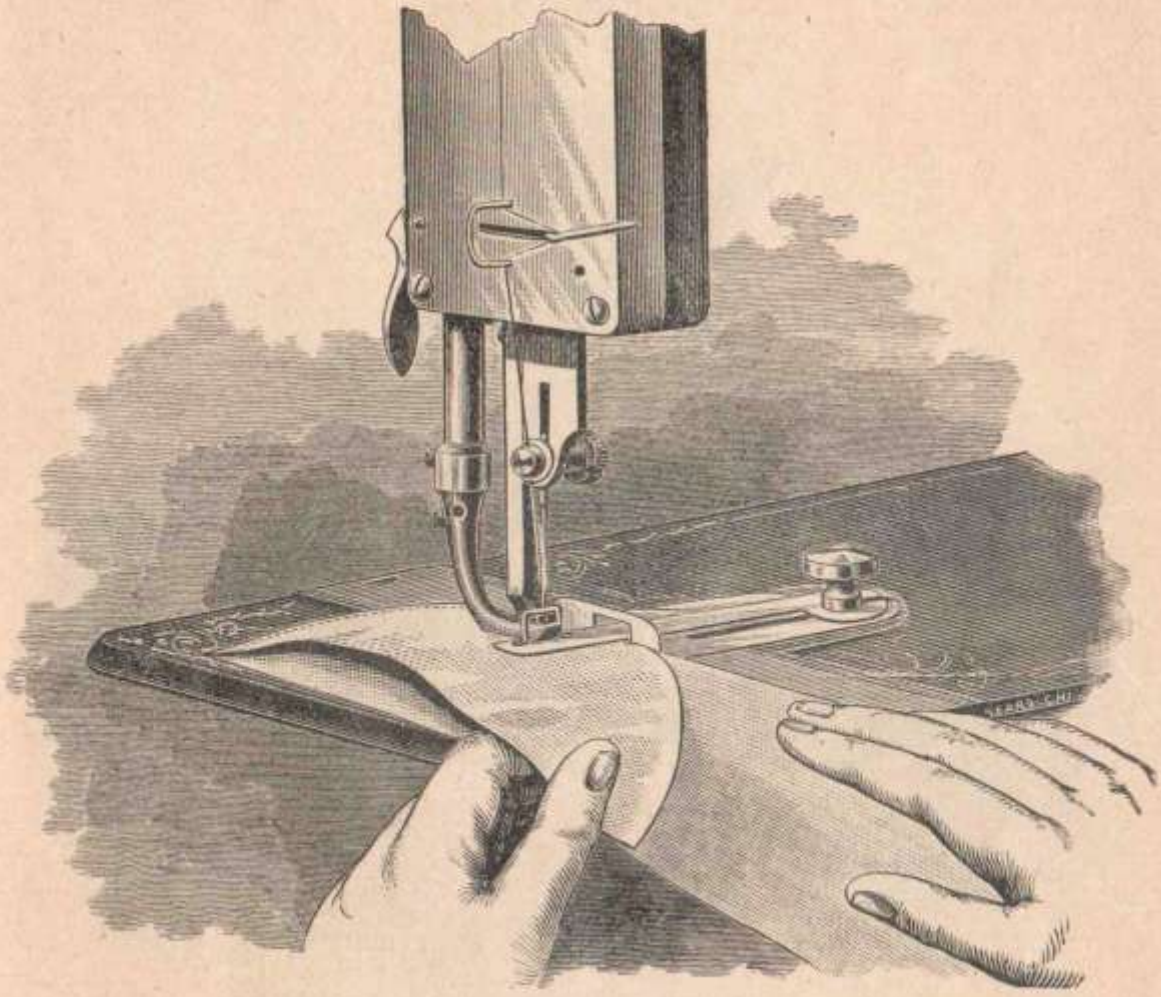
GAUGE AND SELF-SEWER.

Attach the Gauge and Self-Sewer to the machine by the gauge screw A having the loop of the spring M on the "toe" N, of the presser foot 123, as shown in Figs. 13 and 14.

Set the gauge K as far from the needle as you desire to have the line of stitching from the edge of the goods. Place the goods under the spring M, under the needle and presser foot, with the edge, or edges, against the gauge. Lower the presser bar, and sew as usual.

The spring M will hold the goods smoothly against the gauge, thus insuring a perfectly straight seam.

Fig. 14.



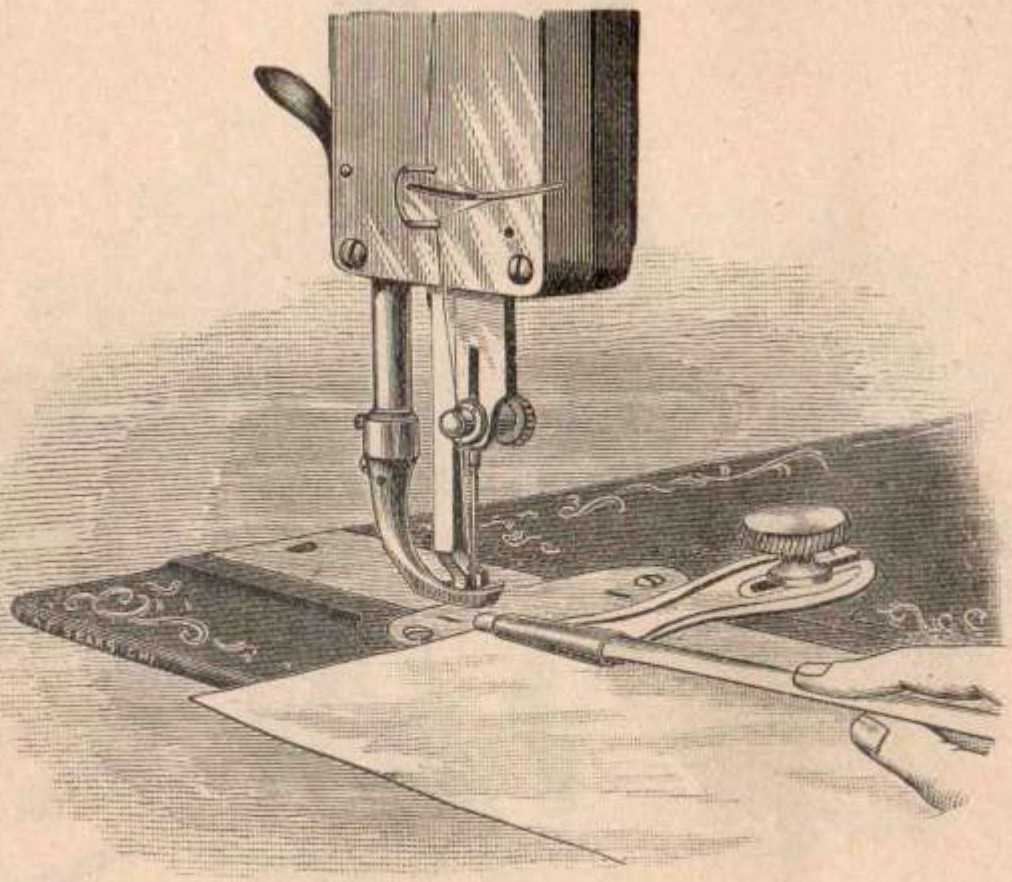
GAUGE AND SELF-SEWER.

Fig. 14 shows the operation of sewing a curved piece on a straight one, without basting; using for that purpose the Gauge and Self-Sewer.

This attachment is invaluable in sewing straight or parallel seams, a curved edge on a straight one, or two curved edges together; also in an almost inconceivable variety of similar work, as *all can be done without basting* by using this attachment.

NOTE.—The spring M (see Fig. 13, can be detached, and the gauge K (Fig. 13) used alone when desired.

Fig. 15.

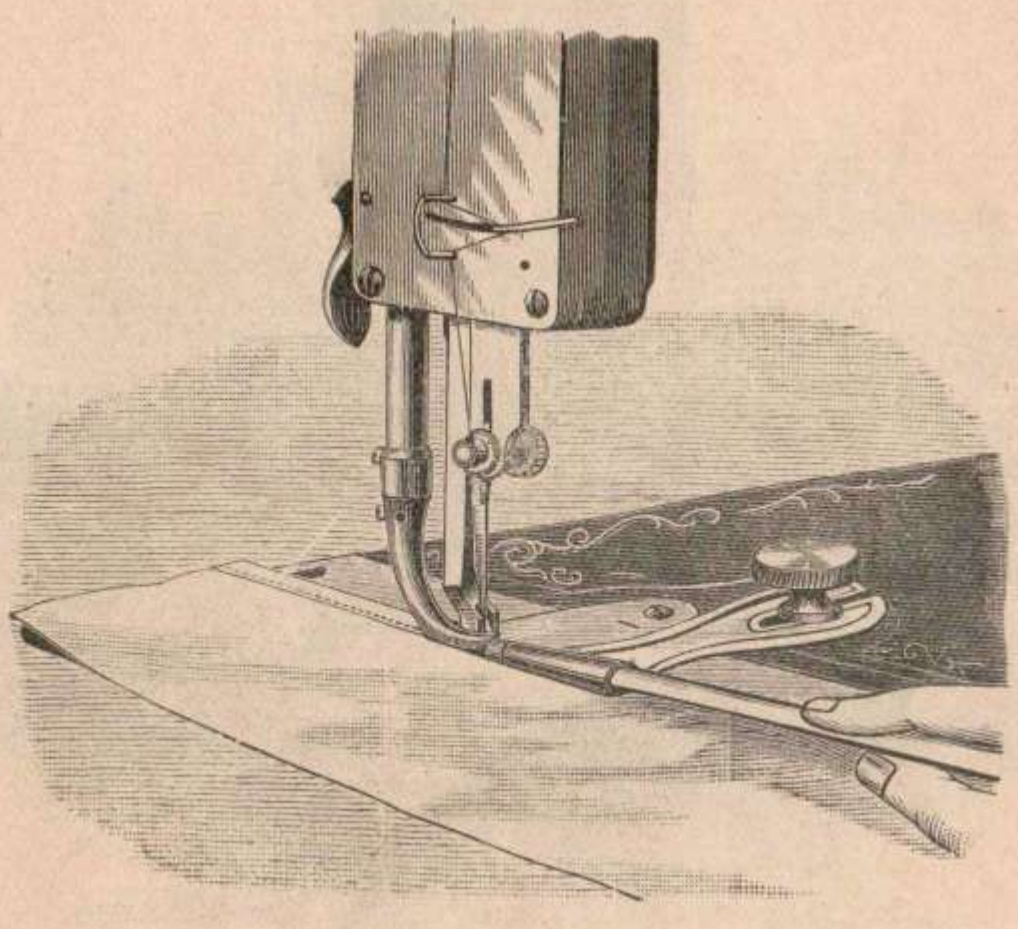


HEMMING.

Attach the Hemmer securely to the machine with the gauge screw, having the end of the scroll close to the stripper of the presser foot, and in such position that the line of stitching will be on the edge of the hem as desired. Enter the edge of the cloth in the Hemmer, drawing it back and forth until the scroll is filled and the hem evenly turned.

Fig. 15 shows the Hemmer attached, with the cloth inserted in proper position

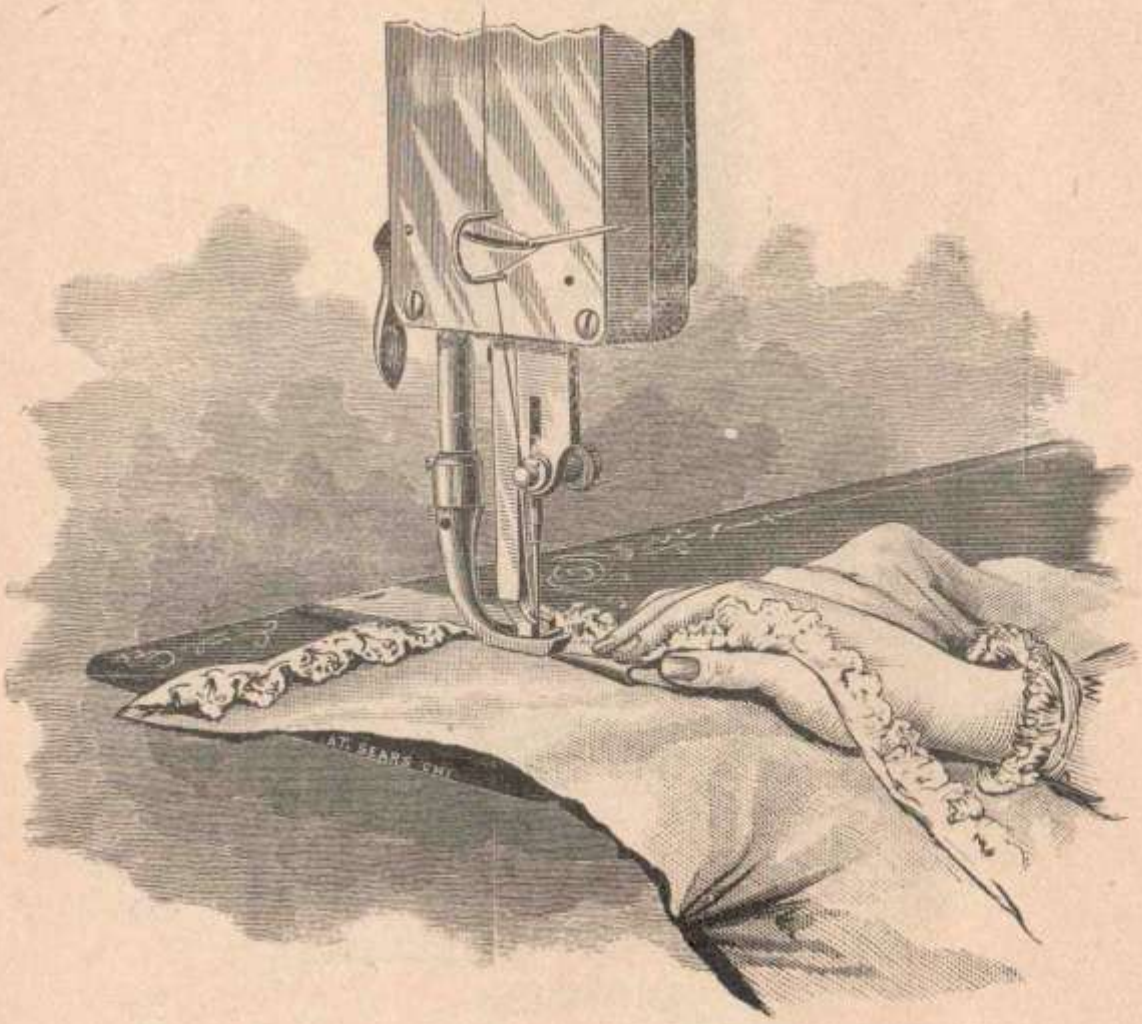
Fig. 16.



HEMMING.

Having the Hemmer attached, and the cloth inserted, as shown in Fig. 15, page 16, lower the presser bar and proceed as with ordinary work, guiding the material as shown in Fig. 16, above, keeping the scroll filled.

Fig. 17.

