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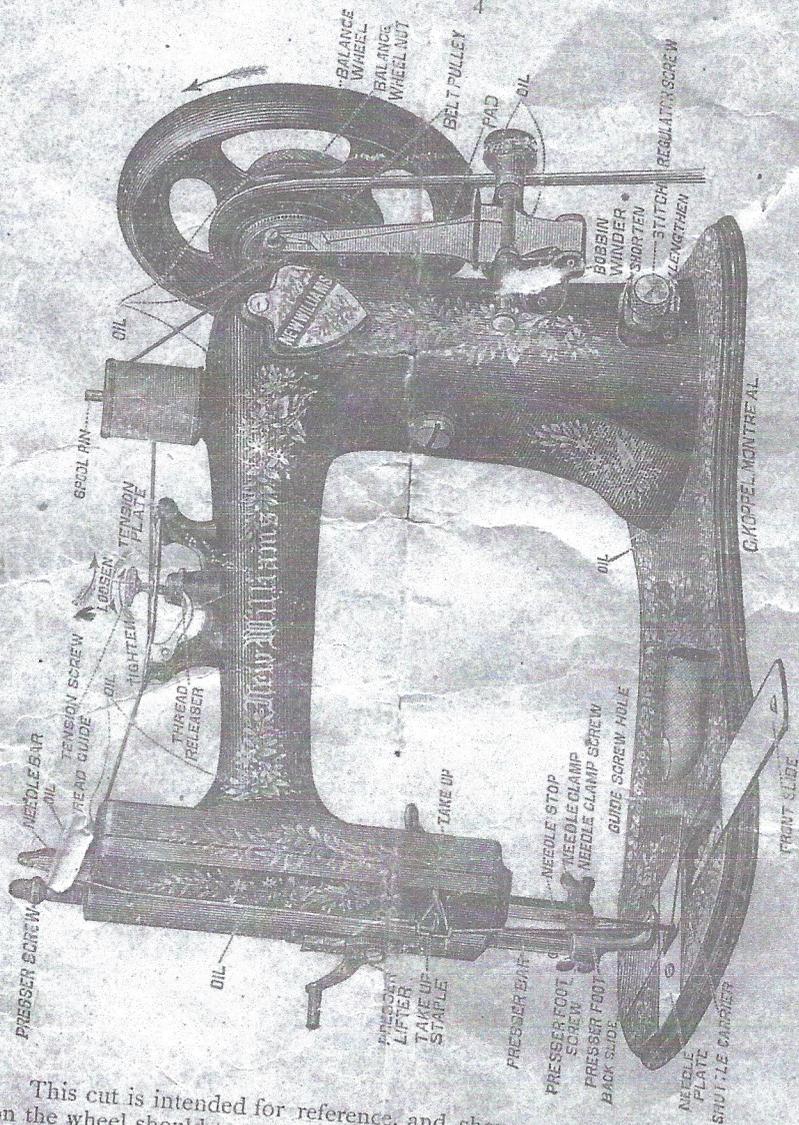
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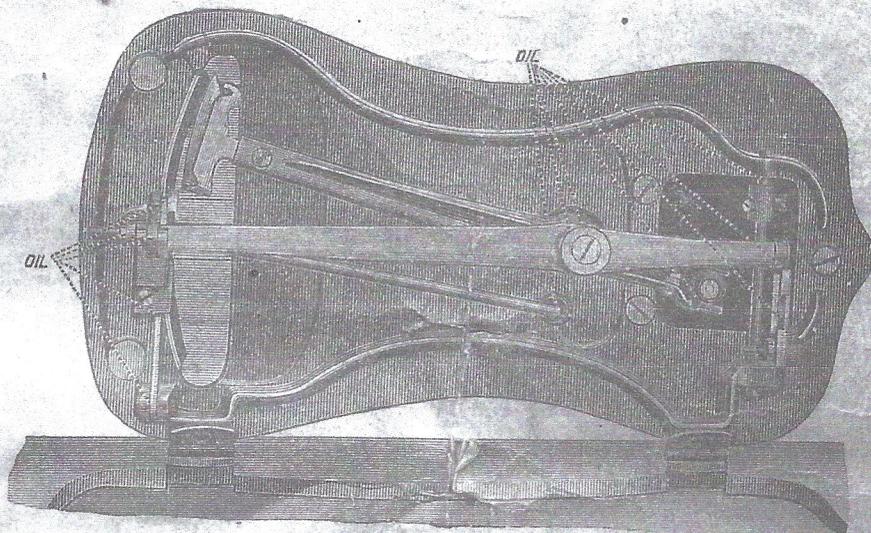
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This cut is intended for reference, and shows very clearly the direction the wheel should turn, the threading of machine and bobbin winder, and gives the names of all the parts to which reference is made in the instructions. It also indicates the places to be oiled and shows the manner of drawing up the under thread.



Head of Machine, showing under mechanism and points at which oil must be applied.

