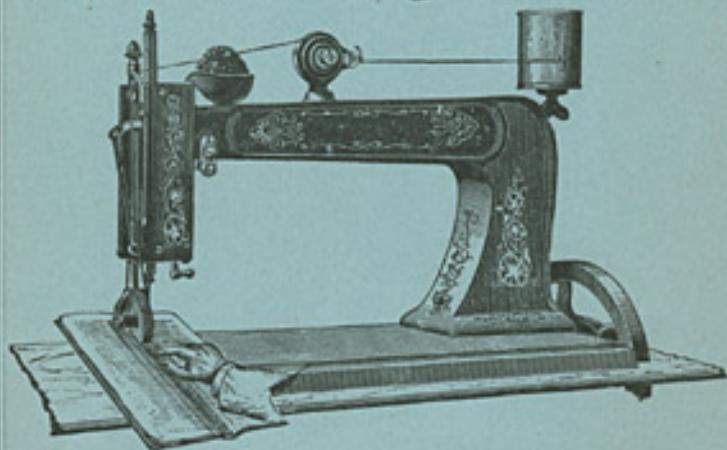


DIRECTIONS FOR THE USE  
OF THE  
**TENNIS**  
Book Stitching Machine.



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## DIRECTIONS.

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Before starting please have operator read instructions about setting needle and threading machine, and **note carefully how machine is threaded before you unthread it.**

The hinges for machine are secured in their proper places on table, and in order to hang machine you need only to loosen right hand hinge and slip machine into place, which will make it flush with wood-work.

In running by steam power, if you belt from a shaft above machine it will be necessary to bore two holes in table, so belt can pass through, or else saw end of table; but the former is better.

The pulley is split and will fasten right on to your shaft, being bored the proper size,

The wheel on shaft of machine is regular size, but if you want more speed you can obtain it by putting belt on smaller cone of fly-wheel.

In running machine the fly-wheel turns towards you.

It would be well if you could obtain an operator who has used some kind of a machine, as they take hold better.

The operator may have some little trouble at first until she gets accustomed to handling the work, but a little patience and everything will go easily.

I send with machine enough thread and ready-wound bobbins to start with. I have tried various threads, but find that sent with machine to be the best in finish and durability. I enclose net list.

### TO THE LEARNER.

The machine being in place on its table, and cleaned to prevent dust and grit from doing injury, proceed to

### OIL ALL WEARING PARTS.

Put oil in each of the little holes you will find above and under machine—made for that purpose—also the various bearings in the stand.

Next, place the belt around the wheels in their grooves, and with the presser-foot raised from the feed

### PREPARE TO RUN THE MACHINE

by seating yourself in front, placing the feet on the treadle with the hollow as nearly over the rod as possible. (ALWAYS turn the wheel *toward* you.) Tip the feet steadily up and down by an ankle-joint motion without jerking, keeping the heel and toes firmly on the treadle.

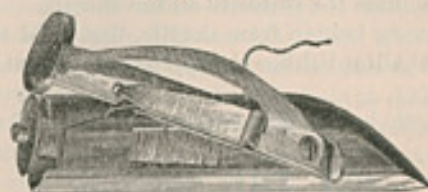
After running the machine a while, wipe off all the superfluous oil, thus preventing the soiling of your work. Sufficient oil will have worked into the joints to make them run easily for some time. Be especially careful to clean the needle-bar and the shuttle-race thoroughly. Next,

### FILL A BOBBIN

with thread from spool placed on spool-pig at the right and top of the machine; to do which you will place bobbin in spooler by putting one end into the concave cup at right-hand side of spooler, then pull the plunger in opposite side of spooler to the left, and the bobbin will come to place and be held firmly. Place end of thread between end of bobbin and cup of spooler. Start machine, pressing the rubber ring gently against the face of the fly-wheel with your left hand, guiding the thread with your right hand back and forth across the bobbin carefully and regularly, so that the thread will unwind easily and evenly when sewing.

(If you use ready-wound bobbins, which are best, the above directions for filling bobbin are unnecessary.)