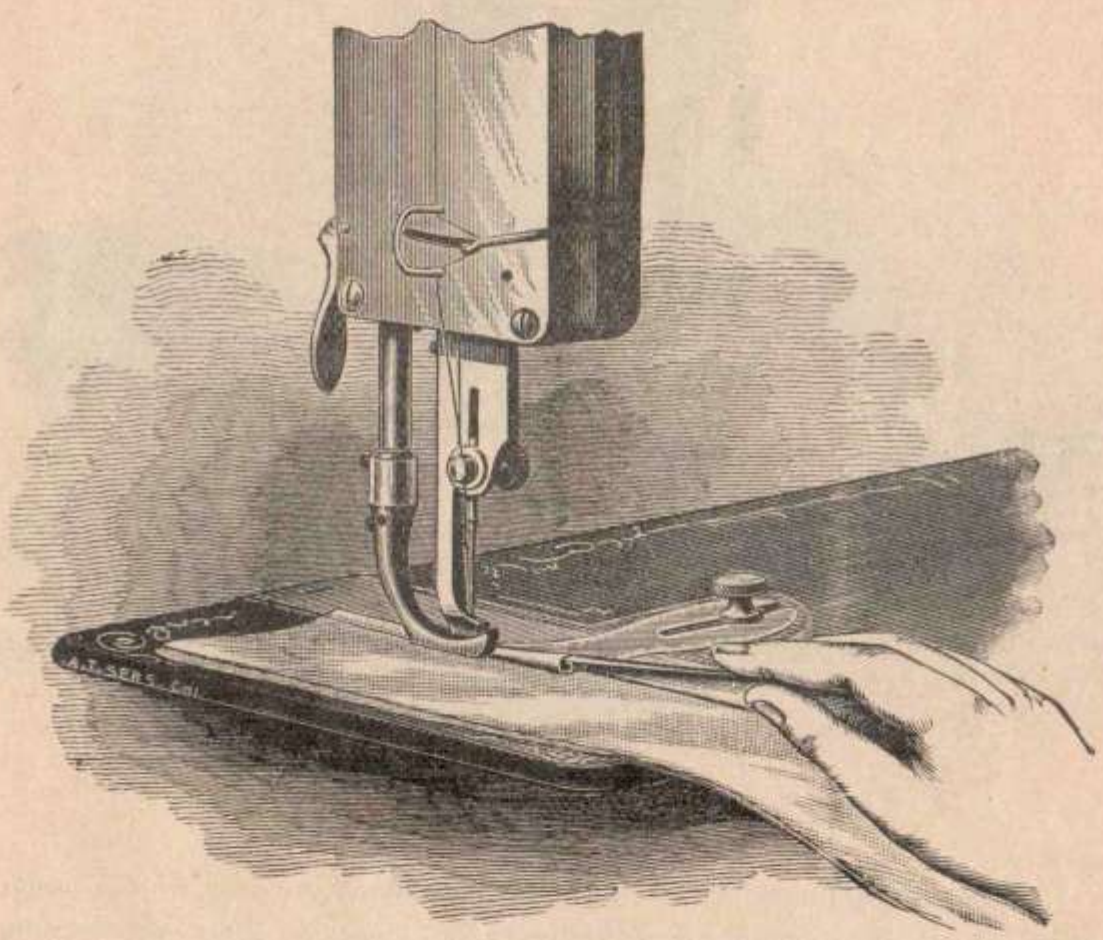


TO MAKE A HEM AND STITCH ON EDGING.

Attach the Hemmer and insert the goods as shown in Fig. 15, page 16. Place the edging over the Hemmer and under the needle and presser foot.

Lower the presser bar and proceed as with hemming, guiding the edging as shown in Fig. 17.

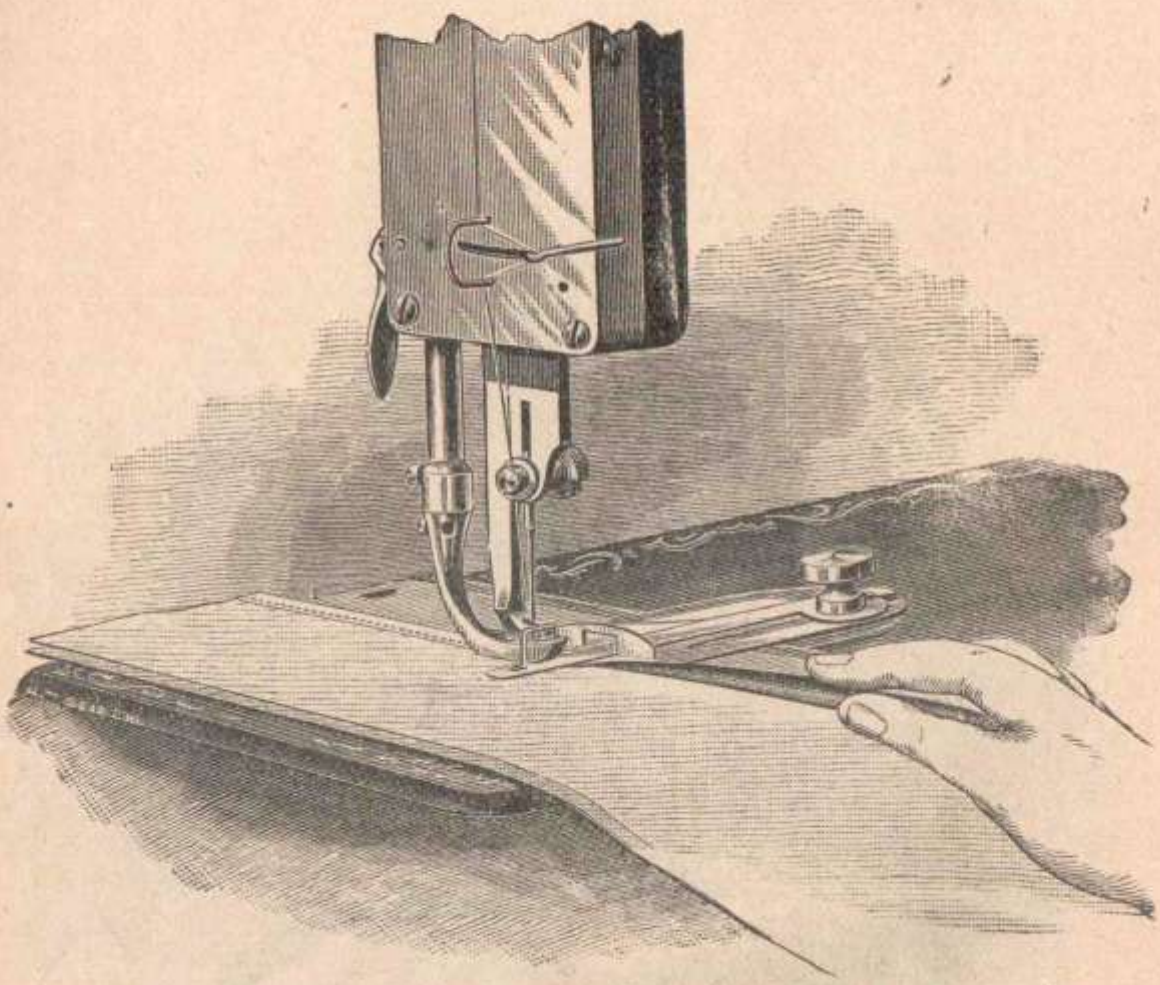
Fig. 18.



FELLING.

See also Figs. 19 and 20 on pages 20 and 21.

Fig. 19.

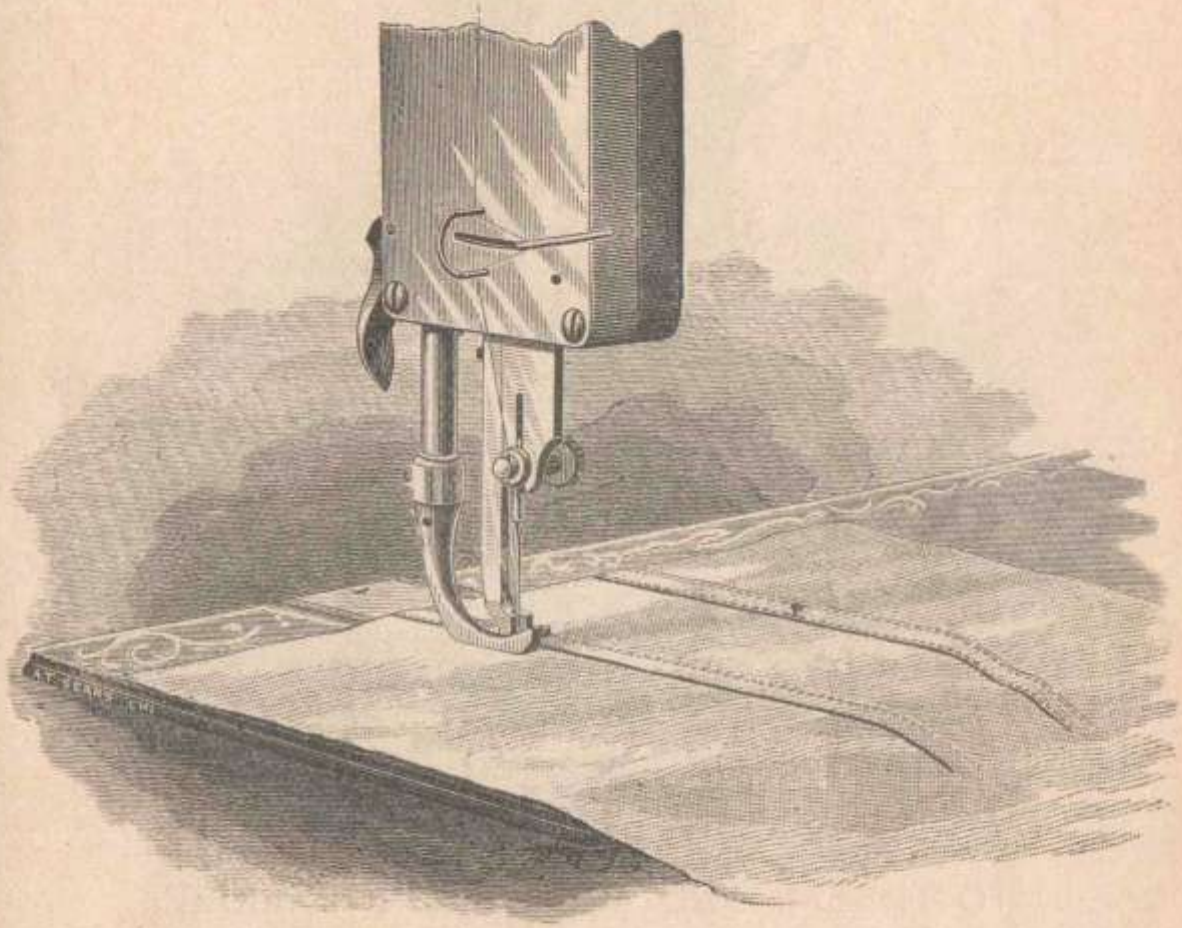


FELLING.

Place the two pieces of material together, having the edge of the under piece project beyond the edge of the upper far enough to admit of its being turned over the edge of the upper and stitched down, as hereafter explained. (With such goods as ordinarily require felled seams, the under edge should project about *one-eighth of an inch.*)

Pass the goods through the Hemmer, as shown in Fig. 18, page 19; or use the Gauge and Self-Sewer, as shown above in Fig. 19—turning the edge of the lower piece over the edge of the upper, and stitching it down, as shown in both Figs. 18 and 19. In this operation the edge of the upper piece *should not be turned*, but should be held close to the fold in the lower piece. The edge of the lower piece should be turned *just enough to be fastened by the seam*; if turned over farther than necessary the edge can be trimmed close to the seam.

Fig. 20.



FELLING.

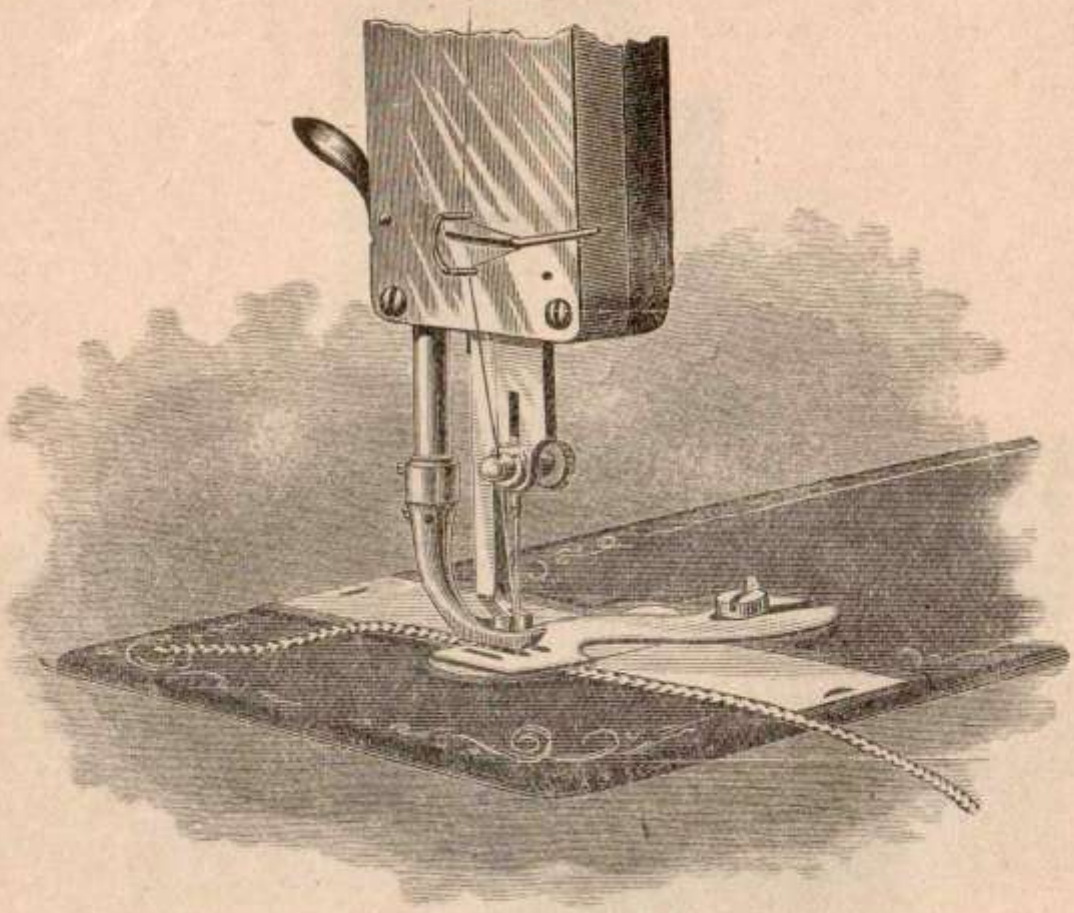
Remove the Hemmer or Self-Sewer. Spread the goods out smoothly at the seam and stitch down the edge of the fell, as shown in Fig. 20.

By using the Gauge and Self-Sewer, as in Fig. 19, page 20, a fell of any width can be made, and with any kind of goods, or *across seams and other fells.*

In the operation illustrated in Fig. 18, page 19, use either the No. 1, No. 2, or "B" Hemmer, according to the thickness of the material.

If it is desired to show both edges of the fell, as at P, in Fig. 20, a Hemmer should be used in the first operation, having the edge of the under piece project far enough to make a *regular hem.* Then spread out the goods and stitch the other edge, as in Fig. 2[illegible].

Fig. 21.



TO THREAD AND ATTACH THE BRAIDER.

