GROVER & BAKER'S
IMPROVED

Sewing Machines
THE VERY BEST IN USE.
SALESROOMS:
730 Chestnut St., Philadelphia.
A HOME SCENE;

OR,

MR. ASTON'S FIRST EVENING

WITH

GROVER & BAKER'S

CELEBRATED

FAMILY SEWING MACHINE;

CONTAINING

DIRECTIONS FOR USING,

ETC., ETC.

"A GOOD SEWING MACHINE LIGHTENS THE LABOR AND PROMOTES THE HEALTH AND HAPPINESS OF THOSE AT HOME."

GROVER & BAKER SEWING MACHINE COMPANY,

495 Broadway, New York.
A HOME SCENE.

In a cosily furnished room of a neat house in East—Street, were a family group, consisting of father, mother, and three children, the latter reading from a book in a low tone, but an occasional comment in a loud one, would startle their nervous mother, who, at last rising from her seat, exclaimed with impatience: “I can stand this no longer; I must have the children sent to bed.” Ringing the bell, she summoned Jane to take them away, that she “might have a chance to breathe,” as she expressed herself.

Mrs. Aston was not what would be called an impatient mother; but at the close of the day, wearied and worn, her work still unfinished, she felt that of the cares of this life she possessed a large share. Her husband sat with his newspaper reading; but the nervous manner of his wife arrested his attention, and he thought of the time when her brow was as serene as the Summer sky, and her step buoyant and light. “It is plain,” he soliloquized, “that Mary needs more company, more exercise in the open air, to restore her wanted calmness. I will give up my paper this evening and take her out.” He addressed her, saying: “I see there is a concert given at Niblo’s to-night, Mary; suppose we attend. It will do you good.”

Mary glanced at the work piled on the table, which at that particular moment seemed to rise mountain high, and sighed as she replied:

“I would enjoy the music very much, but am so much in arrears with my sewing, that I can not afford the time. I must devote every moment to work, for the children must have new clothes. I find it difficult to get a seamstress in the house; besides, it is harder to give directions and make one understand what my wishes are, than to perform those duties myself.”

A shade of disappointment passed over Mr. Aston’s face, as his eyes followed the direction in which his wife’s work was fixed. To his dismay, he saw the pile of unfinished garments she had
spoken of. He hitched about uneasily in his chair, and finally resumed his paper, having arrived at the conclusion that sewing was a troublesome thing. How to get rid of it he could not tell. After attempting to read intently for some minutes, haunted all the while, however, by the work on the table at his elbow, the bright colors and cheerful patterns of which seemed changed into so many mischievous elves, who were trying to destroy his happiness and render him uncomfortable, a change at last passed over his countenance, as his eye rested on an advertisement, and he exclaimed half aloud: "I have it now." He read:

"The Grover & Baker Sewing Machine Company, having greatly increased their facilities for manufacturing their celebrated Family Machines, with all the recent improvements, offer for sale a New Style Machine of beautiful finish, at greatly reduced prices."

And in a louder tone, so as to be certain of attracting his wife's attention, he continued to read:

"It is no longer questioned that these Machines are the best in use for family sewing."

"But," interposed Mrs. A., "I don't think they will do my sewing well enough. I am very particular, as you know." Mr. A., without answering, read further:

"They hem, fell, gather, and stitch in the most superior manner."

And then inquired: "What more can you have, Mary?"

Mrs. A. answered: "I am afraid I have not mechanical skill enough to manage a machine. It would be a failure in my hands."

"Well, listen again," said Mr. A., "to what I will read."

"And are the only Machines in the market that are so well and simply made, that they may be sent into families with no other instructions than are contained in a circular which accompanies each Machine, and from which a child of ten years may readily learn how to use them, and keep them in order."

Mrs. A. paused awhile, but at length said, interrogatively: "I wonder how fast they will sew? I feel that I am getting interested."

In answer, Mr. A. read:

"They make upward of fifteen hundred stitches a minute."

"But it is so much money to give just for sewing," said Mrs. A.