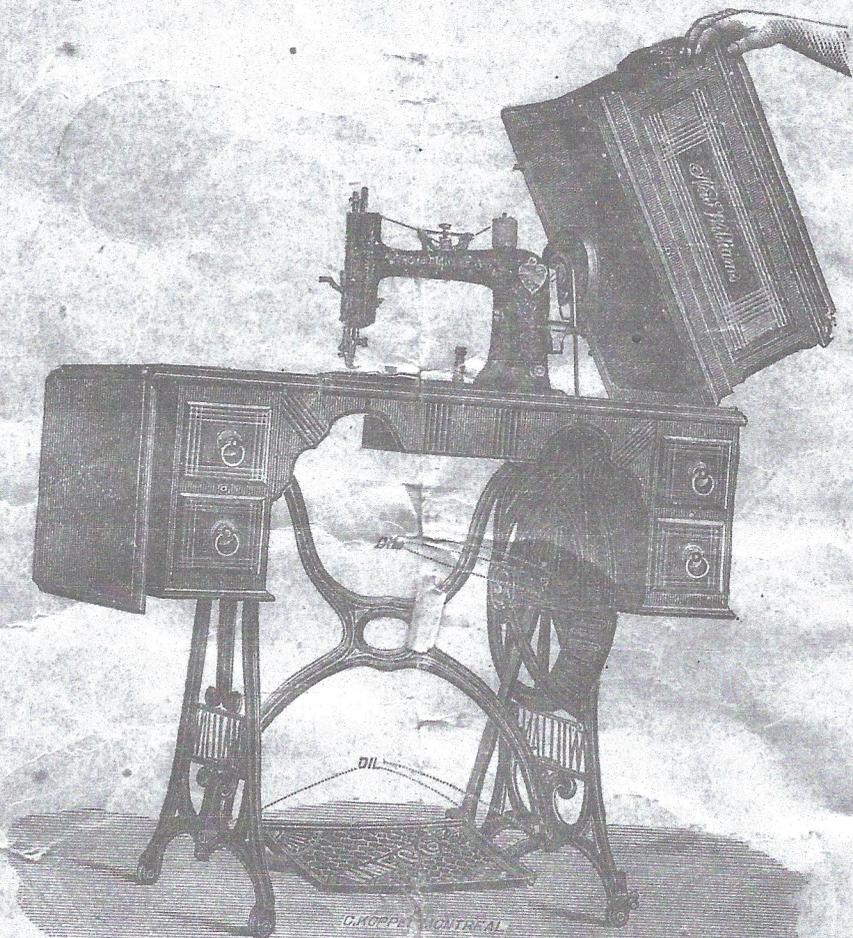
ATTACHMENTS AND ACCESSORIES.

We furnish free with each New Williams Machine :

| | | |
|--------------------|----------------------------|---------------------|
| Six Bobbins, | One Thumbcrew, | One Shirring Blade, |
| One Screw Driver, | One Foot Hammer or Feller, | One Binder, |
| Twelve Needles, | Four Plate Hemmers (Set) | One Braider, |
| One Guide, | One 'Fucker | One Oil Can, |
| One Quilter, | One Ruffler, | One Thread Cutter, |
| One Bottle of Oil, | | |

One small Screw Driver for Shuttle Tension Screw.

The above articles constitute the most valuable and useful outfit furnished with any Machine in the market.



Special attention is called to our PATENT DEVICE FOR AUTOMATICALLY ADJUSTING THE LEGS OF MACHINE to any kind of floor. On the foot of the right front leg you will notice a Small Thumbscrew, which when loosened, releases the adjustable Caster, which will at once cause all the legs to rest on the floor. Tighten the Screw and the Machine will stand solidly, thus in a very simple manner obviating the necessity of "WEDGES," "SCREW DRIVERS," etc., being stuck under the leg to level up the Machine, and when moving the Machine to another place, it is only necessary to repeat the loosening and tightening of the Thumbscrew to ensure a solid standing Machine. The dotted lines indicate the points where oil is needed.

7

INSTRUCTIONS FOR USING THE MACHINE.

TO OIL THE MACHINE.

(See Cut on Page 4.)

1st. See that the Machine is CLEAN, then oil in all the small round HOLES and wherever there is any friction of the working parts. Oil the working parts of the STAND as well as the HEAD of the Machine. Use only the best Sewing Machine Oil. Only a small quantity should be used at a time.

2nd. The curved side of the RACE against which the SHUTTLE works should be oiled at least twice a day when the Machine is in constant operation.

3rd. After the Machine has been oiled, run it (with PRESSER-FOOT up and SHUTTLE out) for a minute, and then wipe off the superfluous oil.

4th. If the oil becomes gummed, causing the Machine to run hard, put a little KEROSENE or ALCOHOL in the OIL-HOLES, run rapidly, wipe clean, and then oil with Sewing Machine Oil.

TO GET THE MOTION.

1st. Unthread the NEEDLE, remove the SHUTTLE, and raise the PRESSER-FOOT by turning the LIFTER-HANDLE from you.

2nd. Place the feet of the TREADLE, with the instep directly over the ROD upon which the TREADLE rests.

3rd. Start the Machine by placing the right hand upon the top of the BALANCE WHEEL and revolving it from you.

4th. Place a piece of cloth on the FEED and let the PRESSER-FOOT down, and practice in starting and stopping the Machine until you can do so with ease.

TO THREAD THE MACHINE.

1st. Raise the Needle to the highest point by turning the wheel from you by hand.