### THREADING THE NEW CYLINDER SHUTTLE.



Hold the shuttle in left hand in position shown in the above engraving. Open the shuttle by pressing lengthwise on the end of the latch where screw is seen in above cut, the latch and spring will move to the right and swing around. With bobbin in the right hand, and thread delivering from the under side toward you, slip it nearly into its place, and

pass the thread through the narrow diagonal slot, into the straight slot, then lay thread from you, across the square opening. Now close the shuttle, lowering the point so that the bobbin will drop into place; raise the latch until it can be pushed into position by the thumb. (Be careful to push it in squarely so as not to unnecessarily strain it.) Then, draw the thread back toward the heel, or square end of shuttle, and raising the thread slip it over the notch in the upper edge of the latch and directly beneath the outside flat tension-plate. Now, reverse the position of shuttle, and carry the thread out through the guide-hole and staple, as shown above, and under the outside curved spring.

Be careful that the thread passes through the staple, else the latch will be likely to fly out and be broken.

It will be noticed that in this shuttle there is only *one hole* through which to pass the thread.

Tension is obtained by means of the screw near the point of the shuttle, turning it *to the right* to increase, and *to the left* to diminish the pressure on the thread.

In removing bobbin from shuttle, first hold the shuttle *point down*, to allow bobbin to drop out of recess in end of latch.

The shuttle being threaded, lay it aside, and next

### SET THE NEEDLE,

taking it in the left hand, putting its point through the hole in the presser-foot and needle-plate, then entering the large end into the perpendicular hole in needle-bar, *with the long groove to the left* and the eye even with the bottom of shuttle-race when the needle-bar is at its lowest point. Turn the set-screw to hold the needle fast.

### FINISH SETTING THE NEEDLE

by noticing whether the loop from the needle thread is in such a position as to let the point of the shuttle pass directly through its center or fullest part; if not, raise or lower the needle so that it will do so. Improper setting of needles is the usual cause of skipped stitches.

Holding end of upper thread loosely by the left hand, turn fly-wheel once around, when the two threads will have become locked, and can be drawn through the hole in needle-plate by drawing thread in left hand upward. Pass the two thread ends away to the left. Put the slides into their places over the shuttle. Turn the fly-wheel until the needle is raised to the highest point, then put the book under the presser-foot and drop it down.

### THREADING NEEDLE OF MACHINE.

Place spool on its pin as shown in cut, pass the thread under the small guide and over, and once around the large wheel, thence through guide on face plate, thence through the two wire eyelets and spring at bottom of face plate, thence (threading from you) through hole in end of take-up, thence through hole in needle bar at its lowest end, thence (from left to right) through eye of needle, leaving a few inches extended.

### REGULATE TENSION

of upper thread by turning the tension or thumb screw to the right, until the thread seems to draw through it with about the same tenacity as it did from the shuttle, for the purpose of making a stitch alike on both sides.

If the under thread lies straight, or is not drawn sufficiently into the goods, turn the tension-screw more to the right. If such is the case with the upper thread, turn to the left, or increase shuttle tension.

### GET REQUIRED LENGTH OF STITCH

by turning the nut under front of machine to the right or upward for a longer, and to the left, or downward, for a shorter stitch: but it may be turned so much to the left or down (unscrewed) as to *stop* the motion of the feed *altogether*; should this happen, turn it again to the right (or screw it up to set the feed in operation.

You can now proceed to sew, remembering that practice is necessary for performing these instructions properly.

### REMOVE THE BOOK

when the needle is out of the goods, and the presser-foot raised, drawing it *from you* after pulling the upper thread out two or three inches.

### DIFFICULTIES WHICH LEARNERS MOST FREQUENTLY ENCOUNTER.

#### Breaking of the upper thread may be caused

- By the machine being wrongly threaded;
- By the upper tension being too tight;
- By the needle being too small for the thread;
- By the needle being set the wrong side out, or set crooked;
- By turning the machine the wrong way;
- By the horn at the heel of the shuttle sitting too close to it, or wearing sharp.

