

OPERATING
INSTRUCTIONS

for the
CHANDLER DARNER

All Models



CHANDLER MFG. CO.
Ayer, Mass.

KNOW YOUR DARNER!



Read these instructions carefully and thoroughly before operating machine.

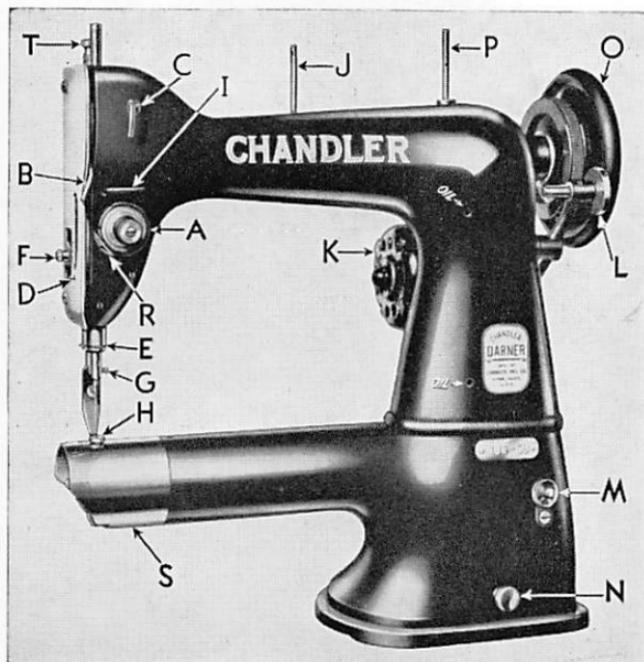
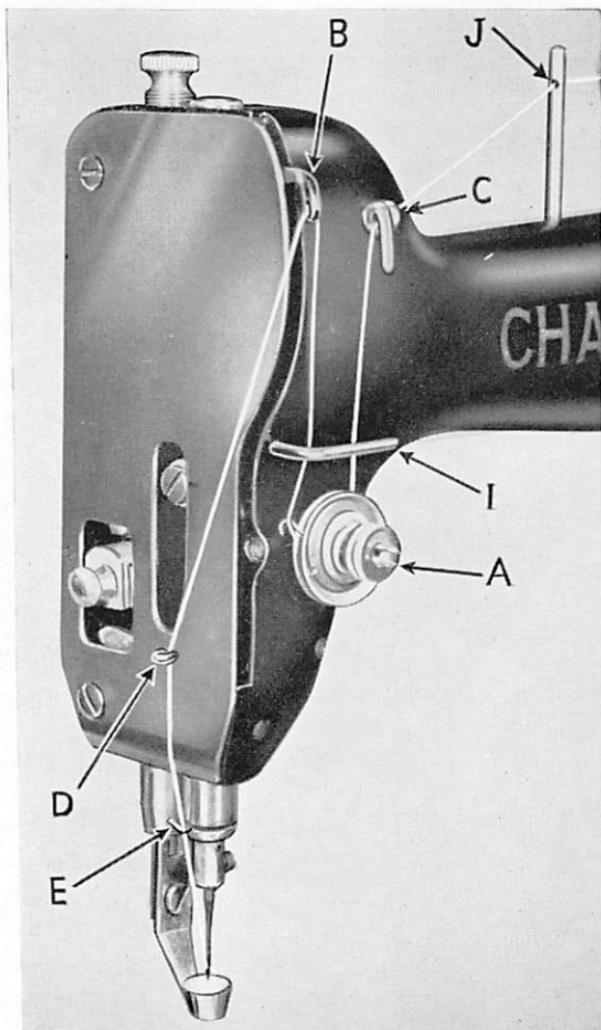


Fig. 1

- | | |
|---------------------------------------|-------------------------------------|
| A - Top Thread Tension | K - Motor |
| B - Take-up Lever | L - Bobbin Winder |
| C - Top Thread Guide | M - Bobbin Winder Tension |
| D - Face Plate Thread Hook | N - Thumb Screw for Tilting Head |
| E - Needle Bar Thread Guide | O - Hand Wheel |
| F - Presser Foot Lifter Adjustment | P - Spool Pin (Rear) |
| G - Needle Clamp Screw | R - Take-up Spring |
| H - Presser Foot | S - Latch Sleeve |
| I - Spool Pin (Front) | T - Presser Foot Thumb Screw |



To Thread the Machine

Fig. 2

Pass the thread from the thread-stand hook through the spool pin J, through upper thread guide C and down behind lower thread guide I. Next lead the thread to the right of and between the two tension washers A, drawing the thread to the left and then up into the take-up spring and again behind thread guide I. Now lead the thread through the hole in the take-up lever B, and down the face of the machine through guides D and E. Finally, draw the thread through the eye of the needle from LEFT to RIGHT.