2nd. Place the SPOOL on the Spool-pin and pass the thread into the slot in the Tension Spring, carrying it to the left under the point of the flat THREAD-GUIDE, and through the hole in the top of the NEEDLE-BAR. Pass the thread down behind the CHECK LEVER THREAD GUIDE (a bent wire near the lower end of the Face-plate), drawing it towards you between the Guide and the Face-plate. Next, pass it over or into the hook of the CHECK LEVER, after which push it back from you, between the THREAD-GUIDE and Face-plate, thence carry it down to the needle and pass it through the eye from left to right, leaving about three inches extending beyond the needle. See cut page 4.

TO REMOVE THE NEEDLE.

Raise the NEEDLE BAR to its highest point; take hold of the NEEDLE with the thumb and finger of the left hand, and with the right hand loosen the NEEDLE-CLAMP by turning the top of the winged NEEDLE CLAMP NUT toward you about a turn, not more; then lower the needle and remove it.

TO SET THE NEEDLE.



FIG. 1.

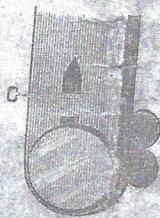


FIG. 2.

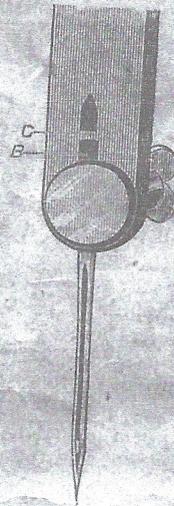


FIG. 3.

Now observe the illustrations above. Fig. 1 shows the NEEDLE; A is the shank and B the self-adjusting stop. Fig. 2 shows the end of NEEDLE BAR and CLAMP, and just above the CLAMP and in the groove that receives the NEEDLE is the stop C, against which the end of stop B (Fig. 1) rests, as clearly shown in Fig. 3. Pass the shank of NEEDLE up into the groove of the NEEDLE-BAR, keeping the shoulder to the right and the long groove to the left. Guide it up until it rests against and covers the stop C (Fig. 3) then fasten by turning the top of winged THUMB-NUT from you. As the NEEDLE is self-setting, this brings it correctly into place.

TO WIND A BOBBIN.

Examine the cut on Page 4 and the threading will be better understood.

- 1st. Oil the cavity in the end of the SPOOLER-SPINDLE and the bearing of the SPOOLER-PULLEY before inserting the BOBBIN.
- 2nd. At the end of the Upper Shaft, and to the right of the Balance Wheel, will be found a Nut. Turn this Nut a little to the left or towards you; this will loosen the Balance Wheel so that it will turn freely, without running the Machine.
- 3rd. Put the BELT into the groove in the PULLEY of the WINDER.
- 4th. Place the spool of thread on the spindle on the top of arm of Machine, draw off a few inches of thread and pass the end of it through the small hole in brass head of Bobbin.
- 5th. With the left hand pull the SPINDLE to the left and insert the BOBBIN, taking care that the little pin in the socket to the right enters the hole in the end of the bobbin, thus fastening the end of the thread.
- 6th. Pull the TENSION PAD towards you until it presses against the Bobbin.
- 7th. Take hold of the thread just above the top of the Tension Pad, pass it into the right hand slot in pad, then around behind into the left hand slot, then from right to left around the Tension Screw between the Tension Discs, then again through the left hand slot, then roll up on the spool any slack thread that may remain between winder and spool.
- 8th. Start the BALANCE WHEEL from you by hand and proceed as in sewing.
- 9th. When done winding turn the nut to the right, or from you, to tighten the wheel, and remove the belt from the Winder Pulley.

TO THREAD THE SHUTTLE.

N.B.— Remember the Shuttle is Self-threading.

1st. Hold the shuttle between the thumb and middle finger of the left hand, point down and spring side towards you.

2nd. Take the Bobbin between the thumb and forefinger of the right hand, holding it so that the thread will draw up and over FROM LEFT TO RIGHT.

3rd. Drop the BOBBIN into the SHUTTLE and press it gently on the end with the forefinger of the left hand to prevent its turning readily. Draw the thread into the notch at the end of the spring shown in Fig. 1, continue to draw the thread firmly down towards the point of the shuttle and you will find that it will pass under the diff. at points of the tension spring and finally come into the position shown in fig. 2. The Shuttle is now threaded and ready for use.

FIGURE 1.

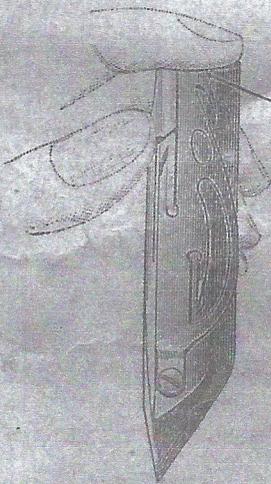
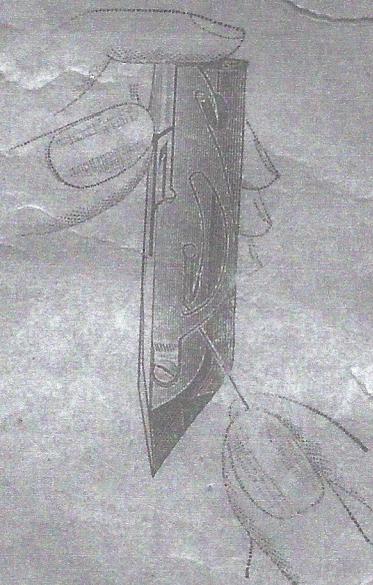


FIGURE 2.