"Not at all, Mary. I am told they last a lifetime," replied the husband, reading again:

"And will do the sewing of a family cheaper than a seamstress can do it, even if she works at the rate of one cent an hour."

After pausing a minute, as if in deep thought, Mr. A. resumed his reading:

"Is there a husband, father, or brother in the United States, who will permit the drudgery of hand-sewing in his family, when a Grover & Baker Machine will do it better, more expeditiously, and cheaper than it can possibly be done by hand?"

Throwing aside the paper, he started to his feet and said:

"I can not withstand that appeal! I must go and see these Machines! I must have one! Mary, you shall have your evenings, aye, and your afternoons, too, for relaxation and mental culture! I must have been asleep not to have seen through all this before!"

On a fine Spring morning, a few days thereafter, a lady and gentleman were to be seen leaving a house in East—Street, whose purpose might have been discovered, if one had accompanied them a short way. But there was no mystery about it; they were going to select the best Sewing Machine that could be found, with a view to purchase; and after calling at the different depots for the sale of machines, and making examinations of the sewing and mechanism of all the various kinds on sale, they decided that the Grover & Baker Machine was the one which would best suit their purpose. They found it simple, its use easily learned, and required no keeping in order—that it would always be ready for work—that it made a very beautiful and durable seam, that would not rip, if the thread broke—that (unlike all other machines) it required no rewinding of thread; but sewed from the two spools, as obtained in the stores; that it was adapted to all kinds of thread and material, by a mere change of spools, and sewed an elastic seam, that would permit it to stretch in washing and ironing, without breaking the thread. Mrs. Aston was especially delighted, that while the machine would sew a seam that was as durable as the fabric in wear, it could easily be removed by
untieing three stitches of that part of the seam that had last been sewed. She was also gratified to find that she would not be obliged to have recourse to the hand-needle in finishing the garments—that the machine itself did it.

It was purchased, and Mrs. Aston sat down to receive instructions for the use thereof. An hour sufficed to accomplish this; and with a gratified smile, she returned home in time to welcome her little assistant, which was to do so much for her relief. The elder children were silent with curiosity; baby was so much amused by the gentle murmuring sound, that he fell into a sweet slumber. The mother glanced triumphantly at the pile of work on the table, which had been cut out and prepared for the next month's sewing; she seated herself and took the first garment, which was a dress for Miss Mary, the eldest daughter, the seams of which were finished in the next twenty minutes. Then a jacket for Master Fred was finished—all but the button-holes. Then baby's turn came next, and the skirt of a little dress was tucked and ornamented in a style that Mrs. Aston would have thought impossible, if she had been obliged to do it by hand. Then a Summer cloak was embroidered for the little fellow, and when the tea-bell rang, and Mr. Aston rose to go to the dining-room, a more smiling, gratified face he had not seen his wife wear for a long time. At table, the only subject of conversation worthy of attention was the new machine.

Mr. A., after tea, jovially remarked: "I think I will make a good operator, Mary," and seating himself at the machine, said: "See me; I take hold of the lower part of the wheel with my right hand, and pull it in a downward direction. What now? it does not run in the same manner in which I started it."

"Very true," responded Mrs. A.; "you do not keep up a regular motion on the treadle with your foot. While interested in watching the needle, the motion of your foot is arrested, and the wheel runs the contrary way before you are aware. To avoid this, keep as good time as if you were playing a melody: press first on the heel, then on the forepart of the foot, without raising the toes."

"Ah! I see," answered Mr. A.; "I suppose I must spring the needle to make it go in the centre of the hole; which can easily be done with the fingers. Well, if I am to be employed by you, I must know the manner in which you set the needle."

"Take it between the thumb and finger of the left hand, the eye being directly in front of you; the outside of the curve of the needle to the left. Pass it into the little groove in the lower part of the needle-arm, and then under the needle-screw, fasten it in by means of the screw-driver, and then to test the accuracy of its position open the plate through which the needle passes, and see if the loop which the upper thread throws out after it has passed through the fabric, and just as it commences to rise, is situated so that the point of the circular needle passes into the centre of the loop mentioned. Care must be taken to have the needle just right, as occasionally a long stitch will be the result, if the circular needle does not pass into the centre of the loop."
“Now I understand all that. I can sew nicely; but if I want to change the thread? I have been sewing with cotton; suppose I want to sew with silk, or any other sized thread. How shall I proceed?”