#### Breaking of the lower thread may be caused

- By the shuttle being wrongly threaded;
- By the tension being too tight;
- By the bobbin being wound too full, so as to not revolve freely;
- By a sharp edge in the shuttle.

#### "Skipped stitches" are caused

- By the needle being set too high or too low, or bent away from the shuttle-*race* or by the accumulation of lint or oil in the holes through which the needle passes, so as to prevent it throwing a regular and perfect loop.
- Irregularity of length of stitch is caused by neglect to oil feed.
- By an accumulation of lint under the needle-plate, in which case remove needle-plate and clean thoroughly.
- By feed-brake screw not being sufficiently tight to prevent feed from working back after stitch is completed; to tighten this screw turn several times to the right.

### HINTS TO OPERATORS.

In doing light work it will not be necessary to use oil cup, but on heavy work let thread draw from **under side of tension** and pass through sponge in cup and see that sponge is kept well saturated. And put in long presser-bar spring (which goes with machine) by removing thimble at top of presser-bar. This will give you a heavy pressure.

The pressure on the foot is presumed to be right for ordinary books, but can be graduated by the screw at the top of the presser-bar, turning it to the right, or downward,

for more pressure, and to the left or upward, for less pressure, regulating it according to thickness of Book. Be careful not to turn it so far up as to leave too little pressure.

Do not pull the work, as by so doing the needle is liable to be bent or broken, and the stitch made irregular.

Remove the shuttle from its race in all cases when filling bobbin. Always take it out *back* of the presser-foot, and by lifting the heel first.

Never turn the fly-wheel the wrong way, or you may break the needle or thread.

Never run the machine with the shuttle in its race, unless the slides are tightly in their places.

See that the needles have good points, and are sharp.

Loop stitches sometimes occur from using needles too fine for the thread; but generally from the thread feeding off too freely, which is remedied by retarding the thread. If the upper thread loops, increase the upper tension; if the lower, increase the shuttle tension.

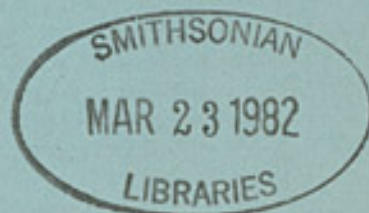
If you have too much tension on both threads, it will be shown by the constant breaking of the upper thread.