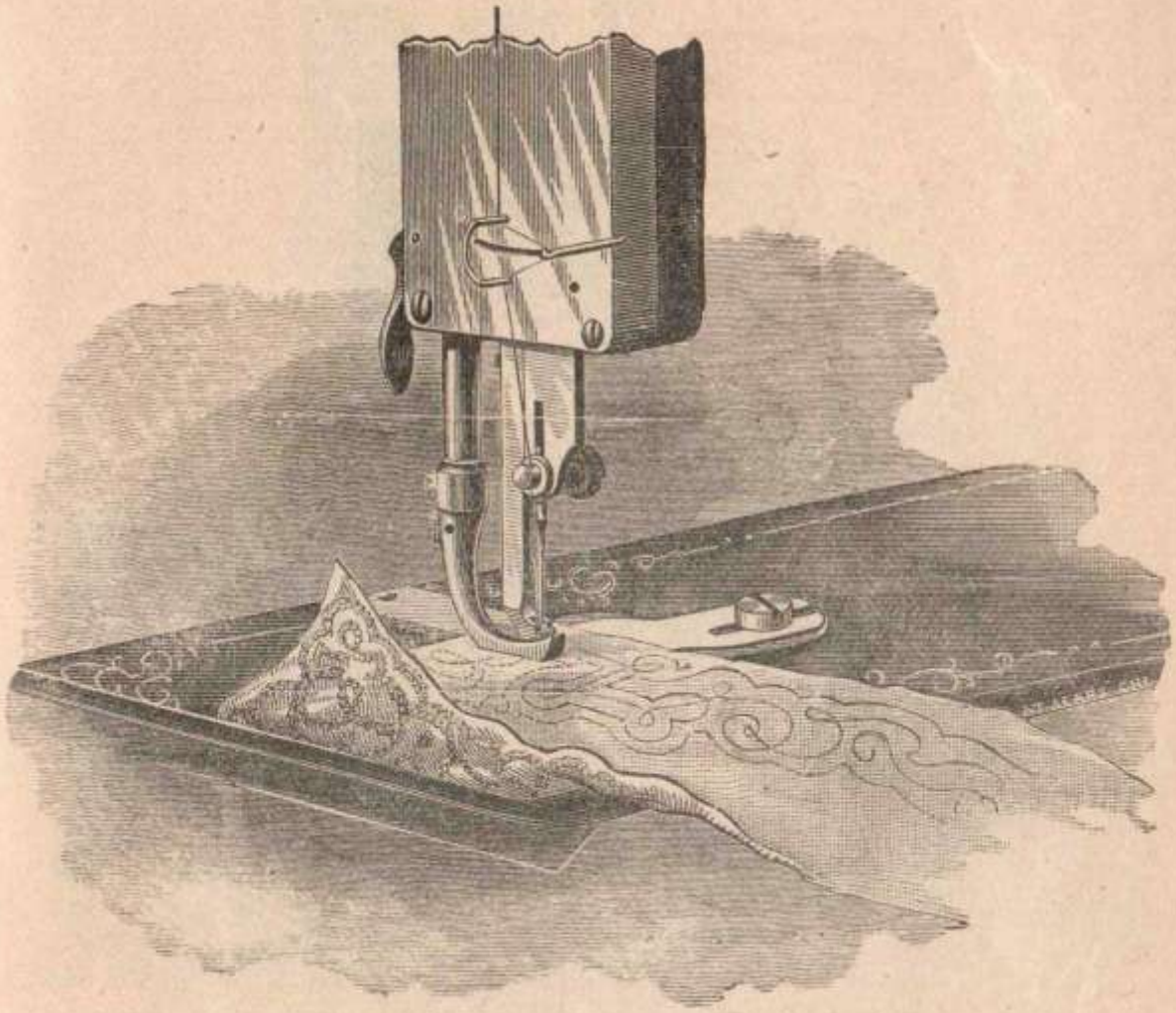
Thread the braid through the slot from the under side of the Braider, allowing the braid to pass out through the slot, back on the upper side about half an inch. Attach the Braider to the machine so the slot used will be directly over the slot in the throat plate, and so the needle will pass down in the little hole at the front end of the Braider slot *without touching*. *Fasten the Braider securely* with the braider screw B. Draw the shuttle thread up through the braid, as explained on page 10, for "drawing up the lower thread."

Have the upper tension strong and the lower tension light, so that when sewing two or three thicknesses of muslin, the knot formed by the lock would appear on the upper side.

The pattern should be marked or stamped on the under side of the material.

Three sizes of slots are made, to adapt the Braider to different sizes of braid. The braid should pass freely through the slot.

Fig. 22.



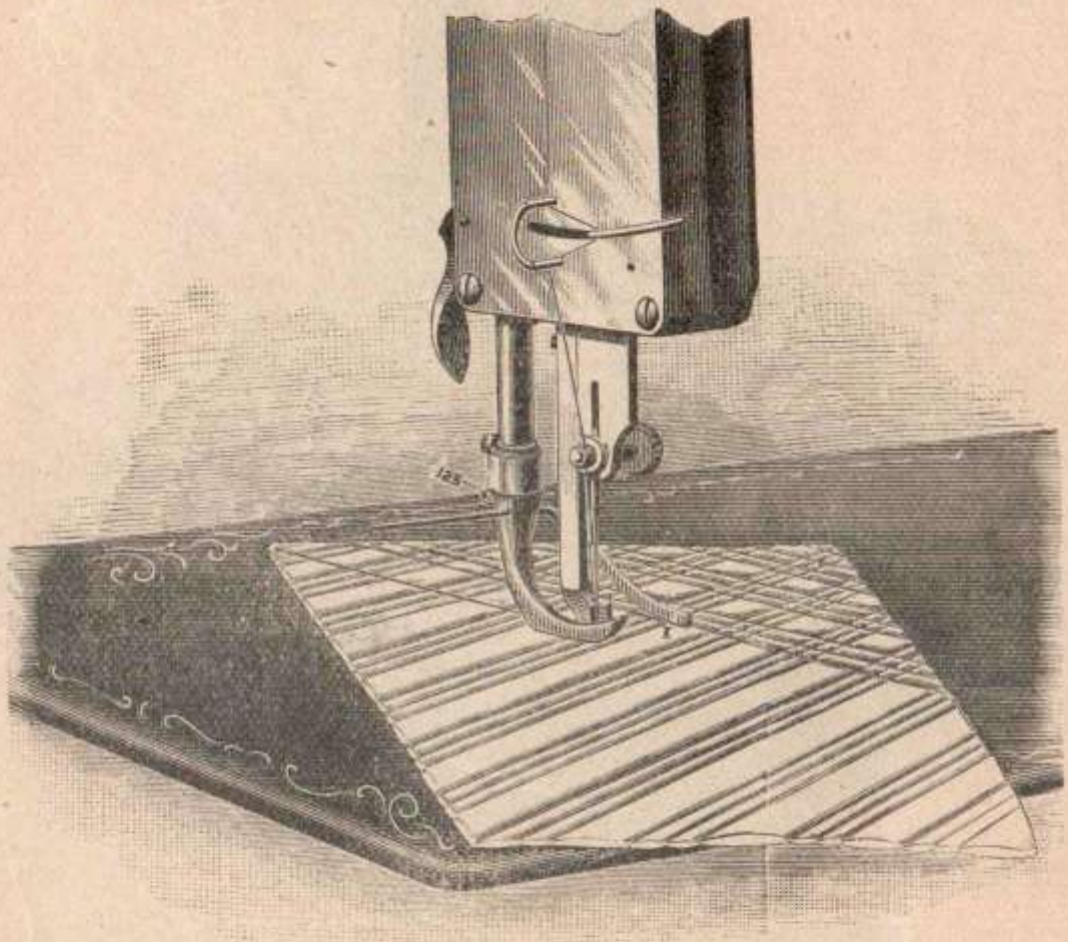
BRAIDING.

Place the goods on the Braider and under the presser foot, with the *pattern side up*, and so the needle will be directly over the point where you desire to commence braiding. Lower the presser bar and sew as usual, guiding the material so the needle will follow the pattern. The braid will be stitched to the under side of the goods, as shown in Fig. 22.

To make a square or sharp angle, sew to the point of turning; stop the machine while the needle is rising, and before it is out of the cloth; slightly raise the presser bar and swing the cloth round on the needle. Care must be taken in turning the cloth, not to pull the needle, thereby causing it to strike the plate and bend or break.

NOTE.—All the attention that need be given to the braid, is to have it pass freely and smoothly to the Braider. The bunch or spool of braid may lie in the lap of the operator.

Fig. 23.



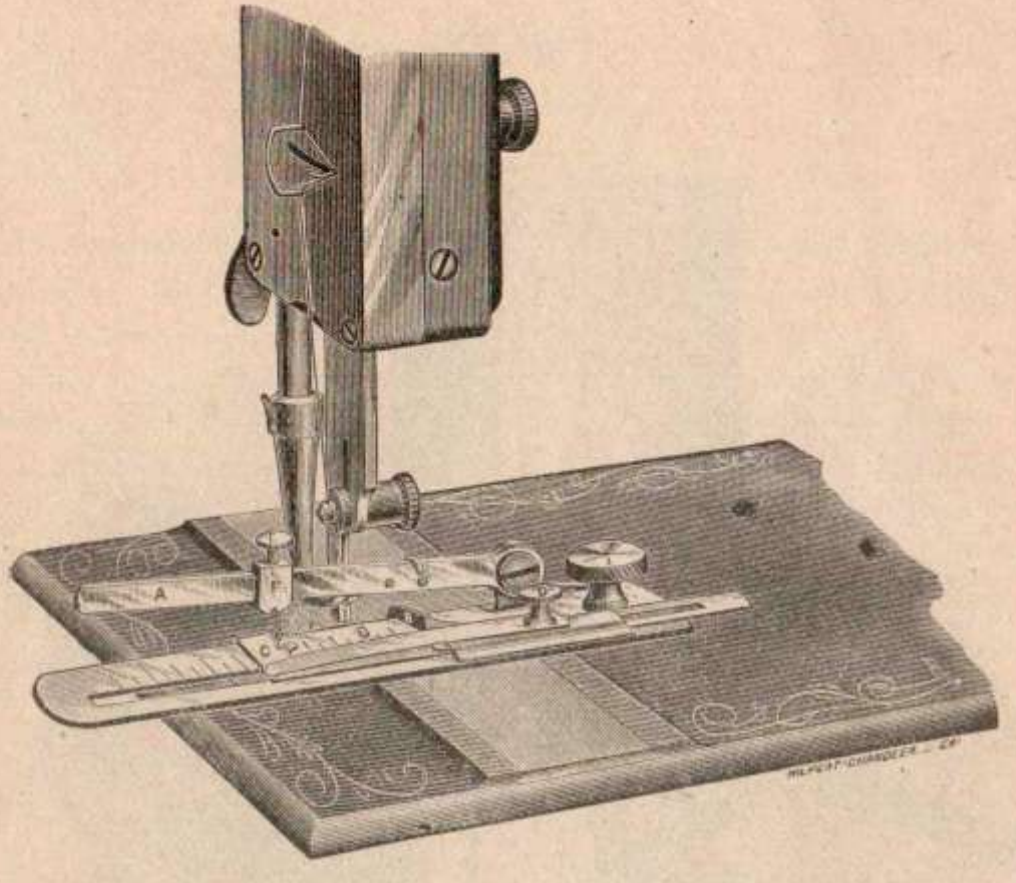
QUILTING.

The Quilter I, is attached by passing the rounded part through the hole in the presser foot made for that purpose, as shown in Fig. 23.

Adjust it to the right or left, according to the distance required between the lines of stitching. Fasten it by the small screw 125, in the presser foot, having the guide or flat part of the Quilter raised just far enough above the bed of the machine to allow the free passage of the work under it.

Guide the work so the last line of stitching will be directly under the flat part of the Quilter. This will make the lines of stitching perfectly straight, and equal distances apart.

Fig. 24.



INSTRUCTIONS FOR USING THE DAVIS TUCKER

Lower the presser bar. Fasten the tucker to the bed plate of the machine with the gauge screw, having the angle piece on the tucker lever A, over the front end of the presser foot.

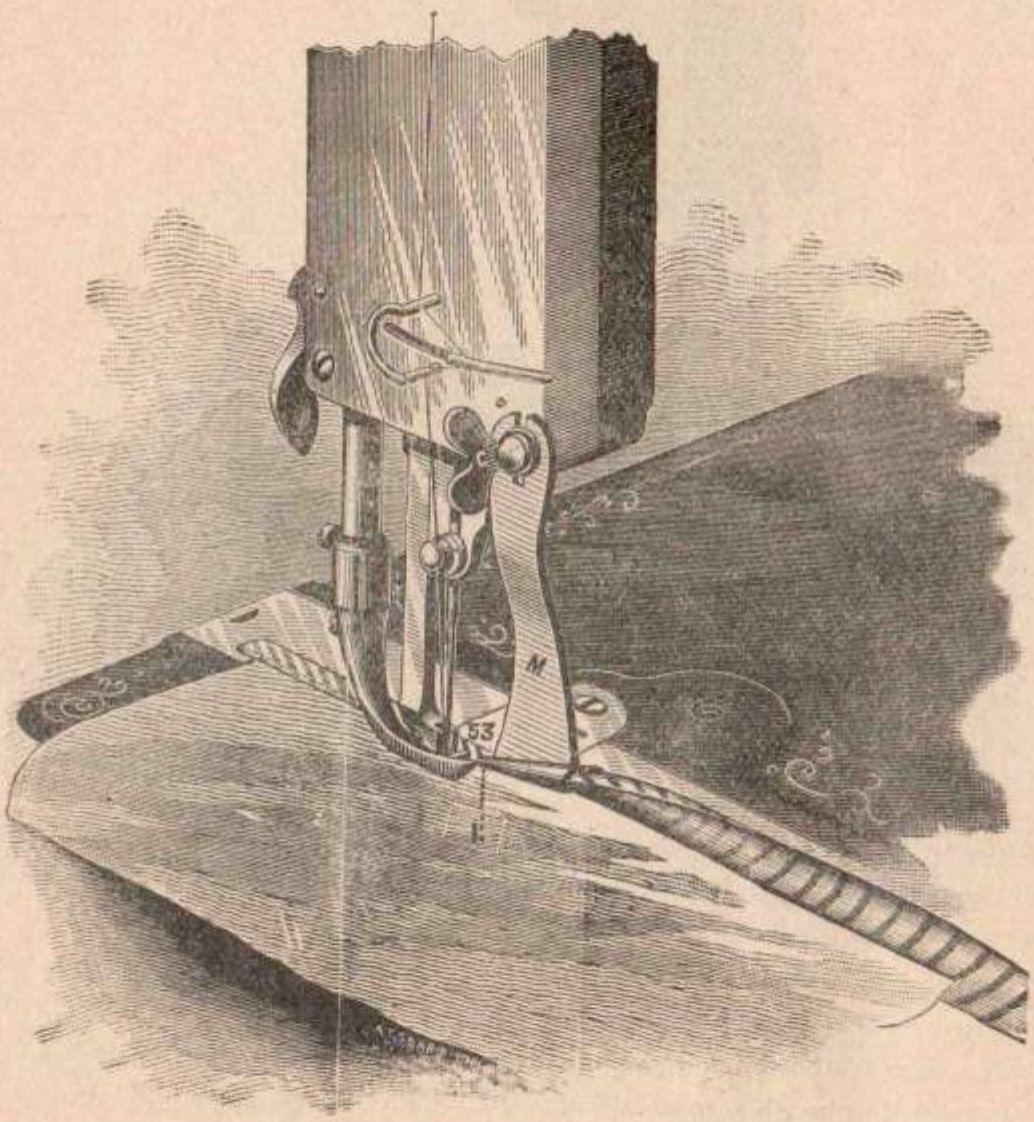
On the bed of the tucker is a graduated scale, by ⅛ of an inch each way from the "o" mark, the scale on the right being for a guide in setting the tucker gauge B, and that on the left for the creaser F and creaser blade C.