“Place the upper spool upon the spindle at the extreme right of the machine; pass the thread through the two disks which are above the spool on which the spool is placed; bring the thread forward to the left of the machine, press the thread spring down with the finger, and pass the thread through the exit, but do not desist. The upper thread need not be changed, as the under or binding thread is never seen on the upper side, and the whole office is to tie the upper thread after it has passed through; but if silk be preferred, open the plate at the extreme left of the machine, where will be seen a spool, like that for the upper spool, upon which place the under spool so that the thread will come from the upper side; bring the thread up and lay it between the disks.”

“Now show me how to thread the circular needle, Mary.”

“This little instrument conveys the under thread through the loop of the upper thread in a very ingenious manner. It is to be threaded in three places, as you will see; a groove lies between these places, in which the thread must lie in passing from one to the other. Now see me: put one end of the thread through the wheel so as to bring the point in front; pass the thread from the outside to the inside of the eye in the point; pick it up and guide it into the groove, before drawing it tight. A large pin or needle will best accomplish this. Now let me show you how to thread the upper or vertical needle (we left it passed through the slot in the plate; bring it down between the nippers, and draw it through the needle. The needle hole is an end about three inches long.) After you have sewed four or five stitches, pass this end under the left side of the presser; where it will be carried out of the way. The end of the under thread need only be brought to the upper side of the plate, and there left. Do you see?”

“Yes—pray continue to have patience with my dulness. Will you show me how to take the work out of the machine?”

“Sloken the upper thread out of the machine, lift the presser; lift the work carefully; so as to bring the under thread up one or two inches, and cut it off close to the work, so as to leave the circular needle threaded. With care, this needle need not be unthreaded till the spool is used up.

In taking the work out in the manner described, Mrs. Aston examined carefully, and, after the lapse of a minute, looking, said, “Mrs. Harvard. You have never done more than I had expected from you, and Mrs. A’s assertion, two years after that they were not mistaken.” For,” said she, “if I could not purchase another, a fortune could not buy my Sewing Machine.”
DIRECTIONS FOR USING

THE

GROVER & BAKER FAMILY SEWING MACHINE.

These directions are written as simply as possible, and in most cases will enable parties who give them proper attention to operate the Sewing Machine without further instruction.

Before using the machine, observe carefully the position of the threads and needles. The engraving on the opposite page represents the machine with the plates, or slides, removed, and part of the bed-piece cut away, in order to show its working parts. The reference marks will enable the operator to follow the instructions understandingly.

TO OPERATE THE TREDDLE.

Familiarity with the motion of the treddle is first to be learned, and practice is necessary in order to give a steady and uniform revolution to the wheel, but before practicing, both needles should be unthreaded, and the presser which holds the work in place on the feeder should be raised by pressing back the lifter at the top of the presser arm, to prevent the feeder from injury by contact with it. Having placed the right foot on the treddle, with the heel resting against the iron ridges which rise at the back of the treddle, start the wheel with the right hand by revolving it to the right, as shown by the arrow on the wheel, taking care to give it impetus enough, or it may stop before you get your foot in motion; keep up a regular movement by pressing alternately with the heel and ball of the foot with equal effect. This should be practiced until a uniform motion of the wheel is obtained.

TO SET THE VERTICAL NEEDLE.

Turn the wheel until the needle-arm rises to its extreme highest point. Take the needle between the thumb and finger of the left hand with the flattened side of its shank toward you; place the needle-shank into the small groove under the head of the needle screw upon the end of the needle-arm, and tighten said screw slightly.
Apply the needle-gauge, as shown in the following engraving, with one of its equal straight sides resting on the needle-plate, and one of its points extending upward to the needle-eye. The needle-eye must be exactly level with the point of the gauge. After the needle is thus set, the needle-screw should be fully tightened. Turn the wheel slowly and carefully, and see that the point of the needle in descending enters and passes downward through the needle-hole, so that every part of the needle is equally distant from the edge of the hole in passing. If necessary, the needle may be sprung to the right curve with the fingers. The upper needle should be so set, that, in rising, the point of the circular needle will pass through the loop of the thread of the vertical needle in crossing it.