To Remove the Bobbin

Turn the hand wheel toward you until the needle bar is in its uppermost position. Then lift up on latch A (Fig. 4) located under the nicked sleeve S on the mending arm. This allows the bobbin case holder to fall back on its hinge releasing the bobbin case.

Lift up hinging clamp F (Fig. 3) with the fingernail and shake out the bobbin.

To Wind the Bobbin

To wind the bobbin, place it on the spindle of the bobbin winder L (Fig. 1). Now lead the thread from the guide pin J down the front of the machine, to the left of and between the tension discs M, and up to the bobbin. Wind the thread around the bobbin a few times by hand, and then raise the bobbin-winder unit against the hand wheel belt. The tension spring will hold it in this position.

Then release the hand wheel for winding the bobbin, by placing your left hand on the hand wheel and with your right loosening the hand wheel knob, a quarter turn toward you or until it is free. This will allow the hand wheel to turn without running the rest of the machine. After the bobbin has been wound, the knob must be retightened.

If the machine is already threaded, the operator may save rethreading the machine by winding the bobbin by the following alternate method:

1. Release thread tension by raising the hand lifter W (Fig. 8).
2. Then, remove the thread from the needle and draw the thread from the last thread guide E (Fig. 2) to the tension discs M and up to the bobbin on the winder arm.

Always lower the bobbin winder unit to save unnecessary wear against the belt.

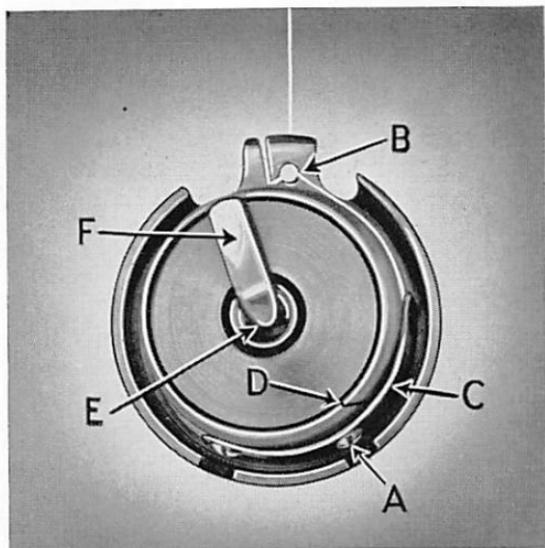


Fig. 3

To Thread the Bobbin Case

Hold the bobbin in the right hand between the thumb and forefinger with the thread drawing off at the bottom toward the right. With the left hand hold the bobbin case with the hinge "F" opened.

Now insert the bobbin on the center stem E, draw the thread through slot D and under the tension spring C. Care should be taken to see that the thread is under the spring.

From the spring, lead the thread to the projection on the bobbin case and draw it through the hole B. The bobbin case is now threaded and ready to be placed in the machine.

To Replace the Bobbin Case And Complete Threading

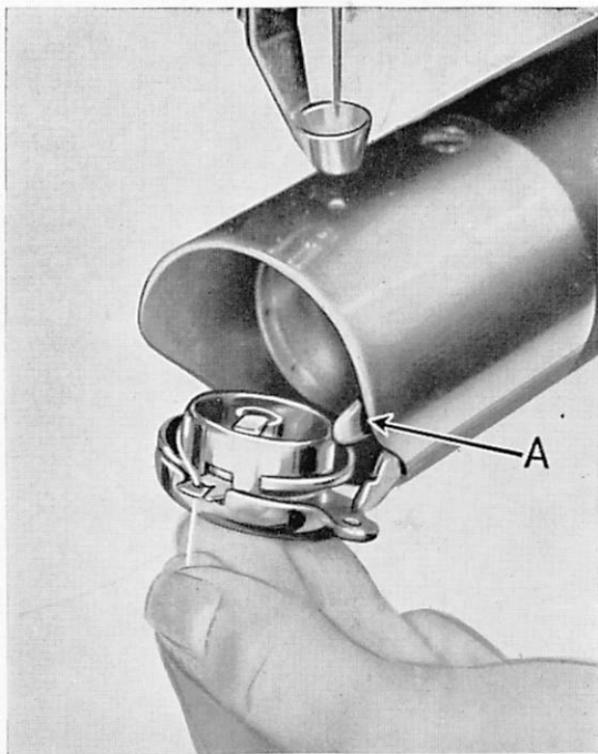


Fig. 4

After the bobbin case is threaded, take it in your left hand and place it onto the bobbin case holder. The projection of the bobbin case should lie in the cut-out of the holder.