Loosen the thumb screws D and E, by which the gauge B and creaser F and creasing blade C are fastened. Set the guage B as far to the right from the "o" (and needle) as the width of the tuck to be made. When there is to be no space between the tucks, set the creaser F and creaser blade C to the left of the "o," twice as far as the gauge B is to the right. If space is wanted, add the width of the desired space to the distance the creaser F and creaser blade C are moved from the "o."

After the gauge has been set, hold it in place while moving the creaser F and creaser blade C. When both have been properly placed, fasten them by the two thumb screws D and E.

Care should be taken in folding the goods for tucking. This is a very important point. Be sure and fold the goods by the crease made by the tucker.

Fig. 25.



BIAS BINDER.

Remove the screw from the lower front corner of the face plate. Attach the Binder, as shown in Fig. 25, with the screw C, and washer accompanying it. The small end of the scroll L of the Binder should be *one-eighth of an inch back of the front edge* of the throat plate 53. *Fasten the Binder firmly* with the screw C.

BIAS BINDING.

Pass the binding through the scroll of the Binder and draw it back under the needle. Place the edge of the goods to be bound, in the Binder, and draw it back to the needle. Lower the presser bar, and sew as usual.

Fig. 25, page 26, shows the machine with the Binder attached, the binding and the goods to be bound, in the Binder in proper position.

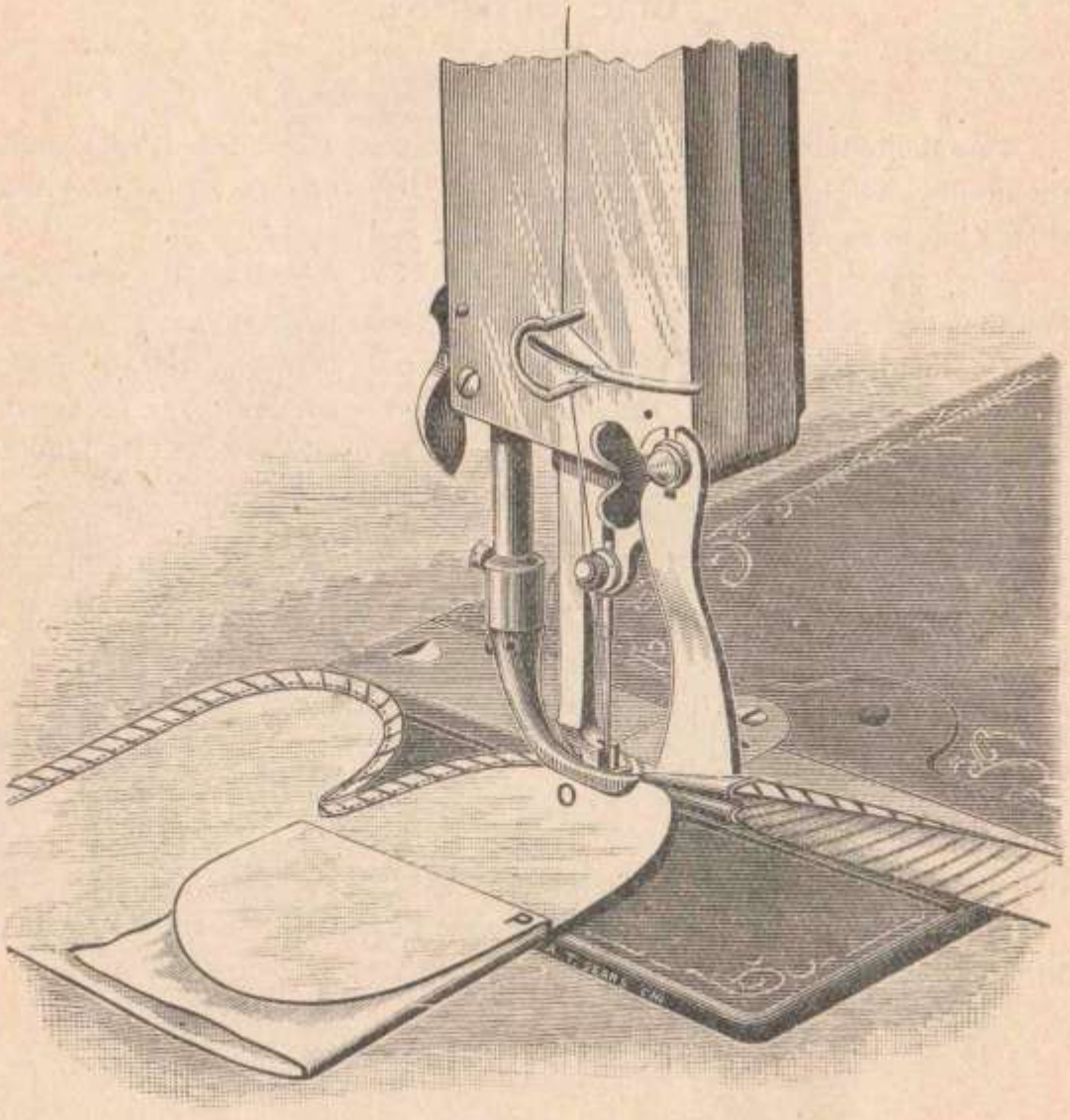
For bias binding, goods of any description can be used. For the Binder ordinarily used, the binding should be cut three-quarters of an inch wide. (If very light, "slazy" material is used, it may be necessary to cut the binding a little wider, in order to have the edges properly turned under).

TO BIND WITH COMMON DRESS BRAID.

Proceed the same as when using bias binding, as explained above. The only difference is, the dress braid being narrower, the edges will not be turned under as is the case with bias binding.

NOTE.—The shank M of the Binder may be bent to the right or left, to bring the line of stitching the desired distance from the edge.

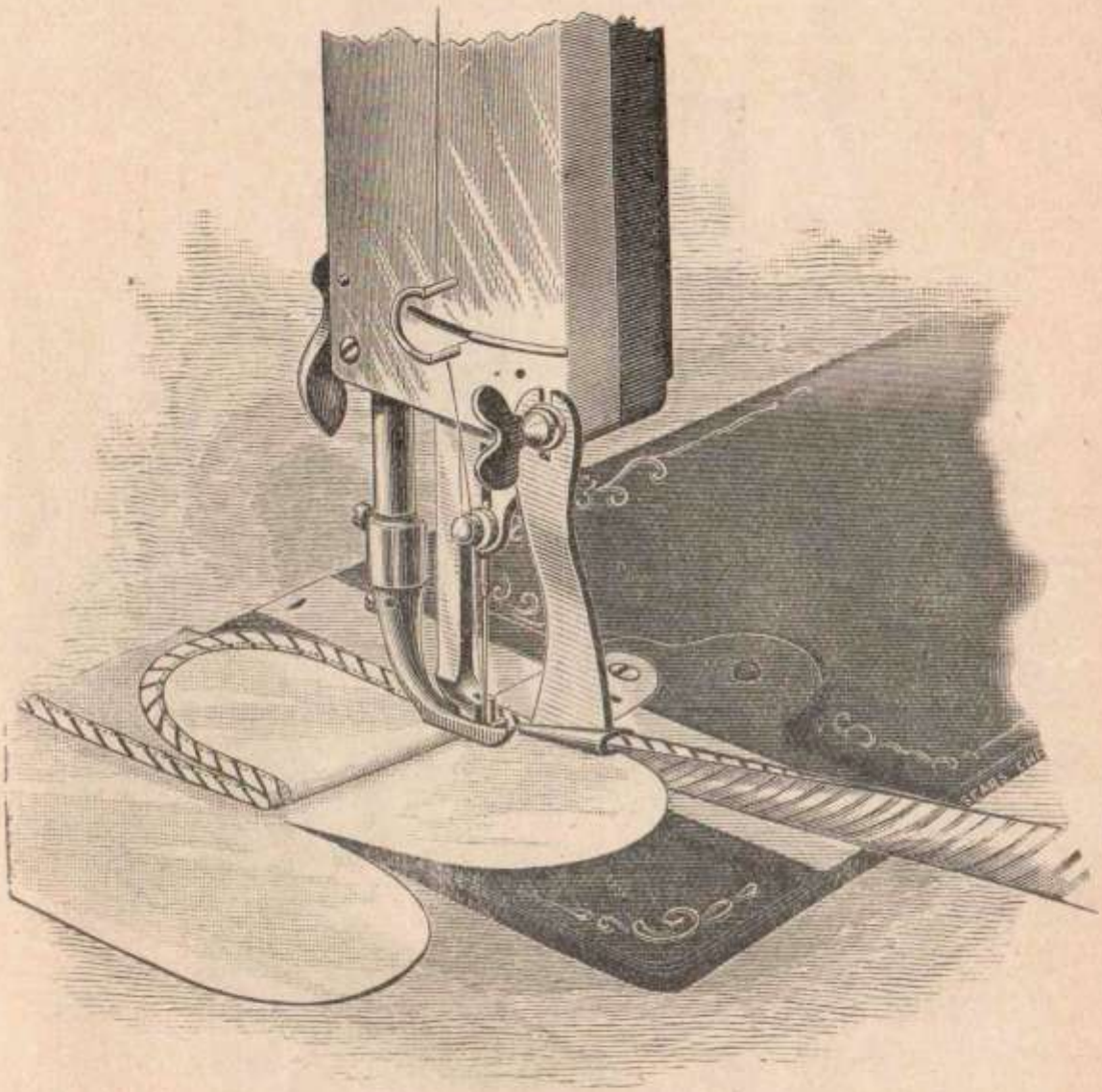
Fig. 26.



BINDING SCALLOPS.

Attach the Binder and insert the binding and goods as explained on pages 26 and 27. Bind around to the center O of the scallop, as shown in Fig. 26. Fold the goods *over from you* at the angle between the scallops, and fold the next scallop to the left, as shown in Fig. 26. Bind around to the edge P of the folded scallop, *taking care to keep the edge of the scallop being bound, between the folds of the binding and under the needle.* When binding down into the angle between the scallops, sew *close to* the edge P of the next scallop, but stop the machine *just before the needle would reach that edge.*

Fig. 27.

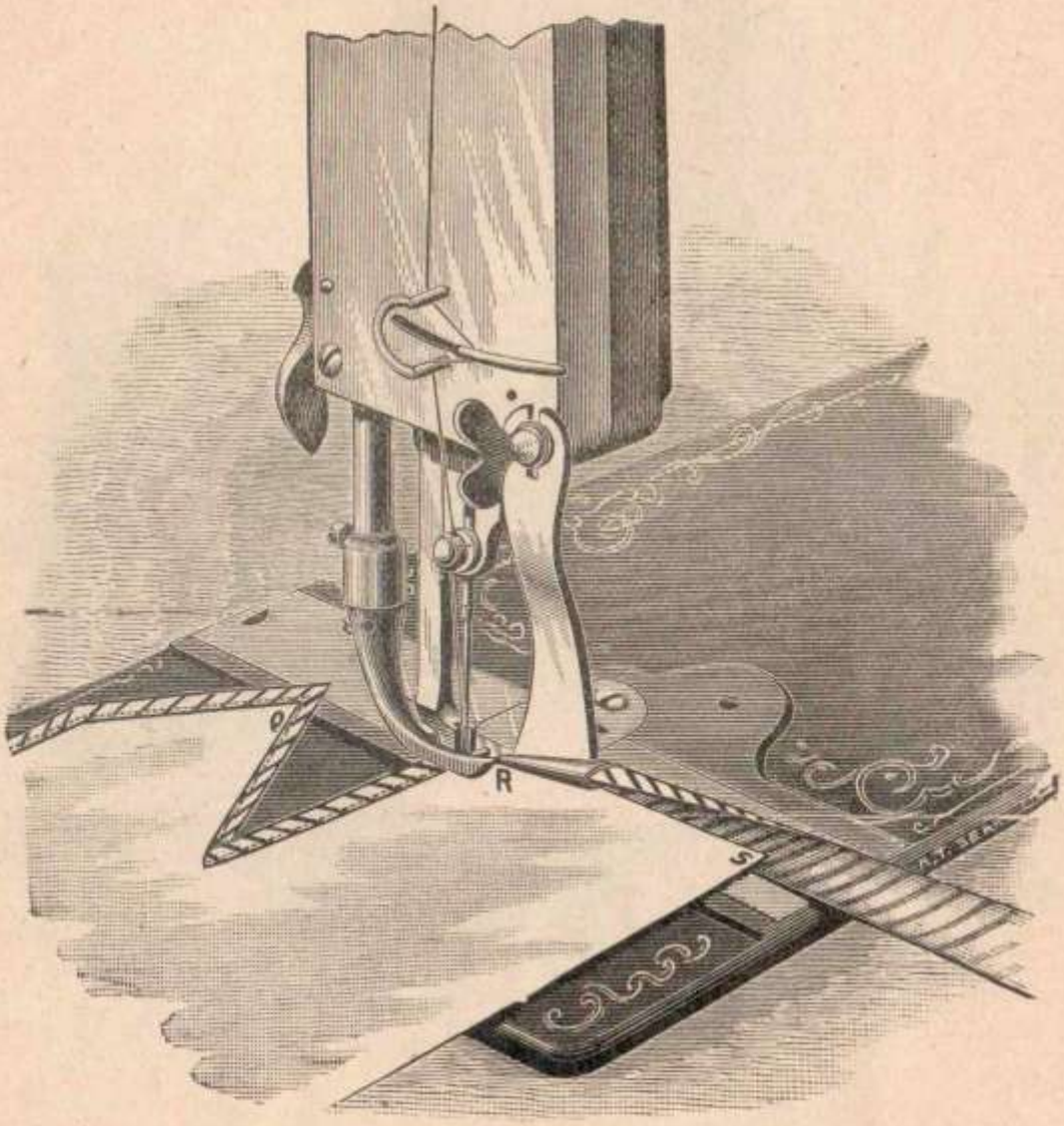


BINDING SCALLOPS.

Having reached the folded edge P, as described on page 28 (see Fig. 26), raise the presser bar, leaving the needle in the goods; fold the goods back under the bound scallop, leaving the next scallop to be bound, in the Binder, as shown in Fig. 27, above.

NOTE.—When the machine is stopped for the purpose of turning the goods at a point or angle in binding, or in *any* work, it should be stopped *while the needle is rising and before it is out of the goods.*

Fig. 28.