Unless the curve of the needle is true, the needle will crowd the work to one side and make a crooked seam.

If the needle is set in the machine when received, do not remove it till necessary, as it is correctly set.

The needle-point should be carefully examined every day, and if dull or rough, pointed on an oil-stone.

NEEDLES AND THREAD.

Much care should be taken to adapt the size of the needle to the size of the thread; so that in passing through the fabric the thread will lie in and fill the groove without crowding.

The needles are numbered 00, 0, 1, 2, and 3; the 00 being finest, and suited for Swiss or other very fine material; the 1 is used for shirt work or under garments, quilting, etc., or cloth; No. 2 is used where the material is thicker; No. 3 for the heaviest sewing.

No. 00 needle to be used with 100, 110, or 120 cotton.
No. 0 needle to be used with 80 or 90 cotton.
No. 1 needle to be used with 60 or 40 cotton.
No. 2 needle to be used with 45 or 50 cotton.
No. 3 needle to be used with 24, 30, or 40 cotton.

TO PLACE THE UPPER SPOOL.

Place the upper spool upon the spindle at the right of the machine; pass the thread between the two disks which are above the spindle which holds the spool; bring the thread forward to the left of the machine, press the thread-spring down with the fingers, and pass the thread through the slot in the thread-guide upon which the thread-spring is placed, causing it to lie between the nippers above the needle. All which will be readily understood by reference to the engraving on page 8.

TO PLACE THE UNDER SPOOL.

On the left of the machine, will be seen a spindle like that for the upper spool, upon which place the under spool so that the thread will come from the upper side; bring the thread up, and lay it between the disks. The thread used upon the under spool should NEVER be more than one half as large as that used upon the upper.

TO THREAD THE CIRCULAR NEEDLE.

Pass the end of the thread through the eyes in the heel and middle of the circular needle, turn the wheel so as to bring the point of the needle in front, and then pass the thread from the outside to the inside of the eye in the point, letting the thread lie in the groove and leaving about two inches lying upon the bed-piece.
TO THREAD THE VERTICAL NEEDLE.

Pass the thread from the upper spool (after having proceeded as above) down between the nippers, and through the eye of the needle, from you, pulling it through about two and a half inches.

TO REGULATE THE LENGTH OF THE STITCH.

Open the plate at the left hand of the machine, where will be found a lever called the stitch regulator, stretching across the aperture which strikes the feeder. Move the lever towards you to make a long stitch, and away from you for a short one. In making a short stitch, do not press the lever too far back, or the lever will not act. A very little way will be enough to alter the stitch. It is best, before commencing to sew, to try the length of the stitch on a small piece of muslin.

TO REGULATE THE TENSION.

The tension of the thread is regulated by the tension-nut near the tension disks. Turn it to the right to tighten, and to the left to slacken the tension. When the tension is once regulated, there is no need of altering it—no new spool of thread of the same size may be put on without change of tension. Care should be taken not to have the upper thread too loose, as a fringed or rough seam will be the result; but, if too tight, the thread is apt to break. If the under thread should break, the tension is generally too tight. When working with silk a much greater tension can be obtained than with cotton. For woolen goods, the tension needs to be tight. For materials that are to be washed often, the tension should be rather loose. If in working on Swiss or Nunsock the work has a drawn appearance, the fault will be with the upper thread, which will be found too tight. In ordinary sewing, the upper should be kept tight, and the under loose, but not to the extreme in either case.

THREADS AND SILK.