Retaining your hold on the thread will keep the bobbin case lying in the proper position while closing the bobbin case holder. To close, merely snap up the bobbin case holder so that the retaining latch will lock it in place.

Before closing latch, make sure no accumulated thread is in the hook, and be sure the needle is in its uppermost position. If the needle is down, the latch will not close and any attempts to force it will break the needle.

Hold top thread and turn machine by hand one full revolution, drawing bobbin thread up through needle hole in sleeve. Lay both threads under presser foot to the rear.

To Begin Mending

With the machine properly threaded, you are now ready to begin mending. A few pieces of scrap material should be used to become accustomed to the feel of the machine.

Lift up the presser foot by means of the hand lifter "W" (Fig. 8) and insert the material to be darned beneath the presser foot. Then release the hand lifter to lower the presser foot in operating position. A slight pressure to the knee or foot rheostat will start the machine.

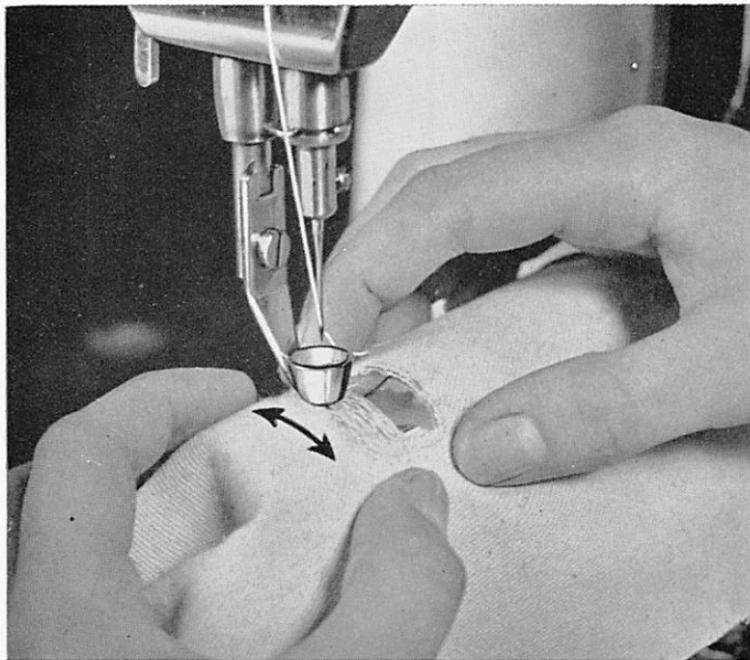


Fig. 5

The correct method of holding the material is shown above. The fingers should be held as close to the presser foot as the hole to be mended will allow. This method of holding prevents the material from wrinkling and allows better control of the cloth. Now oscillate the material, first forward and back and to finish, from side to side.

After the mend is completed, lift up the presser foot, turn the hand wheel toward you until the needle clears the material. Draw the material out and break off the threads.

Procedure In Mending A Hole

When mending a hole, it is always best to run a row of stitching around the hole to tie down the loose threads. This is especially true in the case of materials which have a tendency to run, as in socks.

Next sew across the hole forward and back until the hole has been covered with straight rows of stitching all in the same direction.

Now go over the hole again in the opposite direction moving the cloth from side to side to form stitching at right angles to that previously done. The illustration shows the steps in darning a hole.

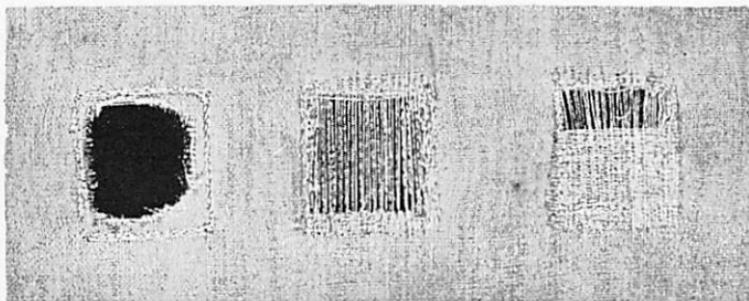


Fig. 6

Be sure to catch the thread in the material on BOTH sides of the hole. Never go half way across the hole and return to the same side. Be sure you catch the thread on the other side before crossing back again over the hole.

The material must be kept in motion at all times, as to stop the cloth will pile the stitching in one spot and cause the thread to break.

The operator may find other methods of darning more suitable, depending on what one finds most convenient, but always bear in mind that fast movement of the cloth with the machine running at slow speeds makes large stitches, while slow movement of the cloth with the machine running at high speed makes fine stitches. The operator must become accustomed to moving the cloth in relation to the speed to make neat, even stitches that result in perfect mending.