To put the SHUTTLE in: Have the CARRIER at one end of the race, and lay the SHUTTLE in the CARRIER, point first and toward you, the spring side up. Let the end of the thread (about three inches) lie over the SHUTTLE and CARRIER on your right, and close the side.

To increase the tension turn the screw to the right, to decrease it turn to the left. A very small screw driver is furnished for this purpose.

TO DRAW UP THE SHUTTLE THREAD.

See cut Page 4—Position of Thumb and Thread.

Take hold of the BALANCE WHEEL with one hand and the Needle-thread with the other. Let the thread lie slack, so as not to spring the Needle. Move the WHEEL from you once round, then pull up the slack of the Needle-thread with your hand in order to draw the Shuttle-thread up through the Needle-plate; then take both threads and pass them under the PRESSER-FOOT, toward the back of the Machine. Then close the slide over the SHUTTLE-RACE.

TO BEGIN SEWING.

Place the work on the FEED and let the PRESSER-FOOT down on it. Guide the work with the left hand, starting the Machine with your right hand by turning the WHEEL from you. The work should be kept free, so as not to drag or hold back on the FEED.

TO TAKE OUT THE WORK.

Raise the Needle-bar to its highest point and lift the PRESSER-FOOT off the goods. With the forefinger of the right hand press down the Lever of the Thread Releaser (which will be found in front of the tension plate), while with the left hand you draw the work out back from the machine. Break or cut both threads about three inches from the needle by means of the THREAD-CUTTER.

TO REGULATE THE TENSION.

To tighten the TENSION of upper thread, turn the TENSION THUMB SCREW to the right. To lessen it, turn to the left. If the upper thread is not properly drawn into the cloth, loosen the upper tension. If the under thread is not properly drawn into the cloth, tighten the upper tension. (*See Hints to Users No. 7, Page 26.*)

TO TURN A CORNER.

Stop the Machine without raising the Needle more than half way out of the work; raise the PRESSER-FOOT and turn the work in the manner desired, using the Needle as a pivot.

TO ALTER LENGTH OF STITCH.

The STITCH-ADJUSTING SCREW is in the front of the NEEDLE-ARM BASE, and near the BED-PLATE. To lengthen the stitch, turn the THUMB-SCREW to the left; to shorten the stitch, turn the Screw to the right.

TO ADJUST THE PRESSURE ON WORK.

Hard, stiff goods require more pressure than light or soft goods. To increase the pressure turn the **PRESSURE-SCREW** at the top of the Machine to the right; to decrease it, turn the screw to the left.

TO RAISE OR LOWER THE FEED.

At the left end of the feed-lever is a block attached to the lever by means of a screw. Loosen the screw and push up the block to raise the feed, or pull it down to lower the feed. When you have the feed to the right height, then tighten the screw.

THE BELT.

The Belt should be tight enough to run the machine without slipping should it be necessary to shorten it, open one end of the wire hook which joins the ends of the Belt together, cut a small piece off the end which you have unfastened, make another hole for the hook and join it again.

TO SELECT NEEDLES AND THREAD.

The following table may be a useful guide:—

| | | | |
|------------|-------|---|--|
| 300 to 500 | 000 | 1 | For the very finest work. |
| 120 to 200 | 00 | 2 | For the very finest work that ordinarily occurs. |
| 90 to 110 | 0 | 3 | For fine underclothing, etc. |
| 70 to 80 | 0 & A | 4 | For common underclothing, calico, etc. |
| 40 to 60 | B | 5 | For unbleached cotton or linen fabric, etc. |
| 12 to 36 | C | 6 | For heavy work. |
| 0 to 10 | D & E | 7 | For very heavy work. |
| | | 8 | The coarsest soft goods. |

USING THE ATTACHMENTS.

NARROW HEMMING.

See opposite page.

Put the HEMMER in place of the PRESSER-FOOT, and hold it up by the lowest lift. Have the under thread drawn up through the needle-hole.

Turn the right hand edge of the work upward into the scroll of the HEMMER while passing it from you through the HEMMER, until it inclines over to the left, and forms a hem which must lay under the NEEDLE. Then let the HEMMER down.

As you start to sew, pull gently on the ends of thread to help the work along one or two stitches till the FEED catches it, then rest your hands back on the table and gently hold back on the work to keep it smooth and in line with the feed. As it runs through the hands, turn it (enough to fill the hemmer) straight up from the table. Do not attempt to fold it over nor to place it in the hemmer, but keep your hands so far away that the hemmer can act freely, when it will only require the proper quantity of goods to make an absolutely perfect hem.

To bring the stitching close to the edge of the hem, the hemmer should be set close to the needle; but for coarse, rough work, it is well to set it off a little.



NARROW HEMMING.

(See opposite page.)

This hemmer is furnished with the Machine without extra charge.