The best thread should invariably be used on the Sewing Machine, as the strain required is greater than that which the hand gives, in drawing up the thread in hand sewing. Patent or glazed thread is not so good, as it does not sink into the cloth readily, leaving more thread on the surface than is deemed necessary, and is very liable to snarl. A poor or indifferent thread will always give more or less trouble. Silk can be purchased on spools, and this will be the best way to use the silk, as the winding, being done by machinery, will give a more even strain than winding by hand. For shirtwaist muslin, the thread need not be coarser than 60 or 70 for the upper spool, and never coarser than 110 or 120 for the under spool. No fear need be entertained that these sizes will be too fine, when we take into consideration that the thread is to be crossed several times; that it takes better material to make a fine thread of first quality, and when this is doubled, as is the case with the Grover & Baker stitch, the seam will be found to be quite strong enough. The best sized silk to be used for ordinary family purposes will be 0 silk. The spools are numbered 000, 00, 0, A, B, C, and so on, 0000 being the finest. Care should be taken that the thread for the vertical needle be in proportion to the needle. It is too coarse to lie in the groove of the needle, in its descent through the fabric, it will break. Cotton may be used on the under spool, as the under thread is never seen on the upper side.

TO COMMENCE SEWING.

Place the edges of the material together. If a long seam is to be sewed, pins placed a few inches apart will answer the place of basting. Place the work in the machine so that the bulk of the work passes to the left hand. This will be better than to pass the most of the material under the needle arm. A little care should be exercised in laying the work on the feeder, so that it can not press between the feeder and needle plate, and that the presser be brought down upon it before turning the wheel. Avoid pulling or pulling the work through while stitching.

TO CROSS A SEAM.

When sewing cotton goods with much dressing, it may require some care in crossing seams, when there are a number of thicknesses—where hems and falls come together, for instance—the crossing will be facilitated by pressing the seam flat, and rubbing a little white soap on the upper part. A small piece of soap kept in the work-basket will be found useful for softening the tough places which often occur in sewing. Many ladies follow this practice in hand-sewing where the goods are hard to sew.

TO TURN A CORNER.

Stop the wheel without raising the needle more than half way out of the work; raise the presser, and turn the work in the manner desired, using the vertical needle as a pivot.
TO TAKE THE WORK OUT.

Slacken the upper thread; cut it off close to the work; raise the presser; lift the work carefully, so as to bring the berries thread up one or two inches, and cut it off close to the work. The needles will then remain threaded, and the machine be ready for the next garment. Many ladies have a small strip of muslin conveniently by them, which they run under the presser, without raising, at the end of straight seams. It serves the purpose of fastening the threads, and when a new seam is to be commenced the strip may be displaced by feeding the garment under the presser in the same manner.

THE BELT OF THE WHEEL.

Sometimes stretches, and the wheel will then fail to move the working part of the machinery. It may be tightened by first unscrewing the thumb-screw under the cross-bar, shoving the wheel to the right, and then screwing tight again.

TO OIL THE MACHINE.

When in constant use, all working parts of the machine should be well cleaned with cotton waste or other soft material, and then oiled with the best spern oil wherever there is friction, which is in the following places:

The bearings of the treads, the pitman, and the wheel.

The two bearings of the pulley-shaft upon the machine, for which oil-holes will be found on each side of the pulley when the plates are removed.

The parts of the cam which raise and move the feeder; the bearings which go through the feeder to hold it in place and on which it slides. Also the driving pin on the side of the cam.

The spiral post carrying the circular needle.

The cup of the shank of the circular needle.

The nipper guides between the arms near the needle.

It is very important that the cup and guide should be frequently oiled.

The two bearings, or centres, upon the top of the bed-piece at the right, on which the needle arm vibrates.

The bearings in which slide of the presser moves up and down. Apply the oil on the top of this slide.

Neglect of such seemingly small matters often occasion much trouble and vexation to operators. The wheel and treadle need not be oiled as often as the main parts of the machine.

THE GAUGE.

The gauge is attached to the bed-piece of the machine by the gauge-screw, and can be adjusted, by means of the slot, at any required distance from the needle, so as to assist the operator in guiding the work and making straight seams. It is always attached to the machine when received, and is generally allowed to remain on the machine, even though not required for use, as it does not interfere with the work. It is also used over the hemmer, tucker, and corder, etc., as it renders them more secure than when attached alone.

THE TUCK GUIDE.