Some holes may be too large for darning with thread alone. In this case mend by patching, darning around the patch after trimming stray threads or folding back the edges to the underside. Then trim off the corners of the patch on the underside of the material.

Use of the Flat Work Plate

When there is a great deal of flat work to be mended, you will find the Chandler Flat Work Plate of real value. (Page 19). To install this plate simply lift up the presser foot. Be sure the needle is at its highest point and slide the plate on to the sleeve of this machine. The sleeve will fit in the cut-out in the plate. Then tighten the clamp-screw at the bottom of the yoke, and the plate is set for sewing. This plate will be found to be a great help where a larger surface is needed than provided by the sleeve of the machine. Some operators use the plate in mending with patches, as the extra surface allows free and convenient handling of the patch under the article to be mended.

To Regulate the Tensions

The small thumb nut in front of the tension discs A (Fig. 1 & 2) is for regulating the top thread tension. To tighten the top thread tension, turn this nut clockwise and to loosen the tension turn counter clockwise.

The tension on the bobbin thread is regulated by the small spring tension screw A (Fig. 3) located in the center of the bobbin case thread tension spring C (Fig. 3).

Take the small screw driver furnished with the accessories and turn this screw to the left to loosen the bobbin thread tension and to the right to increase the tension.

The correct tension on the bobbin thread is determined by hanging the bobbin case by the thread. If the tension is too loose, the bobbin case will slide down the thread. The correct tension is one which will allow the bobbin to be shaken down the thread. If the bobbin cannot be shaken down the thread, the tension is too tight.

The usual procedure is to set the bobbin tension first and then the top thread tension is adjusted until the stitch on the under side of the material is perfect and no loops are formed as described in the following paragraphs.

Tensions

Perfect stitching depends to a great extent on the proper adjustment of the thread tensions. The machine, as it comes to you, has the tensions properly adjusted, but you will need to readjust them frequently, depending on type of material sewed and thickness of thread used.

If the stitching is correctly done and the tensions are properly adjusted, the threads should meet in the center of the material, as shown by A (Fig.7).

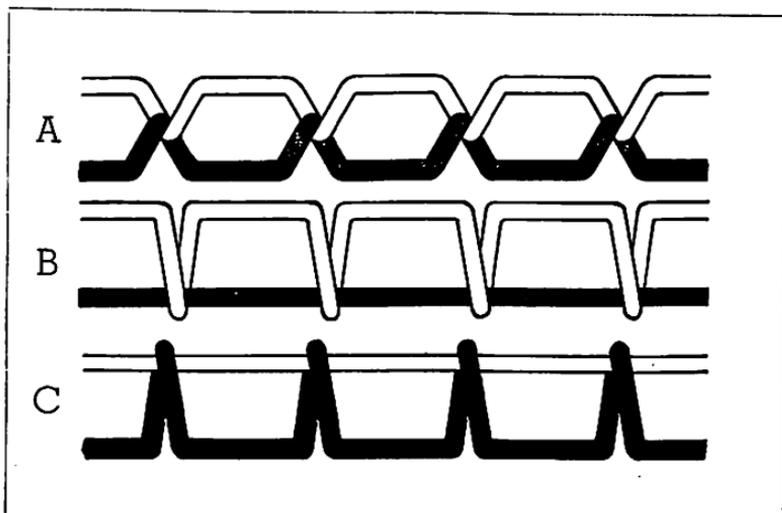


Fig. 7

If the top thread is too tight or the bobbin tension is too loose, the bottom thread will be pulled to the top of the material as illustrated in C (Fig.7).

When the top thread is too loose or the bobbin thread is too tight, the bobbin thread will lie along the under side of the material as shown in B (Fig.7), or it will form loops. When the top thread is too loose, causing these loops to appear, the darning will appear to be bunched and will not give the appearance of a neat job.

Presser Foot Adjustment

The knob F (Fig. 8) is an adjustment built into the machine to enable it to work on the heaviest as well as the lightest materials by making only the simplest of adjustments. The machine, as it comes to you, is adjusted for light and medium work. When such heavy work as nets, coats, blankets, over-alls, and aprons is encountered, raise the presser foot by means of the hand lifter W and take hold of the adjusting knob F (Fig. 8). Pull this knob out and turn a half turn toward you; the adjustment knob will then slip into its new position.

On returning to light work, this adjustment must be returned to its original position.