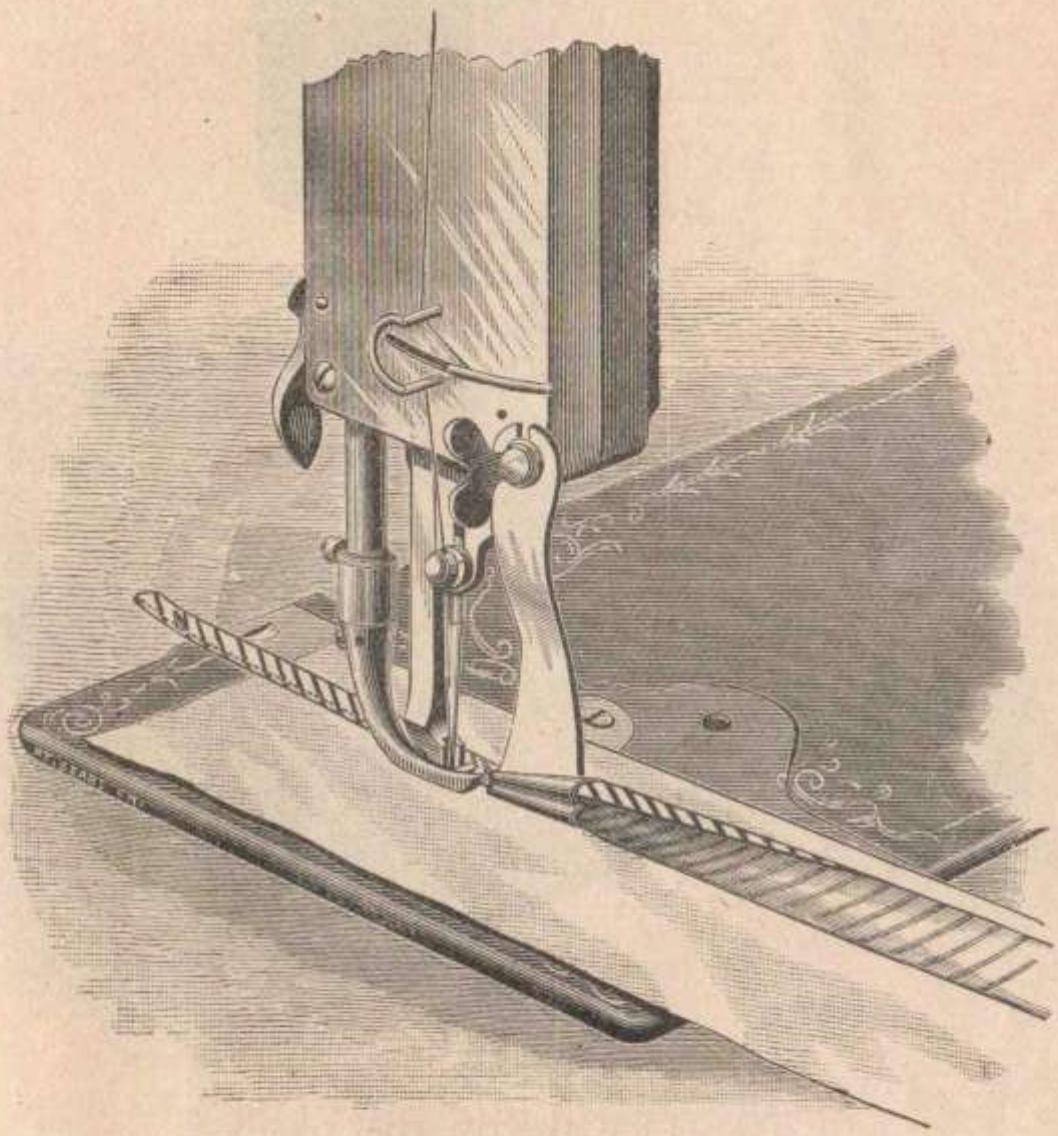


BINDING POINTS AND SQUARES.

Proceed in a manner similar to that heretofore explained for binding scallops.

At the points Q, R and S (Fig. 28), stop the machine, raise the presser bar and carry the binding back a *trifle*, making *small folds or plaits* in both the upper and lower edges. Fold the goods at the angles, precisely the same as in binding scallops.

Fig. 29



TO MAKE FRENCH FOLDS.

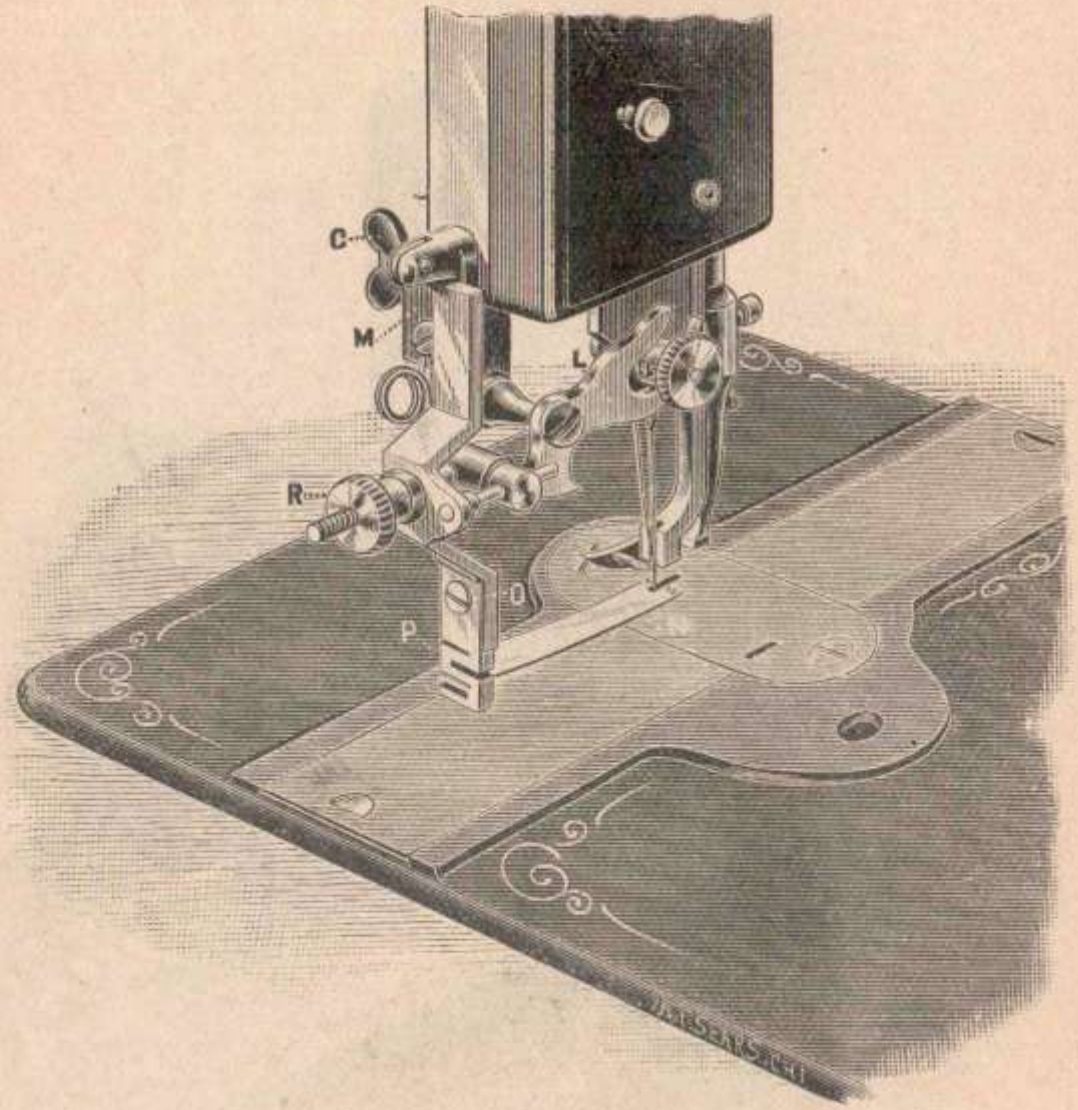
Attach the Binder, as explained on page 26. Pass the binding through the Binder, and sew as usual, stitching the edges together. The French Fold is shown at Fig. N, in Fig. 29.

To Make French Folds and Sew Them on at One Operation.

Attach the Binder as heretofore explained, *but raised enough above the plate to allow the garment to pass freely under the binder.* Pass the binding through the Binder, and place the goods on which the fold is to be made, *under* the Binder. Sew as usual. This operation is illustrated in Fig. 29.

NOTE.—The fold may be laid straight, in curves or circles, or in any other desired form.

Fig. 38.



TO ATTACH THE RUFFLER.

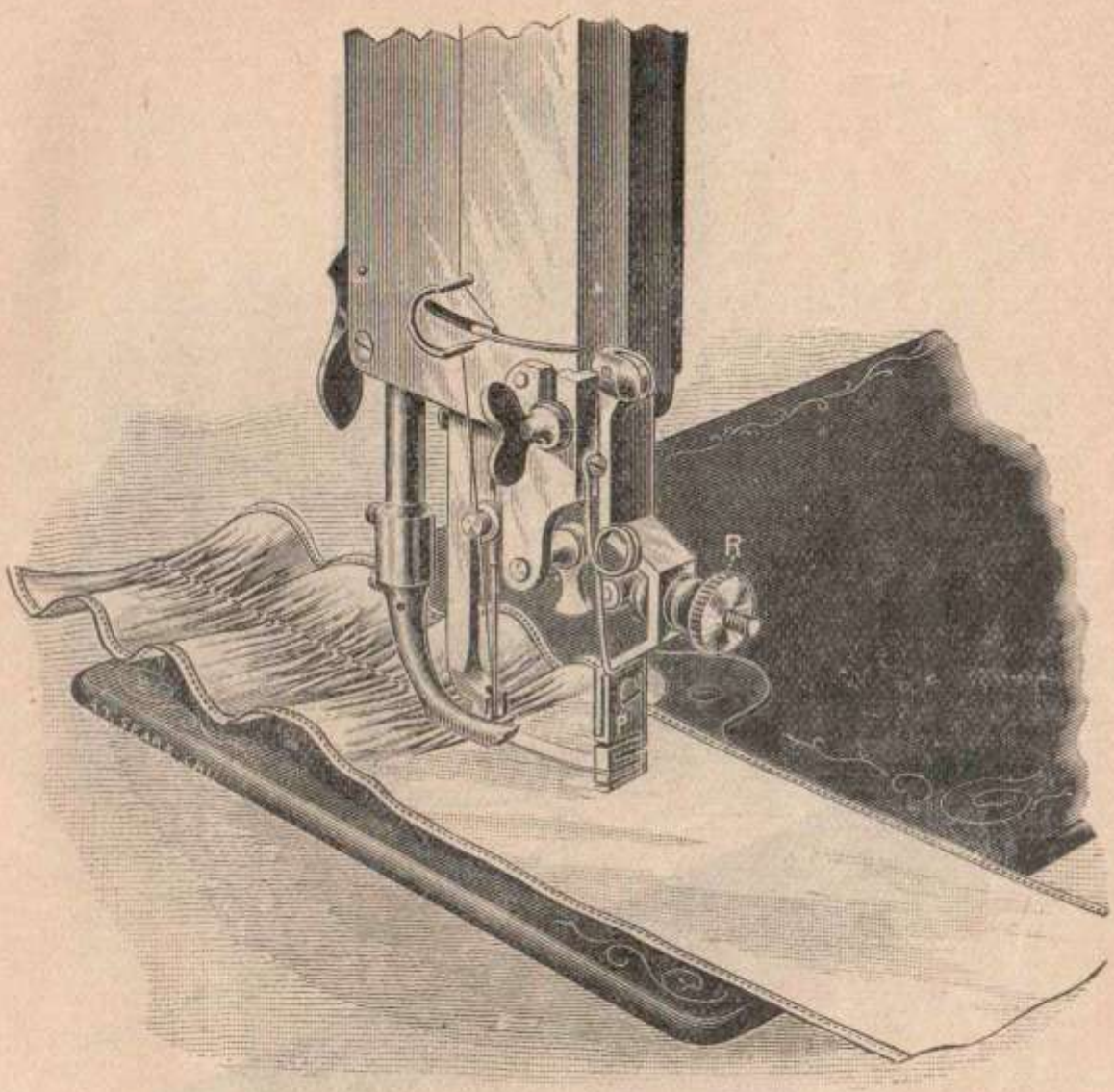
Raise the needle bar to its highest point, also raise the presser bar. Remove the screw from the lower right hand corner of the face plate. Place the cam lever L on the needle yoke nut 145, and the clamp M on the corner of the face plate, having the dowel pin, which is on the inner side of the clamp, in the hole in the face plate made for that purpose. Fasten the ruffler firmly with the screw C. The slot in the feeding spring N, should be exactly over the slot in the throat plate, and the points of the feeding spring should *just pass the needle.* If necessary, the feeding spring can be adjusted to the right or left by loosening the screw O, and moving the feeder P (to the right or left) tightening the screw O when the feeder is in proper position.

The Ruffler properly attached, is shown in Fig. 38.

A very little oil should be applied to the needle yoke nut when using the Ruffler.

To increase the fullness of the ruffle, turn the nut R *to the left. To decrease the fullness of the ruffle*, turn the nut R *to the right.*

Fig. 39.



TO GATHER WITHOUT SEWING ON.

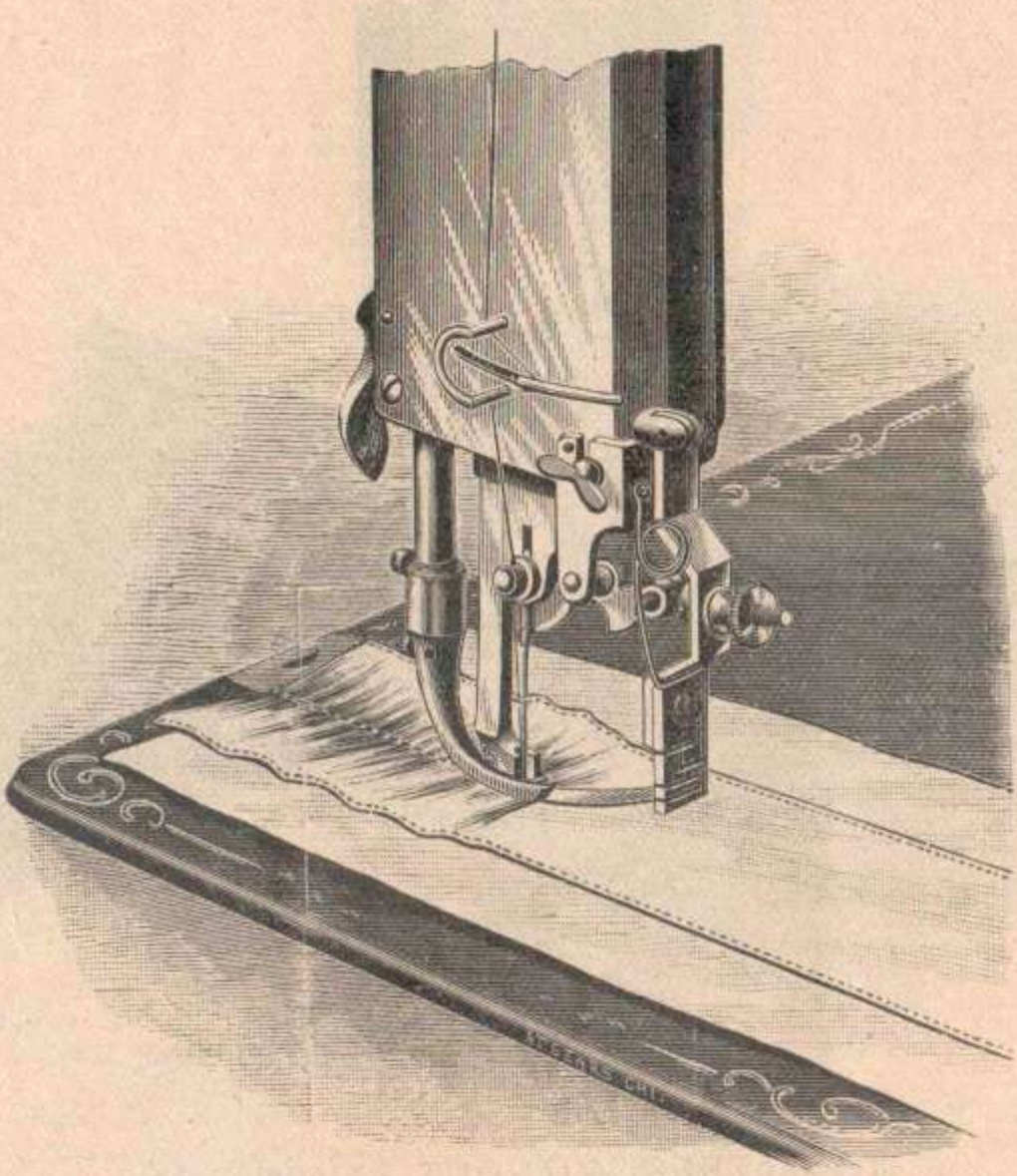
Have the stitch short. This is necessary in all varieties of fine ruffling.