Place the slot over the screw-hole in the bed-piece nearest the needle for ordinary tucks, and for very wide ones use the hole furthest from the needle. Adjust the tucker so that the groove in the right end will be distant from the needle the desired width of the tuck, then fasten it with the gauge-screw. No attention need be paid to the groove on the left-hand of the tucker. The tucks are to be measured as in ordinary hand-sewing.
THE HEMMERS.

There are two kinds of hemmers, and different numbers or sizes of each kind. The obverse hemmer turns the hem on the upper or right side of the material, and the reverse hemmer turns the hem on the under or wrong side.

Directions for Using

THE OVERSE HEMMER.

This hemmer is secured to the bed-plate of the machine by passing the slot under the gauge and tightening the gauge screw. The hemmer should be so adjusted that the outer edge of the tube will be on a direct line with the inside edge of the left toe of the presser-foot, and close to but not touching the latter. Fold up the edge of the article to be hemmed on the right side, about the length of an inch, as if for basting, and place the first fold inside the tube at the large end, drawing it through until the feeder takes hold of the goods, after which it will only be required to keep the tubes full, which can be done by inclining the edge of the goods upward with the thumb and forefinger of the right hand. While entering the goods in the tubes of the hemmer, the presser should be raised, and let down when the fold of the hem reaches the feeder and before the machine is operated. Reference to the illustration on the opposite page will show the manner in which the hemmer is adjusted, and otherwise aid the operator in following the directions.
Directions for Using
THE REVERSE HEMMER.

The reverse hemmer is attached to the bed-plate of the machine in the same manner as the obverse hemmer, and should be adjusted with the point of its tube in a line with the inside edge of the left toe of, and close to, the presser-foot. Enter the edge of the goods at the large end of the tube, under the large flange, and push it along the tube, under the small flange at the small end, and on to the feeder, the presser being raised. If the goods are properly entered, they will emerge from the small end of the tube with the folds of the hem turned under ready for the needle. To insure the proper fold, the edge of the goods, when entering the hemmer, should be held between the thumb and forefinger of the right hand, and inclined under, so that as it passes through the tube, it will fold around the curves of the hemmer and fill the tube, and this downward inclination of the edge of the goods should be maintained until the hem is finished. The forefinger of the left hand should press on the goods, between the flanges of the hemmer, to guide the edge through the small end of the tube, until the feeder has caught it. When the fold of the hem reaches the feeder, lower the presser, and operate the machine as for ordinary seams. See illustration on opposite page.
Directions for Using

THE FELLER.

Place the two pieces of cloth which are to be felled, one over the other, so that the edge of the upper layer shall be about one-eighth of an inch within the edge of the under layer, at the side where the fell is to be made, and stitch the pieces together close to the edge of the upper layer. When this seam is stitched, remove the goods from the machine, and pass the slot of the feller under the gauge, and adjust it to the bed-piece by the gauge screw, so that its point shall be close to the presser, and in a line with the point of the needle. Then take the pieces which have been stitched together, and enter the edge of the under layer, at the end last stitched, in the folds of the feller from the right hand side; push the goods well on to the feeder, and turn over the upper layer to the left (as shown in the engraving), until it lays flat on the bed-piece. The machine may then be operated, and the fell will be properly finished by the feller if the goods are passed smoothly to, and evenly guided over, the feller by the hands of the operator.
Directions for Using

THE FRILLER.

This attachment is used for frilling or gathering. It is adjusted to the machine by sliding it over the left toe of the presser-foot, the presser being raised, with the hooked side underneath, until the opening at the back fits close around the slide of the presser, as shown in the engraving on the opposite page. Use No. 40 or 50 cotton on the upper spool, and No. 100 cotton on the under spool. Have both tensions tight, and lengthen the stitch. The tighter the tension, and the longer the stitch, the greater will be the degree of fullness obtained. Place the goods to be gathered under the friller, lower the presser, and operate the machine as for an ordinary seam, sewing close to the edge. If it is desired to produce puffing, a similar seam on the other edge of the goods will effect it, as will be seen by the illustration. For gathering and sewing on the band at the same time, the band should be held tightly with the right hand in an elevated position, and the goods to be gathered pushed underneath toward the friller with the left hand, so that the band or upper piece, when stitched on, will present an even seam, while the goods underneath will be gathered as a frill or ruffle.
Directions for Using

THE QUILTING GAUGE.