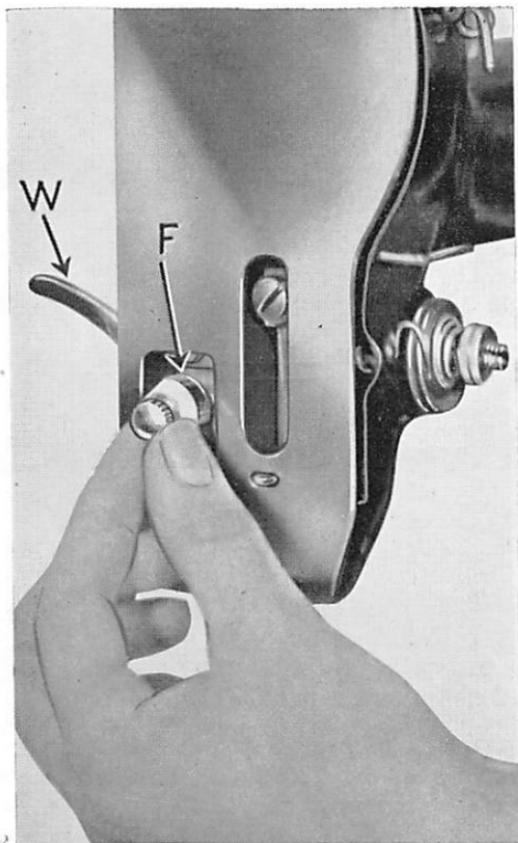


Fig. 8

Motor Belt Adjustment

In order to get the maximum speed and power from the motor, it is essential that the motor belt is correctly adjusted. If the belt is too tight, it will cause unnecessary wear of the bearings, belt, and motor shaft and also slow down the machine. If the belt is too loose, the belt will slip and fail to bring the machine up to speed.

The tension of the belt may be adjusted by means of the motor lock screw. Loosen this screw and bring the motor to the position desired and retighten. It is a good policy to also tighten the motor hinge pin screw, as this will give additional resistance to the motor being pulled out of adjustment.

Needles

The needles furnished with the machine are of the size #16 and as a rule will be found to meet all the usual requirements. Size #14 is obtainable for very fine mending, and sizes #18 and # 20 for very heavy work, such as nets, coarse cloth and coveralls.

| Size | Class of Work | Size of Thread |
|-----------|---|----------------|
| 20 | Heavy work, overalls, coats, nets, trousers, etc. | 40 and heavier |
| 16 and 18 | All general work | 80 to 40 |
| 14 | Fine work, shirts, linens, etc. | 60 to 80 |

To Set the Needle

Turn the hand wheel toward you until the needle bar is in its uppermost position. Then insert the needle into the hole in the needle bar with the **FLAT SIDE** of the shank toward the needle clamp screw. Make sure that the needle is pushed up into the hole as far as it will go. Now clamp the needle in this position by means of the needle clamp screw.

Thread

A good grade of thread should be used with the machine. If the thread is rough or uneven, or, if it passes with difficulty through the eye of the needle, the successful use of the machine is interfered with.

Left twist thread should always be used, and the thread for both the needle and the bobbin should be of the same size. A 60 (00) thread can be used for general purposes. It should be soft, mercerized and not contain any hard qualities. A 40 (0) thread is heavier and can be used for mending coats, aprons, nets and other heavier materials. A 40 (0) thread should not be used for socks, linens, etc., as this work requires the finer thread. See paragraph under "needles."

Oiling and Lubrication

To insure the life of the machine, all parts which are in movable contact with each other should be oiled at least once a day. A fine, light oil should be used which

you can obtain from the factory or any authorized agent.

All oil holes are plainly marked with the exception of the motor bearings at each end of the motor. These bearings should have a few drops of oil occasionally all depending on the amount of use that the machine has. Do not over-oil the motor.

A drop of oil should be applied every day to the raceway of the hook. This prevents undue friction and also helps prevent upper thread breakage.

Once or twice a month we recommend the application of a light grease or gear lubricant to the two sets of gears in the machine. The top gears may be reached by moving the nicked plate at the top rear of the machine to the side; the bottom gears by removing the base thumb screw N (Fig.1) and tilting the machine back.

Do not use a cheap oil, and also keep away from heavy motor oils, as this gums the machine and causes it to run slow and overstrain the motor. Always use a high grade sewing machine oil.

To Clean the Hook and Bobbin Unit

At regular intervals it is necessary to clean out the thread and lint which will accumulate in the hook and bobbin unit inside the nicked sleeve on the mending arm. We recommend that this be done at the end of each working week.

Remove the retaining screw on the sleeve S (Fig.1) and slide off the sleeve from the end of the arm. Clean the unit of all thread and lint. When replacing the sleeve be sure that the needle lines up with the hole in the sleeve before tightening the retaining screw.

To Clean Base Plate

Excess oil will run from inside the machine to the base. To prevent this excess oil from flooding onto the table and soiling goods to be mended, it is a good policy to wipe out the base weekly. To do this, remove the thumb screw N (Fig.1) and tilt machine back.