Place the piece of goods to be gathered, *under the feeding spring*, as shown in Fig. 39, and sew as usual.

Regulate the fullness of the gathers by turning the nut R to the right or left, as explained on page 32.

If it is desired to gather *the edge* of the material, place the edge in the lower slot of the feeder P, and draw it back under the feeding spring.

Fig. 41.

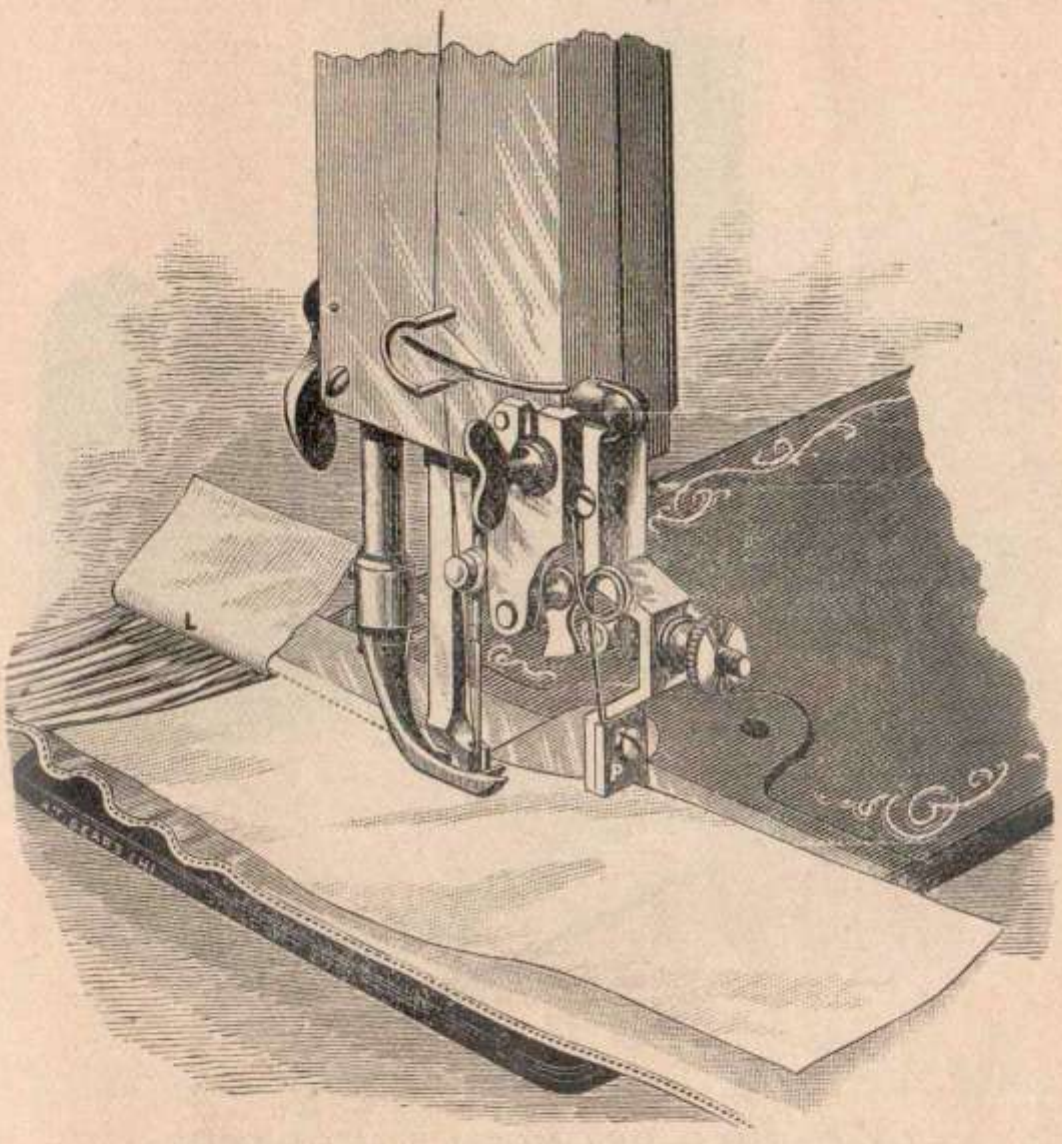


TO GATHER THE CENTER AND SEW ON.

Place the piece to be gathered, under the ruffler and feeding spring, and the piece or garment on which the ruffle is to be made, *under the piece to be gathered*, as shown in Fig. 41. Sew as usual. *Hold* the lower piece lightly, so it will not be "fulled."

NOTE.—The ruffle can be made, and at the same time sewed on the garment in any desired position.

Fig. 40.



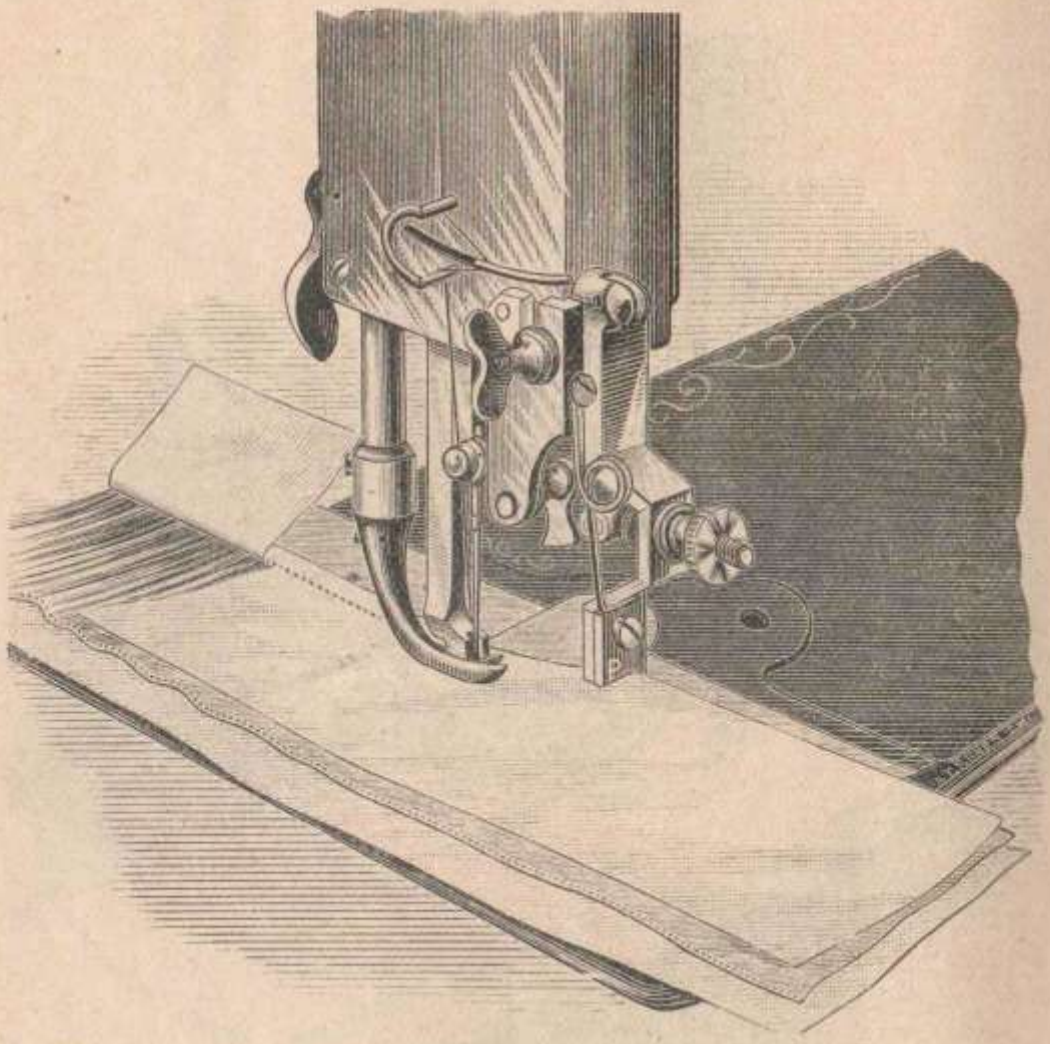
TO GATHER THE EDGE AND SEW ON A BAND.

Place the *edge of the piece to be gathered* in the *lower slot* in the feeder P, and pass it through *under the feeding spring* and under the needle. Place the *edge of the band* in the *upper* slot in the feeder P, and pass it through, *over the feeding spring* and under the needle. Sew as usual.

In Fig. 40, the band at L is shown turned back, as would be done when the gathering is completed.

NOTE.—If the band is of very elastic material, it may be necessary to hold it lightly in order to prevent its being "fulled."

Fig. 42.



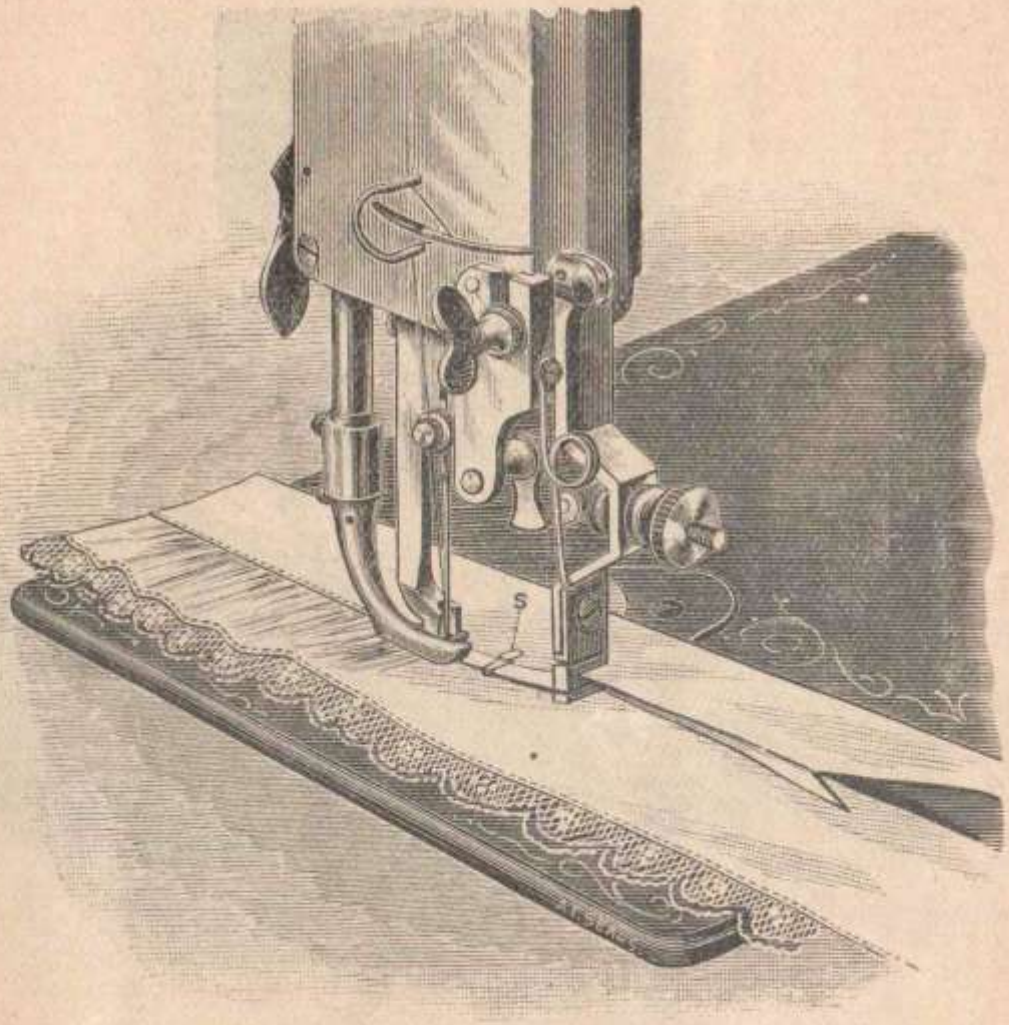
TO GATHER BETWEEN TWO BANDS.

Place the edge of the piece to be gathered, in the lower slot of the feeder P, and through under the feeding spring. Place one band *under the piece to be gathered*, under the feeder (or with the edge also in the lower slot of the feeder).

Place the edge of the other band in the upper slot in the feeder and through over the feeding spring and under the needle.

Sew as usual, being careful to keep the bands and ruffle in proper position, and hold the bands lightly to keep them straight and smooth.

Fig. 43.



TO GATHER AND SEW ON, AND EDGE STITCH THE BAND.

Place the small gauge S on the left hand side of the feeding spring, about half an inch from the end of the spring.

Place the edge of the piece to be gathered, in the lower slot of the feeder and draw it back under the feeding spring. Fold the edge of the band and place it in the middle slot of the feeder (on the right hand side) and draw it back over the feeding spring, under the gauge S, and on under the needle.

Sew as usual, holding the band smoothly up to the gauge. Adjust the gauge S to the right or left, as may be necessary, to bring the line of stitching on the edge of the band.

NOTE.—A second band can be sewed on under the ruffle, by placing it as explained on page 36.

Fig. 44.