This gauge is attached at its slotted end by the gauge-screw to the presser-arm of the machine, back of the presser. The gauge is made to slide, and can be adjusted by the gauge-screw to any desired width of seam. Baste the wadding to the material to be quilted. One sheet, if reasonably thick, will generally be sufficient. If one sheet will not produce the required fullness, use a sheet and a half, and have the cotton side of the half-sheet next the goods. No interlining will be necessary. Mark the line for the first row of stitching with chalk or by creasing; place the goods in the machine, and sew on the line. If silk is used on the upper spool, cotton may be used for the under, as the under thread does not show on the face of the goods. When the first row of stitching is made, and the distance of the second determined, the gauge is adjusted, so that the first row will pass under it while the second is being stitched, and so on for each succeeding one. The use of this gauge for quilting does away with the necessity of marking, and insures straight seams of uniform distances.
Directions for Using

THE CORDER.

TO ADJUST IT UPON THE MACHINE.

Secure its slotted end by means of the gauge-screw near the centre of the bed-piece, as shown in the engraving, the corder being in such a position that the point of its tube will be exactly in line with, and a little under the narrow or inside toe of the presser-foot. Slip the small slotted guide called the corder-step upon the outer side of the presser-foot, and secure it by its screw in such a position, that the needle will pass at the depression in its side. The small groove in the under side of this guide keeps the cord in proper position in the work.

TO OPERATE IT.

Pass the cord from the left side through the eye or ring in the edge of the corder, and thence through the tube, leaving a little of the cord lying on the bed-piece beyond the tube and in the direction the goods pass. Place the goods to be corded in the machine so that the upper fold will be over the tube of the corder, and the under fold below the tube and within the bow of the corder.
THE BRAIDER.

The braid should be inserted in the braidin in the manner shown in fig. 1, before attaching it to the machine, by passing it through the hole \( \sigma \) and pressing it evenly into the groove, so that it will run freely in it.

To attach the braid to the machine, raise the cloth presser, loosen the screw sufficient to admit the foot of the cloth presser under it, and adjust it to the foot as shown at \( \delta \). Fig. 2, with the screw to the left hand and the hole in the braid immediately under the needle hole in the cloth presser; then lower the cloth presser and tighten the screw. The garment to be braided, having the desired pattern marked, is placed in the machine, and the operator guides the braid and the work according to the design.

THE TUCK MARKER.

The Tuck Marker is attached to the bed-plate of the machine by the thumb-screw, in the same manner as the Hemmer and other attachments. Bring the gauge of the Tuck Marker as close to the needle as is necessary for the width of the tuck, then tighten the thumb-screw. This will bring the marking lever back of and to the left of the presser foot. Then slide the marking lever to the left, the proper distance for the next fold of the tuck, and tighten the screw of the Tuck Marker to keep this part in place. The strap attached to the hook of the marking lever is to be passed up between the presser-arm and the needle-arm, over the latter, and brought down in front and fastened on the hook. The article to be tucked is placed on the machine between the jaws of the Tuck Marker, with the folded edge close up to the gauge and under the lip. As the machine is operated, the vibration of the needle-arm raises the marking lever, allowing the goods to be fed through, and the pressure of the marking lever produced by the action of the spring makes the crease in the goods for the next fold. The power of this spring can be increased by shifting the regulator to the notches nearest the operator, and diminished by shifting it in the other direction.

THE DIVIDERS.

This instrument is used for measuring the width of the tucks. Open the short arms to the required width of the tucks. Place one point to the needle, and bring the gauge of the Tuck Marker to the other point; then turn the Dividers, and place one point of the long arms to the needle, and bring the jaws of the marking lever to the other point. This will bring the tucks together, leaving no space between. When space is wanted between the tucks, move the marking lever to the left the distance required.
THE BINDER.