Thread Breakage

Occasionally some thread breakage might occur. In this case check the following for the trouble:

1. Top thread tension too tight.
2. Remove bobbin and check to see that it has proper tension and correct threading.
3. Wrong thread. Either wrong twist or too heavy for needle being used.
4. Follow top thread back from needle to see if it has been double twisted around any of the thread guides.
5. Be sure no cord, box nor other obstruction is leaning against or is contacting thread cone causing undue and uneven thread release from the cone.
6. Check needle to see if it is properly placed in needle bar. Flat part of needle must be to the right, on the same side as the needle clamp screw.
7. Run finger nail along needle point and check for any small burr or bent point. If burr is felt, remove and replace with new needle.
8. Do not continue to sew in one spot; do not let the machine run any length of time on the same spot of material.
9. In darning across a hole, be sure to catch the thread on either side. Do not darn half way across and return to the same side. The loose loop of the thread will be carried down to the hook by the needle and snap your thread.
10. Too violent motion of the cloth or sudden jerks of the material will snap the thread in the eye of the needle.
11. Remove the nickel-plated sleeve and check point of hook to see if needle has struck it to cause a burr on its point. Use a fine stone to remove any burr on hook point. Do not use a file. Hook should not be removed nor loosened unless point is actually broken off.

INSTRUCTIONS

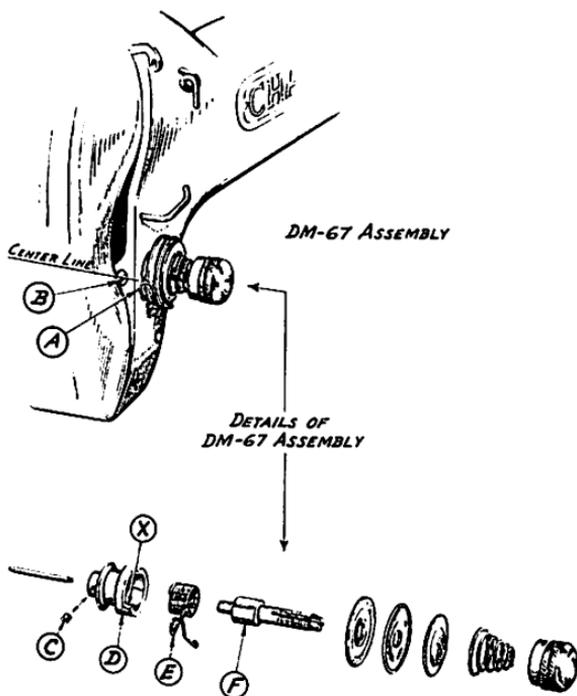
for

TIMING, ADJUSTING, AND CHECKING THE MECHANICAL SETTINGS.

All mechanical settings should be left strictly alone, and should not be tampered with. The following pages are only for those who must replace essential parts or for those who have experienced trouble in operating their machines and wish to double check on the mechanical settings to see if the machines are properly adjusted.

**Important replaceable Parts illustrated at
the end of these instructions**

TOP THREAD TENSION ASSEMBLY



-NOTE-

Position of DM-67 Assembly is correct when top of Check Spring (A) is opposite Center Line of Set Screw (B) as illustrated above... To obtain this position, loosen Set Screw (B) and rotate DM-67 Assembly the desired amount. Then tighten Set Screw (B) securely.

When assembling details - Before tightening Set Screw (C) rotate Stud (F) until Spring (E) positions itself against lower shoulder (X) with a very slight tension. Otherwise Spring (E) will have no tension and will "float" in the slotted opening of the Tension Barrel (D).

MACHINE TIMING

NEEDLE TO HOOK

1st STEP

Remove Screws (A) (B) and (C) Fig 1 and take off Face Plate and Latch Sleeve.

2nd STEP

Making sure the Needle is up into Needle Bar as far as possible, turn machine until timing mark (X) Fig 2 on Crank Head (D) is directly in line with Pin (E) as shown in Fig. 2.

At this time the point of Hook (F) Fig 2 should be at the Vertical Center Line of the Needle and $\frac{1}{16}$ of an inch above the Needle Eye as shown in enlarged view Fig. 2A and at the center of the scarf in the Needle as shown below in Fig. 2B.

To make these adjustments, proceed as outlined below in STEP (3).