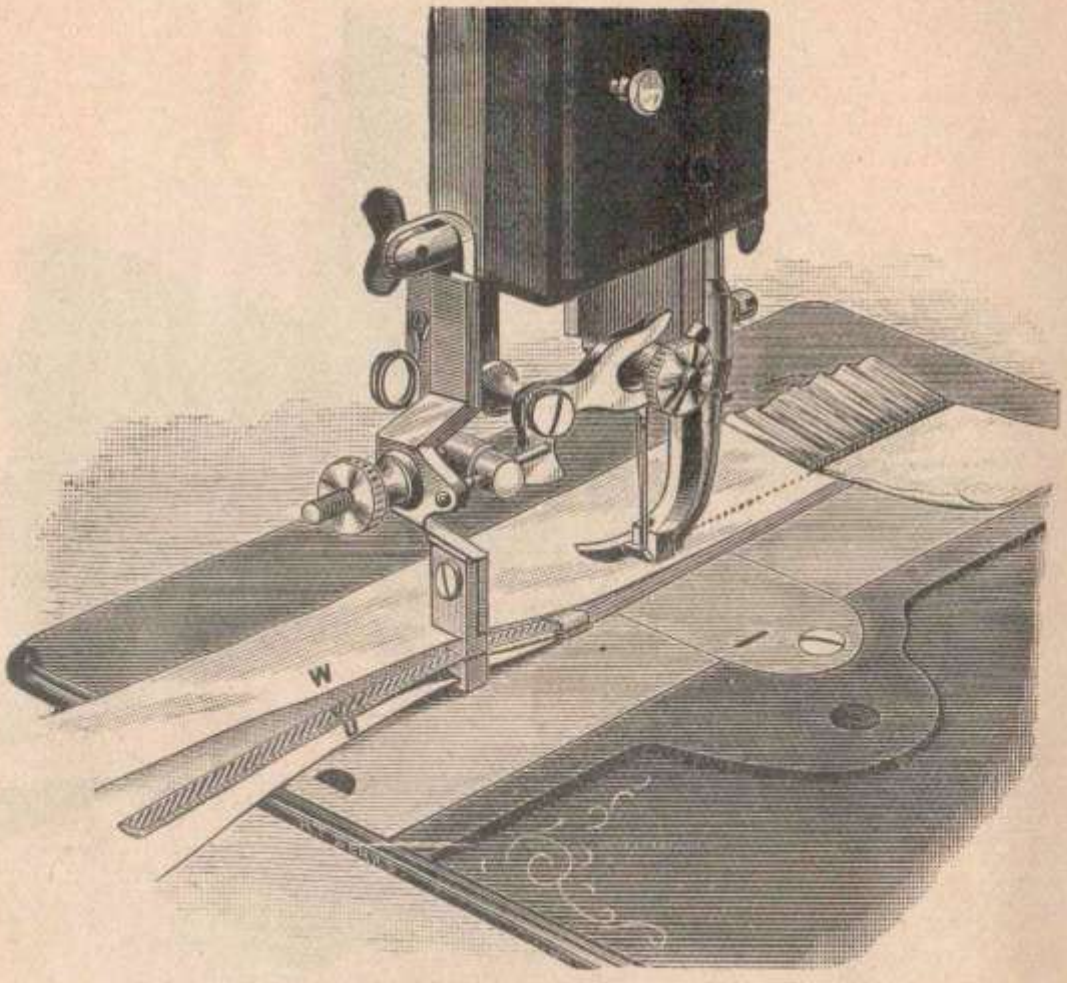


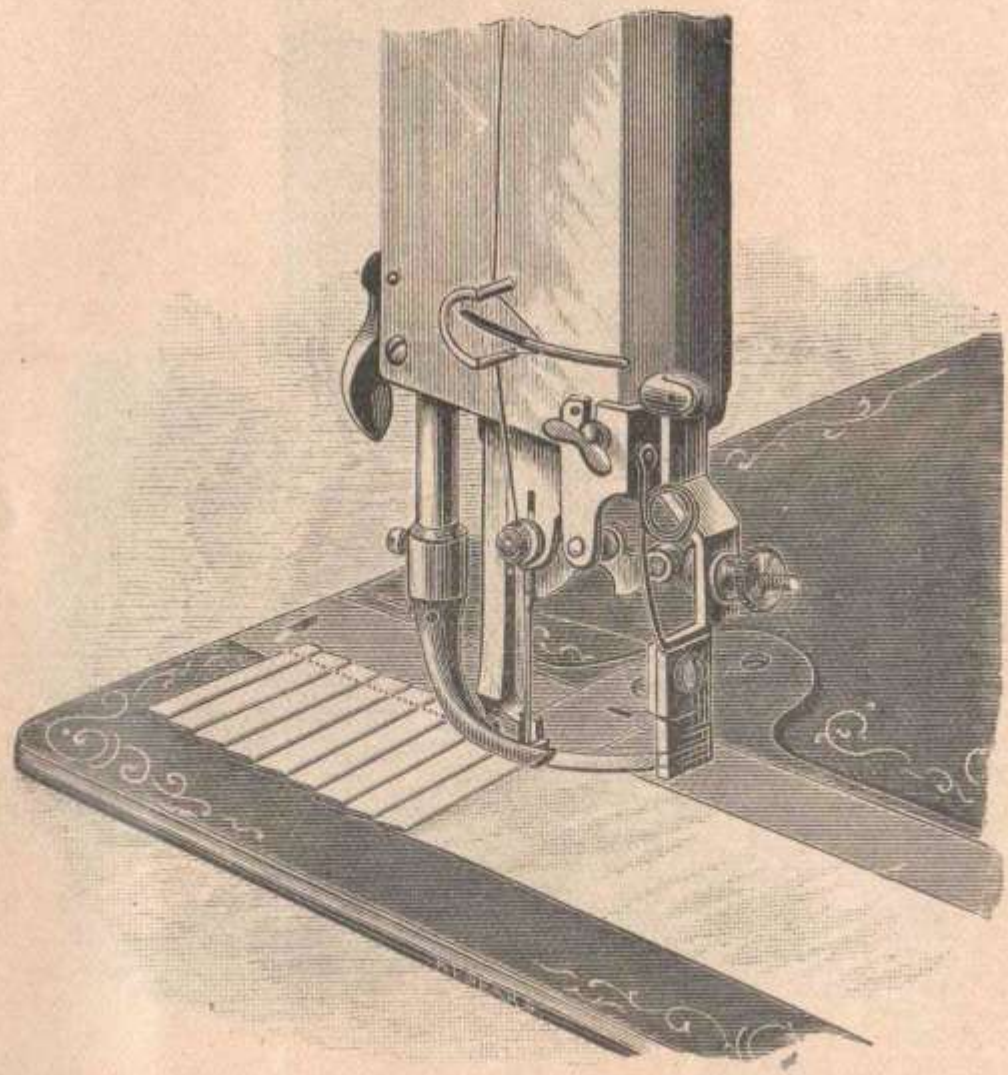
Fig. 45.

To Gather and Sew on a Band with Piping between Ruffle and Band.

Attach the Ruffler as explained on page 32. Place the piping gauge T (Fig. 45), on the feeding spring from the right hand side. Place the edge of the ruffle U in the lower slot of the feeder. Pass the piping V through the middle slot of the feeder, through the gauge T, and on under the needle. Place the edge of the band W in the upper slot of the feeder. Proceed as in ordinary gathering, holding the piping a little "taut."

NOTE.—The piping, if cut and folded, should be such width that when folded it will pass freely through the gauge.

Fig. 46.

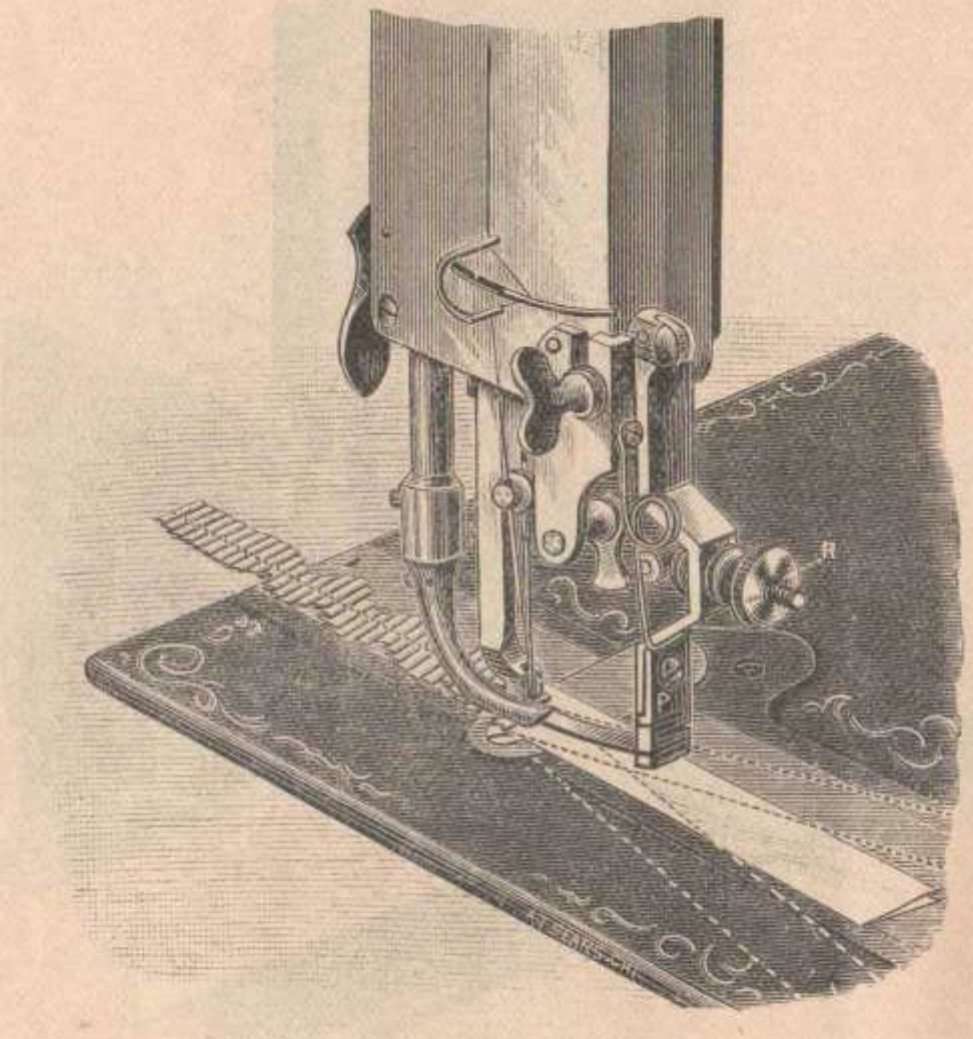


TO MAKE SIDE PLAITING.

Attach the Ruffler as heretofore explained. Turn the nut R (Fig. 38, page 32), as far to the right as possible. Place the material under the feeder, as shown in Fig. 46, or with the edge in the lower slot of the feeder. With the right hand draw the feeder toward you twice the distance you wish the width of the plait; let the bar go back; the feeding spring will carry back the goods, making the plait. Sew until you reach the edge of the plait, then proceed as before.

NOTE.—One of the lines of letters and figures on the front race cover may be used as a guide for the distance which the feeder should be drawn forward to make the plaits of even width.

Fig. 47.



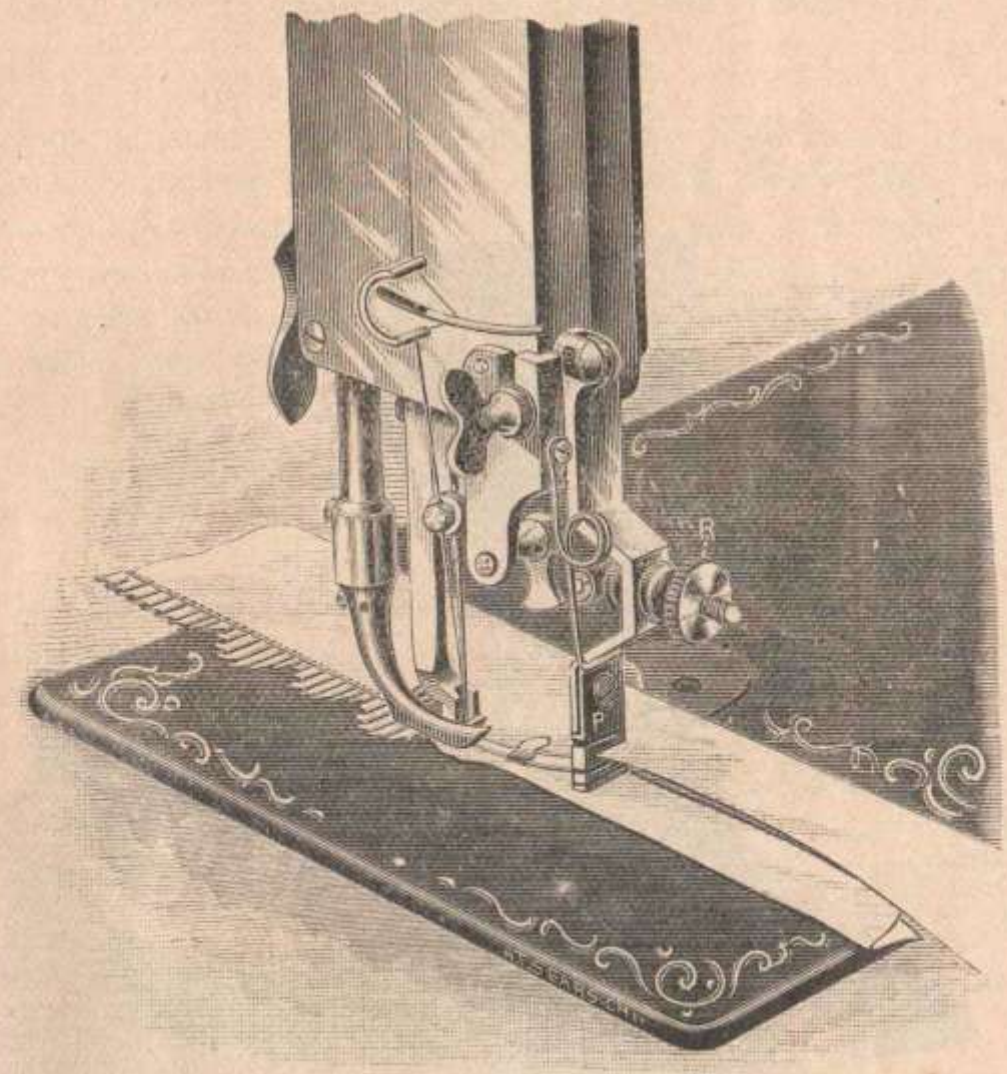
TO MAKE PLAITED TRIMMING.

Attach the Ruffler the same as for gathering, as before explained. Turn the nut R to the left, nearly to the extreme end of the screw, to make a *very full gather or plait.* Have the stitch of medium length.

Cut the material *an inch wide.* Fold it in the center and press the folded edge down smooth. Place it in the lower slot of the feeder P (when making the trimming straight), and sew as usual.

If it is desired to make the trimming in scallops, follow the instructions given on page 43, "To make scalloped plaited trimming."

Fig. 48.