The binder is attached to the bed plate of the machine by the ordinary thumb-screw, used for the gauge, hammers, etc., and is regulated at the proper distance from the needle for the width of binding used by means of the slot through which the thumb-screw passes. The two sliding guides should be set a sufficient distance from the left edge of the binder to allow space for half the width of the binding, the lower one projecting a trifle beyond the upper. These guides are kept in place by the thumb-screw on the right end, and are pressed together on the article to be bound by the one on the left, which is adjustable to different thicknesses of material.

The edges of the binding, near the end, are placed in the upper and lower lips of the guides, and the edge of the article to be bound between them. The guides are then pressed together by the thumb-screw, so as to allow free passage of the material through them. The edge of the material with the binding is passed under the spring of the binder, and under the presser foot of the machine and on to the feed, and the machine operated as for ordinary sewing, keeping the binding and the goods in place while they are being sewed.

The extra set of guides are for thicker binding, and can be substituted for those in the binder when required, by attaching them in the same way.

How to Embroider.

The embroidery done by the GROVER & BAKER Machine is not produced by the application of braid or any foreign material, but is the result of the stitch itself, and is performed in the same manner as ordinary sewing on the machine, but with different sizes of thread. For stitching, tricking, hemming, quilting, etc., the thread of the under spool is much finer than that of the upper, while for embroidery these proportions are reversed, the under being coarser than the upper. As the embroidery design is worked on the wrong side of the material, the coarse thread of the under spool forms the ornamental seam on the right side, more or less raised, according to the size of the silk or embroidery cotton used. When silk is used for the under spool, cotton of the same color may be used on the upper, as the upper thread does not show. The needle plate with the large hole should be substituted for the ordinary needle plate, when using the machine for embroidery. What is known as the French process of stamping for embroidery, is the best. The design is traced on paper, and closely punctured. The paper is placed on the wrong side of the garment, over the part to be embroidered, and held in place by an iron, or other weight. An impalpable powder, especially prepared for the purpose, is then gently rubbed over the paper with a pounce or made of a strip of felt rolled into the form of a piece of tape. This powder penetrates through the fine holes in the paper, and marks the pattern on the goods. The design is continued, when required, by shifting the perforated pattern and matching it to the part already marked. The article being marked, and the proper threads selected for the upper and under spools, nothing further is necessary but to place the work in the machine and operate it as for any other description of sewing, following of course, the lines of the pattern while sewing.
Embroidery Designs.
PRINCIPAL OFFICES
OF THE
Grover & Baker Sewing Machine Co.

NORTHERN AND EASTERN.

BOSTON........................... 34 Summer Street.
NEW YORK......................... 465 Broadway.
PHILADELPHIA..................... 780 Chestnut Street.
Baltimore ......................... 17 North Charles Street.
BROOKLYN ......................... 235 Fulton Street.
ALBANY .......................... 61 North Pearl Street.
ROCHESTER ....................... 48 State Street.
BUFFALO ......................... 329 Main Street.
TROY .............................. 342 River Street.
SYRACUSE ......................... 27 Warren Street.
HARRISBURG ...................... 113 Market Street.
PROVIDENCE ...................... 2 Howard Building.

SOUTHERN AND WESTERN.

CHICAGO .......................... 104 & 106 Washington Street.
CINCINNATI ....................... 58 West Fourth Street.
ST. LOUIS ......................... 611 North Fourth Street.
DETROIT ......................... 4 Opera House.
MILWAUKEE ....................... 13 Newhall House.
CLEVELAND ....................... 24 Public Square.
PITTSBURG ....................... 127 Wood Street.
DAYTO ............................ 75 and 77 Main Street.
INDIANAPOLIS .................... 21 East Washington Street.
LOUISVILLE ...................... 5 Masonic Temple.
LEXINGTON ....................... Bradley's Block.
MEMPHIS ......................... 325 Main Street.
NASHVILLE ....................... 114 Church Street.
NEW ORLEANS .................... 182 Canal Street.
SAN FRANCISCO .................. 116 Montgomery Street.

FOREIGN.

LONDON ......................... 150 Regent Street.
LIVERPOOL ...................... 59 Bold Street.
MELBOURNE ....................... 24 Swanston Street.