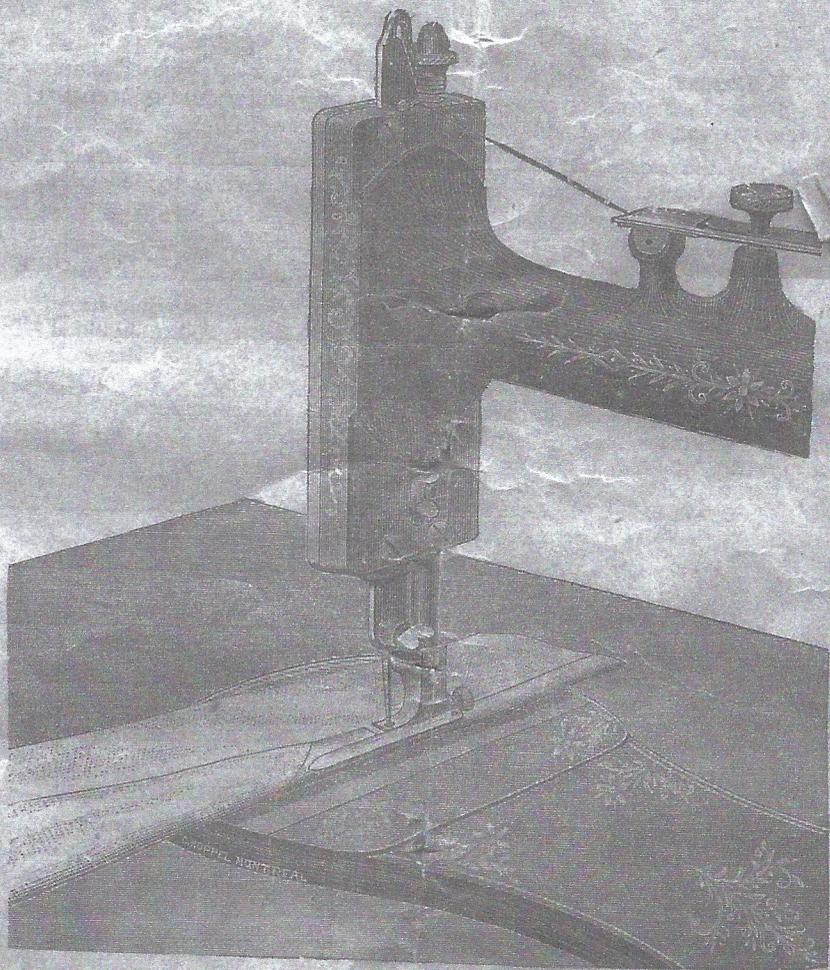
THE HEMMER SET.

(See opposite page.)

These consist of a set of four plate hemmers, and a binder, which are adjusted to the bed plate of machine in a manner similar to the illustration of Binder on page 24 (present book), and are used with the usual sewing foot. The set illustrated on page 15 (present book), which are sometimes furnished, consists of six pieces, the Foot, four Hemmers and a Binder. The four hemmers make $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$ and 1 inch respectively. These hemmers are very convenient for general family use, making good even hems on all kinds of goods, straight or bias, even when seams have to be crossed.

To adjust the wide hemmer to the machine, use the attachment foot, the one with two screws, which is put on to the presser bar the same as the ordinary foot, but is fastened by a screw at the side; then take the hemmer of *width desired*, and slip the straight flat arm into the slot at the heel of the foot until the scroll comes into place in front of the needle, then fasten with the set screw. The hemmer may be moved a little either to the right or the left, if found necessary, in order to get the stitch in the proper position on the hem.

Take the end of the piece to be hemmed and turn down the edge for a distance of about three inches, and about a quarter of an inch in width. Enter the doubled edge of the goods into the scroll of the hemmer, and pass it out under and beyond the foot, then fold again that part of the goods which has passed through the hemmer and draw it towards you until the double folded portion comes directly under the needle. Let down the hemmer, start the machine and guide the material so that it will just fill the scroll of the hemmer without crowding it.



WIDE HEMMING.

(See opposite page.)

The Hemmer Set contains four Hemmers and a Binder.

FELLING.

(See opposite page.)

If the HEMMER (which is also the FELLER) is on, it can be used simply as a presser in running up the seam, the edges of which should be trimmed if necessary, as in hand felling.

Open the work flat, wrong side up, the seam standing up straight, and taking the work near the beginning of the first seam in the left hand, and the ends of the thread in the right hand, draw the edges into the FELLER, and let down the FELLER without disarranging the work.

Slightly lengthen the stitch and sew the second seam.

NOTE.—The WIDE EDGE should be of such a size as to just fill the FELLER, and should be kept smooth. The NARROW EDGE should be TRIMMED as close as security permits. In sewing the second seam of a fell, the first seam should pass close to the left-hand edge of the opening of the FELLER, over which BOTH EDGES of the cloth should be made to pass. The FELLER may be adjusted to the right or left, so as to sew close on the edge of the fell, or near the first seam, as desired.