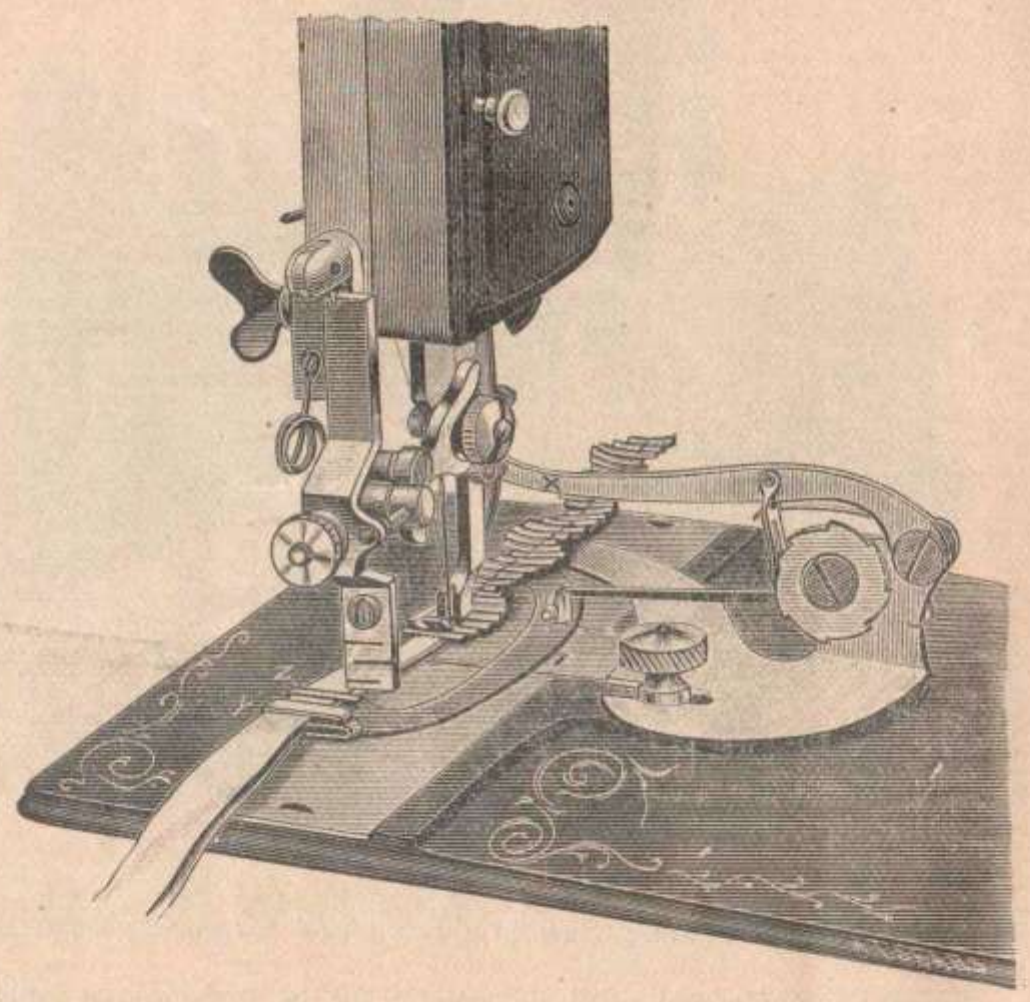
To make Plaited Trimming, Sew on a Band, and Edge-Stitch the Band.

Adjust the Ruffler and place the material for the trimming, as explained on page 40, having the edge-stitching gauge on the feeding spring. Proceed the same as when "Gathering and Sewing on and Edge Stitching the Band," as explained on page 37. The operation is fully illustrated in Fig. 48.

The trimming may be made and sewn on in scallops, by observing and following the directions on page 43, "To make scalloped Plaited Trimming."

NOTE.—The trimming can be sewed on a plain band, between two plain bands, or between two bands with the upper one edge-stitched, and piping can be sewed in if desired. In each case the goods should be placed the same as in gathering, as heretofore explained.

Fig. 49.



THE AUTOMATIC SCALLOP PLAITER.

This attachment is for guiding the material in making "scalloped plaited trimming." For directions, see page 43.

The price of the Scallop Plaiter is Three Dollars.

TO MAKE SCALLOPED PLAITED TRIMMING.

See Figs. 47 and 48.

Place the folded material *under* the feeder P. While sewing, move the goods to the right and left alternately, as indicated by the dotted lines in Fig. 47, far enough to make the scallops the desired depth. The *length* of the scallops depends on the frequency of these alternate movements of the goods.

A regular and even movement can easily be acquired, by which the scallops will be made perfectly uniform.

Cambric is the most suitable for this trimming, if used on white garments that are to be washed, although it can be made of other materials, according to the purpose for which the trimming is intended.

The goods may be cut wide enough to have *both edges folded*, if desired.

The plaited trimming, either straight or scalloped, is extensively used on collars, cuffs, aprons, children's dresses and ladies' underwear.

"THE DAVIS" is the only machine on which it can be made practically.

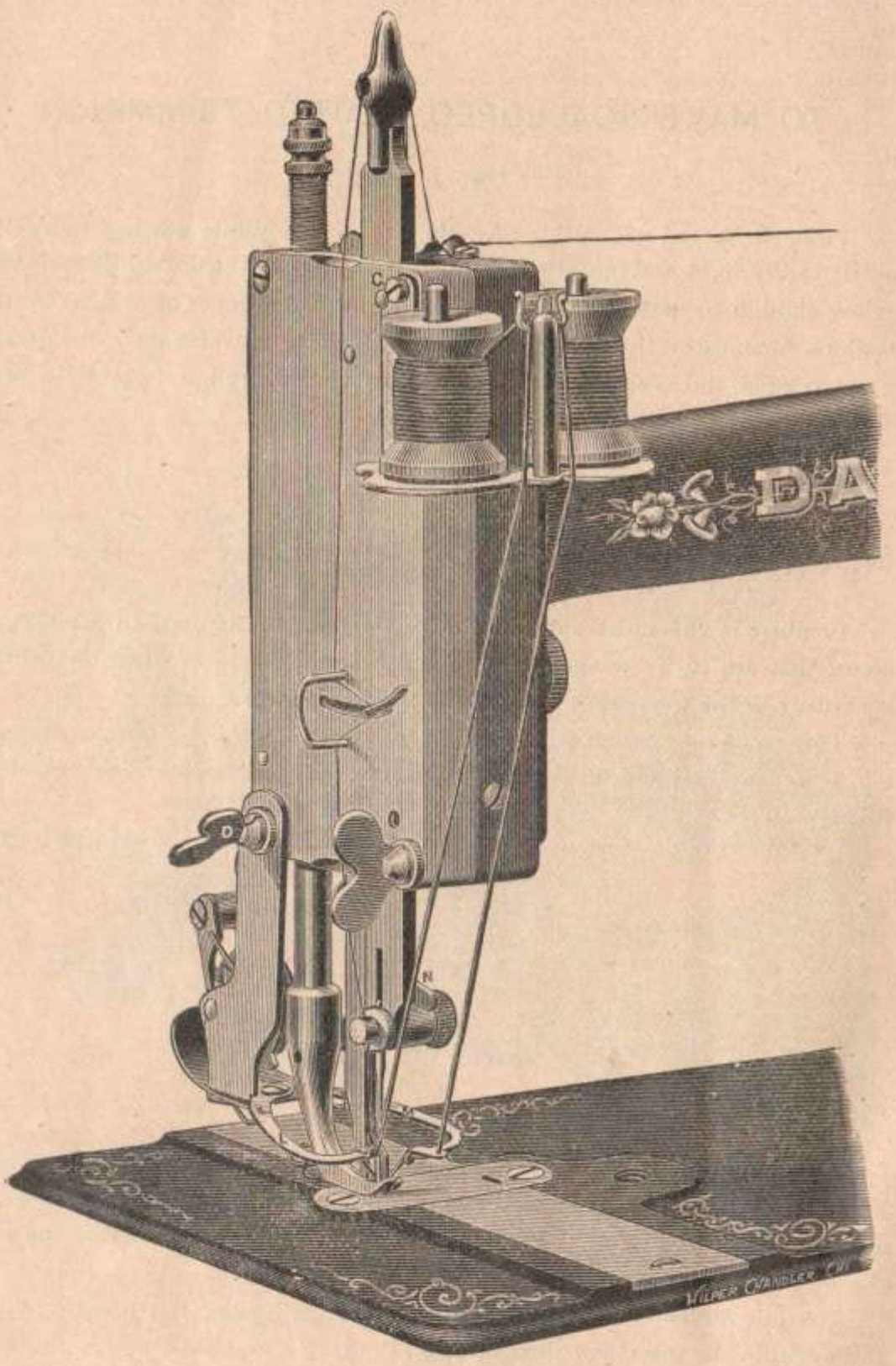
THE SCALLOP PLAITER.

See Fig. 49.

Attach and adjust the Ruffler as explained on page 40. Raise the needle bar to its highest point. Place the hook which is on the end of the lever X over the needle yoke nut, and fasten the Plaiter firmly to the bed of the machine with the gauge serew.

Pass the folded material through the guide Y (having the tongue in the guide within the fold), and then through the slot Z and back under the Ruffler feeding spring and needle.

Fig. 49 shows the Plaiter properly attached, with the material in its correct position.


D

EMBROIDERER.

Thread the machine above and below, as for ordinary sewing. Remove the screw from the lower back corner of the face plate. Raise the presser bar and bring the needle bar to its highest point. Pass the weaving arms L and M of the Embroider under the presser foot, from the back part of the machine, placing the lever N over the needle yoke nut. Lower the presser bar. Fasten the Embroiderer securely with the screw O, in such position that the ends of the weaving arms, when they pass each other, shall come as close as possible to the front side of the needle without touching it.

Attach the spool stand to the upper front corner of the face plate, and fasten it with the screw C. Place the spools on the stand, and draw the threads over the guides on the spool stand, then through the holes in the weaving arms. Draw all the threads directly back under the feed bar. Place the material under the presser foot, and sew as usual.

The cut shows the Embroiderer properly attached and threaded, as when in operation.

NOTE.—Never run the machine with the presser bar raised when the Embroiderer is attached.

A great variety can be made in the embroidery stitch, by the use of different sizes and colors of silk, or other thread, in the needle and Embroiderer, according to the taste and ingenuity of the operator. A very pretty stitch is made by using one thread only in the Embroiderer, it being crossed back and forth with the needle thread.

In working leaves, flowers, etc., with chenille, arrasene or tinsel, a single thread is ordinarily used in the Embroiderer, though in large patterns a good effect may sometimes be produced by running two threads of arrasene together, in one weaving arm. When this is done, the stitch should be very long.

The selection of the embroidering materials, colors, shades, etc., must depend entirely on the judgment and taste of the operator.

NOTE.—The Embroiderer can be used with other attachments, thus making a hem, binding, etc., with a handsome embroidered seam.

The Price of the Embroiderer is Three Dollars.

SEE WHAT THE DAVIS VERTICAL FEED WILL DO WITHOUT BASTING.

It will sew over uneven surfaces as well as plain.

It will sew over seams in any garment, without making long or short stitches, breaking of thread, or puckering the lining of the goods at the seam; requiring no assistance from the operator, except to run the machine and guide the work. This cannot be done with any other machine.

It will sew a curved piece on a straight one, or two curved edges together.

It will make wide and narrow hems, and hem all kinds of goods, such as soft merino, or goods difficult to hem on other machines.

It is the only practical machine for hemming bias alpacas, poplins, muslins and other similar goods, without basting, and it is the only machine in the world that will turn a wide hem across the end of a sheet, without fulling the under or upper side of the hem.

It will turn a hem and stitch on trimming at one operation.

It will turn a hem and sew in a fold at one operation.

It will turn a hem sew braid on the right side, and stitch on trimming, at one operation.

It will do felling, bias or straight, on any cotton or woolen goods

It will fell across seams on any goods.

It will bind dress goods with the same or other material, either scallops, points, squares or straight.

It is the only machine that will bind hats, cloaks, or other articles with bias satin or silk, from one-half to three inches in width, without basting.

The only machine that will make and bind cardigan jackets, or other knit goods, without basting.

It will put on dress braid and sew in facing at one operation, with or without showing the stitches.

It will make French folds.

Make French folds and sew them on at the same time.

Fold bias trimming and sew it on, at one operation.

Make milliners' folds with different colors and pieces of goods, at one operation.

Make milliners' folds with different colors and pieces of goods at one operation, and sew them on at the same time.

It will turn the edge of a bias band, sew on either one or two pipings, and stitch them on the dress at the same time.

It will sew a bias band on a dress, and run in either one or two pipings, without showing the stitches.

It will cover a cord and sew it in between edges, at one operation.

It will cover the cord for seams of waists, cushions, or furniture covers, and sew the seams at the same time.

It will sew in a sleeve, covering a cord and stitching it into the seam, at the same time.

It will sew the cord on the edge of military coats, jackets, etc

It will gather without sewing on. It will gather and sew on at the same time.

It will gather between two pieces, and sew on at the same time.

It will gather between two bands, showing the stitches on the right side, at one operation.

It will make and sew a ruffle on any part of a dress skirt, and sew on a bias fold for heading, at one operation, showing the stitches on the right side.

It will gather and sew on a band, with piping between ruffle and band, at one operation.

It will sew a band and ruffle on a dress skirt, stitching in piping at the head of the band, at one operation.

It will make plaited trimming, either straight or scalloped.

Make plaited trimming and sew on at the same time.

Make plaited trimming, either scalloped or straight, and sew on a band edge stitching the band, at one operation.

It will make plaited trimming, either scalloped or straight, and sew a piping on at the same time.

It will make *knife plaiting*.

It will shirr any kind of goods.

It will, with one operation for each variety, without basting, execute twenty practical varieties of ruffling, being twelve more than can be produced on any other machine with the same number of operations.

It will make a more elastic stitch than any other machine.

It is the only machine that will sew velvet, or plush, without drawing or puckering.

It does not change length of stitch on scroll work.

It sews from lace to leather, without changing stitch or tension

For tucking, cording, braiding, quilting, embroidering, shoe-fitting, dress making, tailoring, family use, or general manufacturing, it has no equal.

TO THE OPERATOR.

It is a matter of fact that any and all machinery will, sooner or later, by constant use, become worn, and an adjustment of the parts be necessary. Such wear is not likely to occur in the "The Davis" for many years. The machine is so constructed, however, that should it become necessary, any "lost motion" can be taken up, and the parts kept in their proper position for an indefinite length of time.

Operators are cautioned not to attempt to adjust the machine, unless its sewing qualities are impaired, and not then, unless they are *perfectly familiar with its principles and mechanism.*

The attempt by any unskilled person to adjust or repair a machine often does greater injury than years of ordinary wear could produce.

Should the machine be taken apart, and the bars be taken out of the head of the machine, notice carefully the position of each bar, or part, when taking them out, and be sure and put them all back *in their proper places.*

See that the spring which presses forward the feed bar is *placed back of the bar.*

Read the foregoing instructions carefully and understandingly, and follow them to the letter, particularly those relating to setting the needle, sizes of needles and thread, threading the shuttle and the machine, the tension, and oiling. By doing so, your machine will always be in proper condition, ready at all times to serve you, and capable of executing the greatest range of work, in the the most practical manner of any Sewing Machine in the market.

Any operator can readily learn to make any variety of work which we advertise the machine as capable of doing.

Any communication addressed to the Company, or any of its Branch Offices, will receive prompt attention.

THE DAVIS SEWING MACHINE CO.,

DAYTON, OHIO, U. S. A.

INDEX.

THE

Davis Sewing Machine Co.

OFFICE AND MANUFACTORY.

DAYTON, - OHIO.

PRINCIPAL BRANCHES:

CHICAGO,	46, 48 & 50 Jackson Street.
BOSTON,	31 Hayward Place.
LONDON, E. C.,	24 Aldersgate Street.
PARIS,	48 Boulevard Sebastopol.
MILAN,	52 Via Spiga.
BRUSSELS,	103 Rue Neuve.
MEXICO,	Sommer, Hermann y Ca.
MELBOURNE,	79 Bourke St., East.