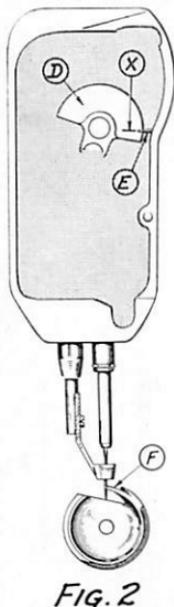
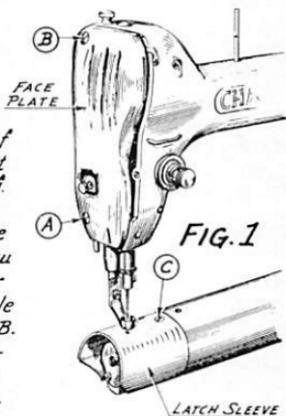


FIG. 2

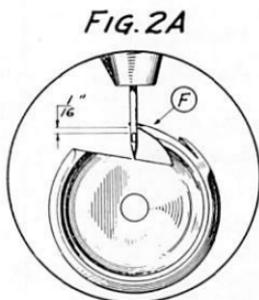


FIG. 2A

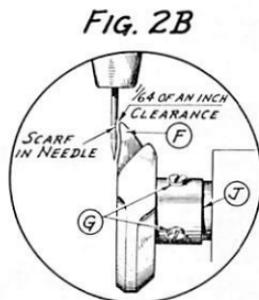


FIG. 2B

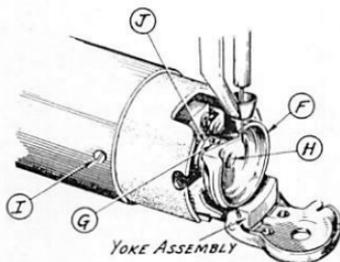


FIG. 3

3rd STEP

Loosen 3 Screws (G) Fig 3 and turn Hook (F) to Left or Right on Shaft (H) the desired amount. Now check for $\frac{1}{64}$ of an inch clearance between scarf in Needle and point of Hook (F) as shown in Fig. 2B.

To adjust lateral position of Hook and Yoke, loosen Set Screw (I) Fig. 3 and move entire Yoke Assembly in or out on Shaft (H) making certain that hub of Hook shoulders firmly against the Yoke at point (J) Figs. 2B and 3. Tighten 3 Screws (G) and Set Screw (I) Fig. 3 securely making certain that you do not bind Hook and Shaft by too much pressure at (J).

BOBBIN CLEARANCE

1st STEP

The clearance between Bobbin Holder (A) and Bobbin (B) at (X) (See Figs. 1 and 1A) should be approximately $\frac{1}{32}$ of an inch.

To adjust clearance, loosen Set Screw (C) (nearest one towards operator of three Set Screws on underside of Yoke Casting) Fig. 1 and turn Eccentric Screw (D) right or left until the desired clearance is obtained. Then tighten Set Screw (C) securely.

FOR CHANDLER DARNER CLASS-146

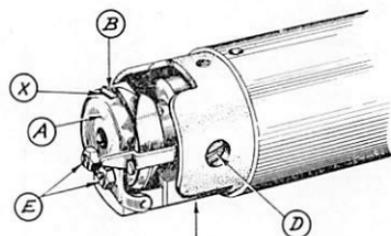


FIG. 1

2nd STEP

The amount of clearance between the inside crowned ends of Adjusting Screws (E) and Bobbin (B) at (XX) (See Figs. 1 and 1A) should be just sufficient to allow the thread to pass between them. To adjust, loosen Lock Nuts and turn Adj. Screw (E) until it tightens on Bobbin Case - then loosen about $\frac{3}{4}$ of a turn - hold in position with screw-driver and tighten Lock Nuts.

- NOTE -

Excessive clearance at (XX) Fig. 1A will cause rattling of Bobbin Case (B).

FOR CHANDLER DARNER CLASS-136-138-140 AND 144

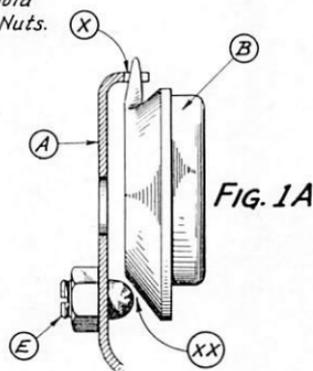


FIG. 1A

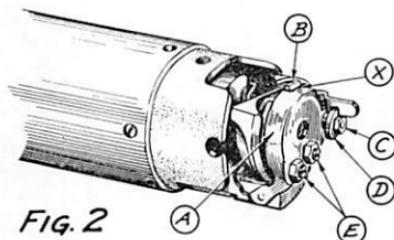


FIG. 2

2nd STEP

Adjust for clearance at point (X) Fig. 1A by means of Adjusting Screws (E) Fig. 2 using same procedure as outlined in the above 2nd STEP.