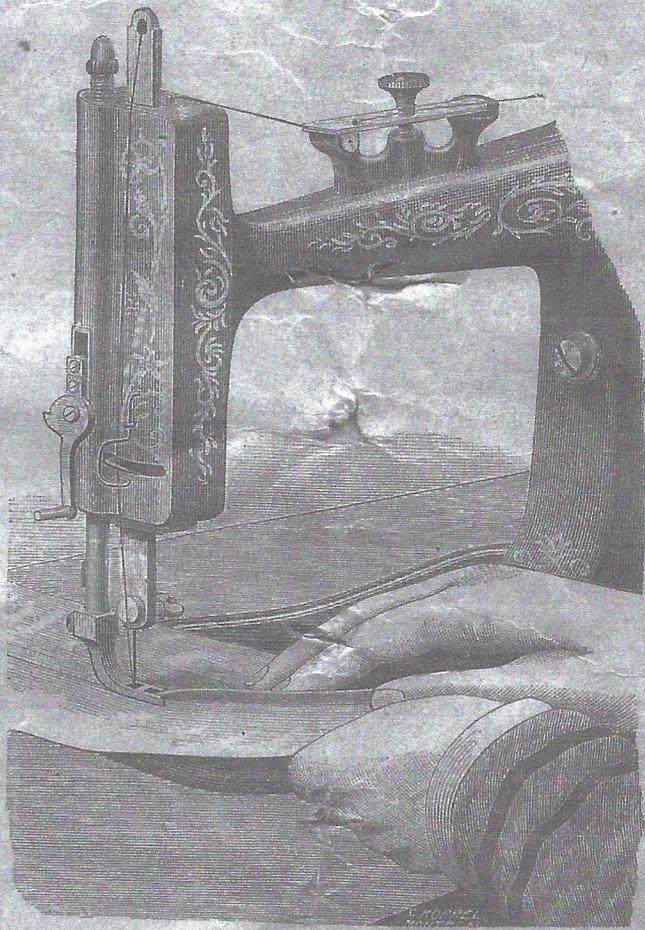
THE UNDER-BRAIDER.

Remove the NEEDLE-PLATE and adjust in its place the BRAIDER PLATE. Remove the front slide, and turn back the CAP that covers BRAID RECESS in BRAIDER-PLATE, and place the BRAID in the channel which is in the BED-PLATE under the slide, and along into the BRAID-RECESS in BRAIDER-PLATE, let the end of BRAID lay over the FEED-TEETH, then swing the CAP back over the BRAID and replace the slide, taking care that the BRAID remain in its proper place in the channel.

By means of the THUMB-NUT which will be found on the lower part of the arm of Machine just back of the NEEDLE-BAR, adjust the VIBRATOR so that when operating the Machine the presser-foot will be raised slightly off the goods when the needle is down. Proceed to work with a rather long stitch and tight tension.

NOTE.—For under-braiding, the pattern is stamped or traced on the wrong side of the goods, which must be kept uppermost while the braiding is being done.

This removes the difficulty experienced in turning sharp corners and renders the braiding of the most intricate patterns a comparatively easy matter.



FELLING.

(See opposite page.)

This operation is performed with the Hemmer.

TUCKING.

(See opposite page.)

With the GUIDE-SCREW, attach the TUCKER to the Machine, adjusting the TUCKER-GAUGE as far from the NEEDLE to the right, as the width of the tuck desired.

Adjust the CREASING-END of the TUCKER at such a distance to the left of the NEEDLE as is equal to DOUBLE the WIDTH of the TUCK and the DESIRED SPACE BETWEEN the TUCKS TAKEN TOGETHER.

NOTE.—When no space is desired between tucks, it will, of course, only be necessary to move the CREASING-END to the left of the needle a distance equal simply to double the width of the tuck.

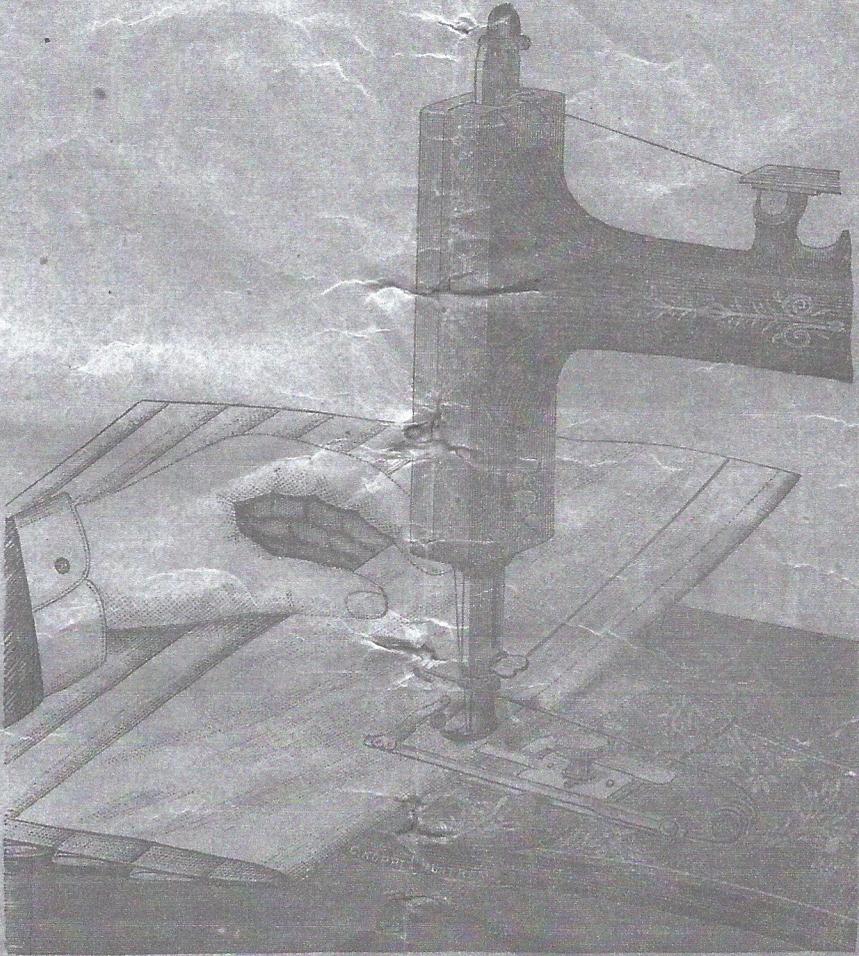
The TUCKER being arranged as desired, unite the parts by tightening the SMALL THUMB-SCREW, and connect the WORKING ARM of the TUCKER with the machine by ATTACHING the HOOK to the NEEDLE.