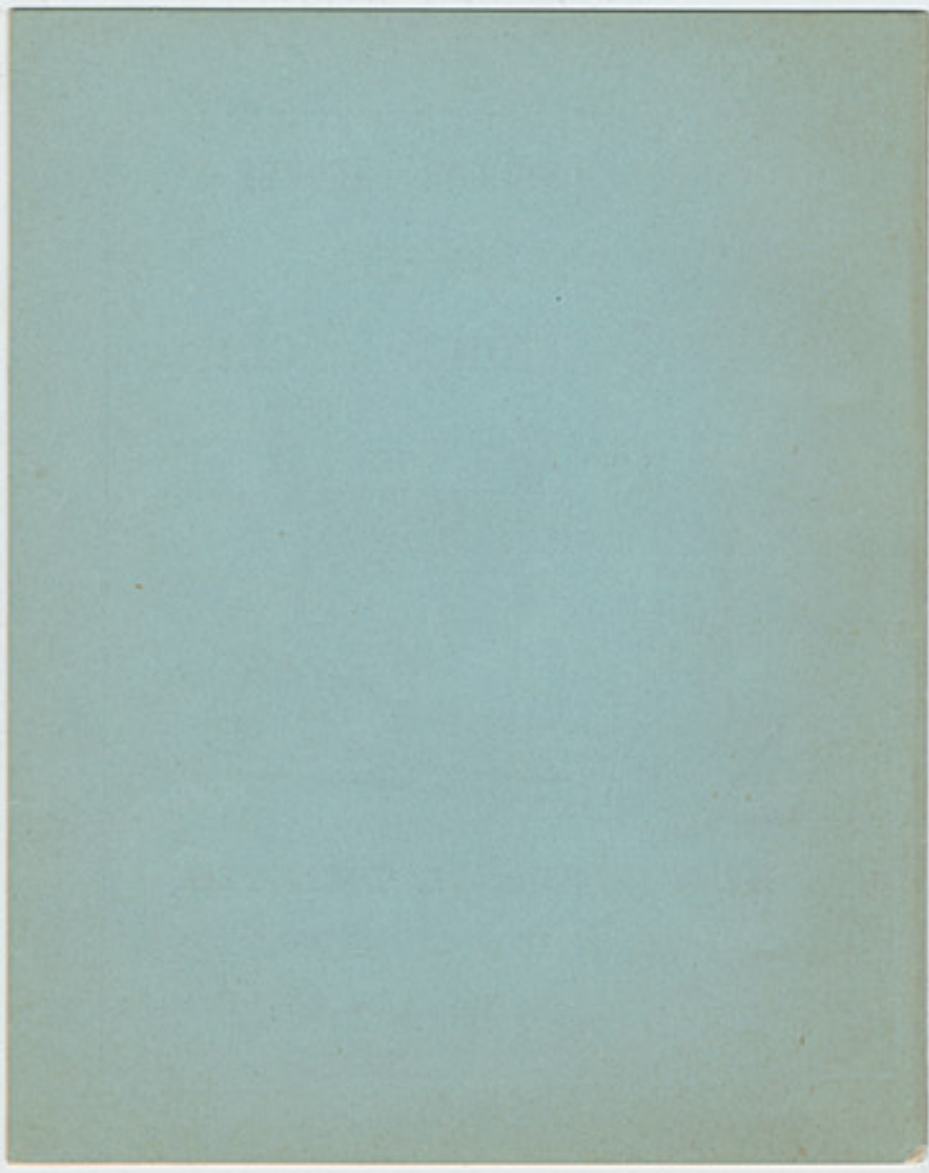
If the belt becomes loose, remove one end from the belt hook, cut off about half-an-inch, punch a new hole, and replace the hook.

Always use the finest lubricating oil. In case the machine has been neglected and become gummed, use paraffine-oil, or benzine, until the machine is clean again; but always endeavor to keep the machine so clean that it will not become gummed or clogged.

Of all things **BE SURE** that the machine is kept cleaned and well oiled.

If there is anything you do not understand do not fail to write for information.





*WV*

## READ WITH CARE.

### SPECIAL INSTRUCTIONS FOR DOING THICK WORK ONLY.

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#### FIRST.

Leave the thread out of wire take-up at base of face-plate, this will give you more slack thread.

#### SECOND.

Fill the oil-cup one quarter full of oil and saturate sponge with oil, then let thread pass through little iron hook in bottom of oil-cup and under the sponge. This will lubricate the needle and make it pass through the work easily.

#### THIRD.

Use the large cone of fly-wheel and a No. 7 or No. 8 needle.

#### FOURTH.

In doing heavy work use the grasshopper spring which is left on the machine to show how it is applied, but this is not necessary for light work as the regular spring gives you sufficient pressure, therefore, remove the grasshopper spring which is around the presser-bar and use only for heavy work.

#### FIFTH.

In doing heavy work—where the grasshopper spring is used—thread the needle by raising the presser foot to the highest point and passing the thread under it through the eye of the needle, for with the grasshopper spring on the pressure is too heavy to throw the presser foot around, but on light work—when threading the needle—raise the presser foot up and throw it around out of the way.

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Tack these Special Instructions up somewhere in Plain View.



On front of face plate, you will notice a plated rod, which is fastened at to p with two nuts, and enters presser bare at its base, this is to regulate downward pressure, so feed will not mark the book.

There should, however, be enough pressure, so feed will move work regularly. With this rod, the rolling foot can be set at such a distance from feed, that it will not be necessary to raise the presser every time a new book is started, but can be fed continuously.

PLEASE NOTE;-- The rod and its nuts control the downward pressure, and the presser bar and grasshopper spring the upper pressure. The rod can be used advantageously on both heavy and light work.

*W.M.*