Fold the right-hand edge of the cloth under for the first tuck, and the PRESSER FOOT being raised, place the work in the machine with the fold close against the guide, after which lower the PRESSER-FOOT and proceed to sew.

As the work passes through the machine it is CREASED for the fold of the NEXT TUCK, which is made the SAME AS THE FIRST.

ADVICE.

Never attempt to take the Machine apart, or you will be sure to get into trouble. Ladies sometimes boast that they "have taken their sewing machines all to pieces and put them together again." Nothing can be worse; it is a mistake to suppose that a Machine can be benefited by being tampered with by inexperienced parties.



TUCKING.
(See opposite page.)

GATHERING OR RUFFLING.

(See opposite page.)

Take off the PRESSER-FOOT and put the RUFFLER in its place, as shown in the engraving. The SLOT in the ARM of the RUFFLER must be placed around the THUMB-NUT of the NEEDLE-CLAMP. Care should be taken to see that the NEEDLE passes down through the centre of the HOLE.

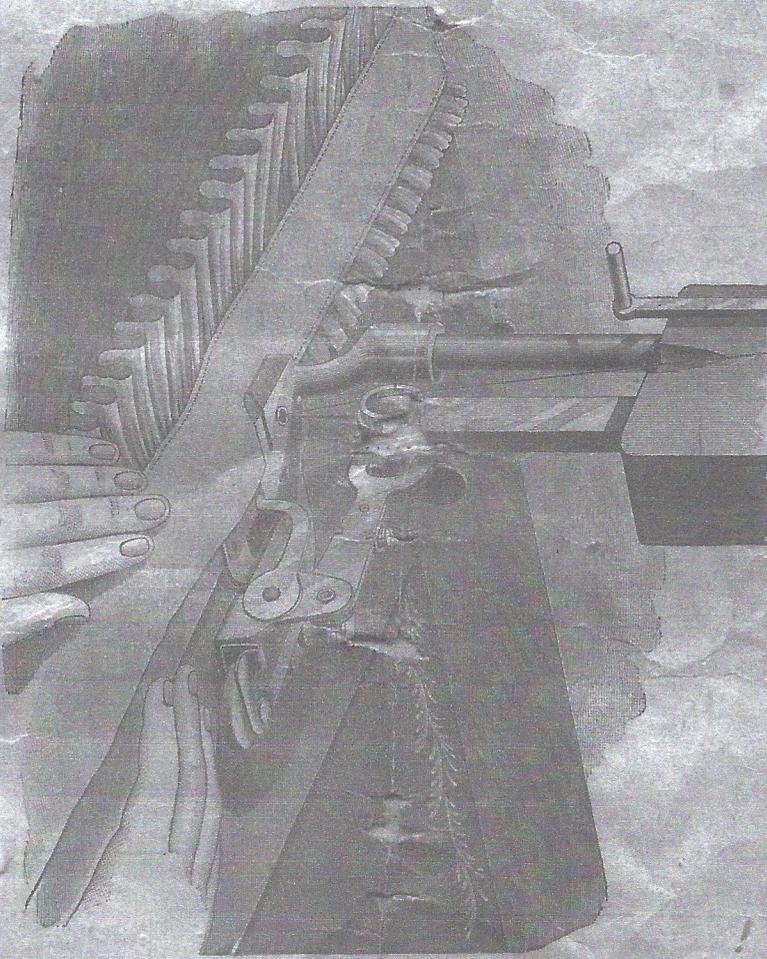
The goods to be ruffled are to be placed between the JAWS of the RUFFLER, and if bands are to be sewed on they must be placed above and below the ruffle, and secured from it by the JAWS. Either one or two bands may be sewed on, or the ruffle can be made without any band, as desired.

The fulness of the gathers may be changed, by moving the regulating LEVER. Move it to the RIGHT to INCREASE the fulness and to the LEFT or inwards to DIMINISH it. The SCREWS on the plate will hold it in the required position. The fulness is also influenced by the length of the stitch. With a short stitch and a scant movement of the Ruffler a fine gather will be made, but if the movement of the Ruffler be increased, the gathers assume more the form of pleats, and then, by a long stitch, you can again get the gathered appearance.

SHIRRING.

Amongst the attachments will be found a piece similar to the front shuttle slide but having a small rounded plate attached to it near one end. This is known as the *Shirring Blade*, and is used only in connection with the Ruffler.

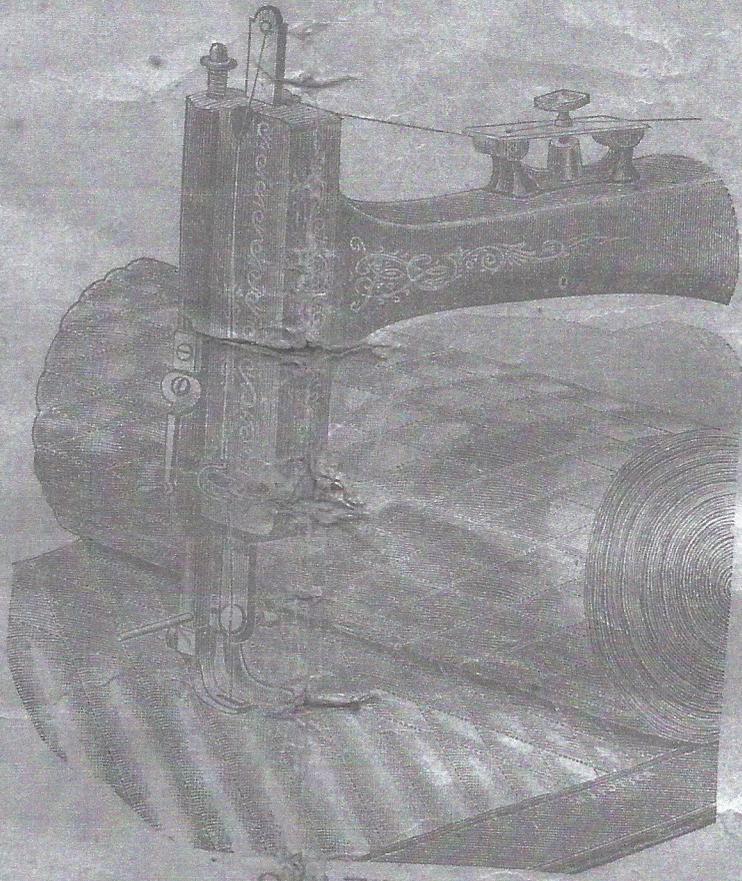
To prepare the Ruffler for shirring remove the lower blade; this is done by loosening the screw at the back of the Ruffler-foot and slipping it out toward the right. Remove the front slide that covers the shuttle, and put the shirring-plate in its place; *when this is properly done the blade covers the feed.* This enables you to bring the shirring blades into the centre of your goods, or rather to place your goods between the blades at any required distance from the edge.



RUFFLING.

(See opposite page.)

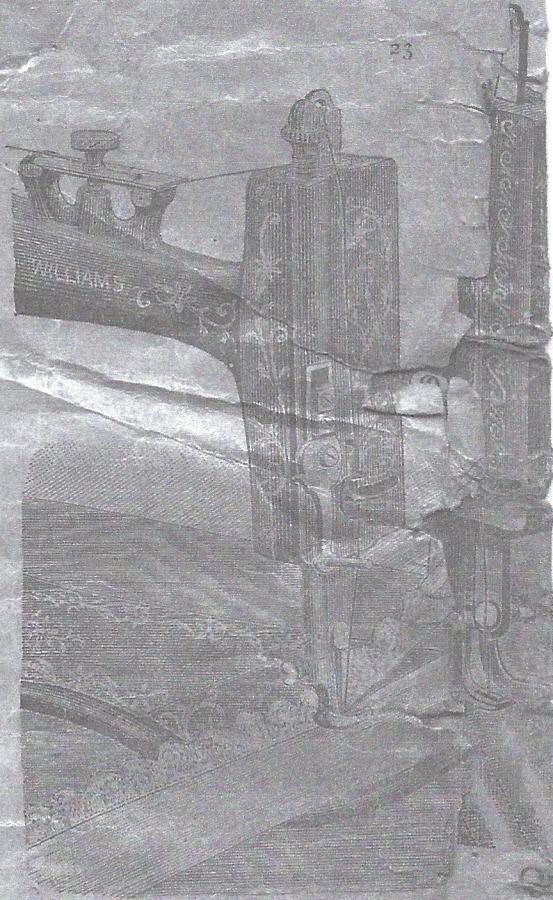
A great variety of work can be done with this Attachment.



QUILTING.

To attach the QUILTER, pass the ROUND ARM of it from right to left through the hole in PRESSER, bringing the flat or GUIDING ARM at a distance to the right of the NEEDLE equal to the desired distance between the seams, and just high enough to allow the work to pass freely under it. Fasten by the screw at the back of the PRESSER-BAR.

Keep the first row of stitching straight by a mark or basting thread. All succeeding rows are made straight, and at uniform distance, by keeping the row last made steadily under the GUIDE. In squares or diamonds the appearance of the work is better on equal bias.



ALTER, D.
 SEWING ON LACE AND HEMMING PRESSER

the NEED
 Start a narrow hem, as shown on high enough
 started, raise the PRESSER, turning the the back
 the NEEDLE. Then pass the end of the of stitch
 of the HEMMER, carrying it back under made st
 the HEMMER, and on top of the hem. ily under

Be sure that the hem is not displac
 needle goes down through the lace and b
 PRESSER and guide the lace over the tr
 into the slot. is better



DING.

Of the Machine by the Guide-SCREW :
It will not move.
It must be cut seven-eighths of an inch
Binding directly into the Scroll of
and between the upper and lower
and let the binding pass easily
if it is too near or too far from the
or left as occasion may require.