1st STEP

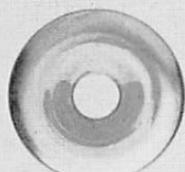
The clearance between Bobbin Holder (A) and Bobbin (B) at (X) (See Figs. 2 and 1A) should be approximately $\frac{1}{32}$ of an inch. To adjust, loosen Lock Nut (C) Fig. 2 and turn Threaded Washer (D) in or out until the desired clearance is obtained. Holding Threaded Washer (D) in position, tighten Lock Nut (C) securely.

Parts Replacement List

Important—When ordering parts please give
CLASS and SERIAL number of machine.

Parts List

| | |
|------------------|--------------------------------------|
| DM- 17 | Tension Washer |
| DM- 18 | Tension Release Disk |
| DM- 19 | Thread Tension Spring |
| DM- 16 | Thumb Tension Nut |
| DM- 67 | Tension Stud |
| DM- 72 | Thread Guide |
| DM-105 | Thread Guide |
| DM- 30 | Needle Bar Thread Guide |
| DM- 80-B | Take-Up Spring |
| DM- 67-AS | Thread Tension Assembly |
| DM- 33 | Presser Lifter Cam Roller |
| DM-101 | Presser Lifter Cam |
| DM-177 | Tension Spring Barrel |
| DM- 20 | Thread Tension Release Pin |
| DM- 40-AS | Presser Bar Lifting Block, Assembled |
| DM- 39 | Presser Bar Guide |



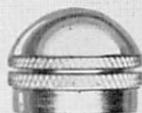
DM-17



DM-18



DM-19



DM-16



DM-67



DM-72



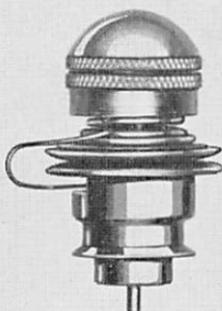
DM-105



DM-30



DM-80-B



DM-67-AS



DM-33



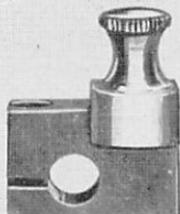
DM-101



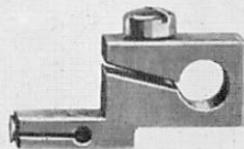
DM-177



DM-20



DM-40-AS



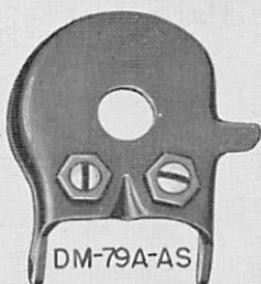
DM-39

Parts List

| | |
|-------------------|--|
| DM- 78-AS | Bobbin Case, Assembled |
| DM- 79A-AS | Bobbin Case, Holder Assembled |
| DM- 79-AS | Bobbin Case, Holder Assembled |
| DM-130 | Bobbin Case, Tension Spring |
| DM-132 | Bobbin Case, Tension Spring Adj. Screw |
| DM- 89 | Bobbin Case, Adjustment Screw |
| DM-190 | Bobbin Case, Adj. Screw Lock Nut |
| DM- 45 | Latch Adjusting Washer |
| DM-127-AS | Bobbin Case, Bobbin Retaining Latch |
| DM- 87 | Latch Guard Clamp Screw |
| DM-169A | Latch |
| DM- 77 | Hook |
| DM- 38 | Latch Sleeve |
| DM-169 | Latch |

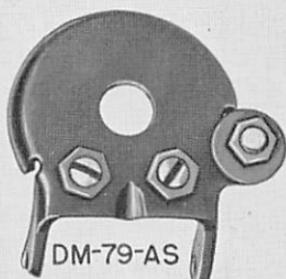


DM-78-AS



DM-79A-AS

FOR CLASS 144
AND LATER MODELS



DM-79-AS

FOR CLASS 136, 138
AND 140 MODELS



DM-130



DM-132



DM-89



DM-190



DM-45



DM-127-AS

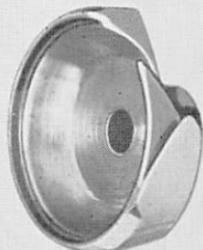


DM-87

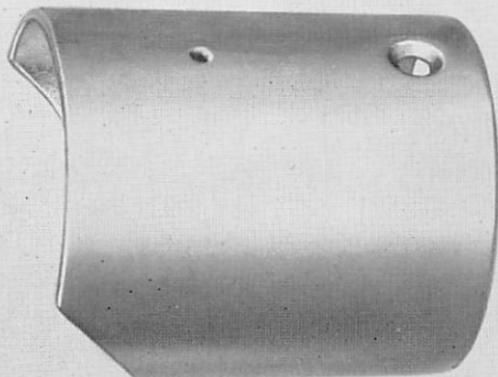


DM-169A

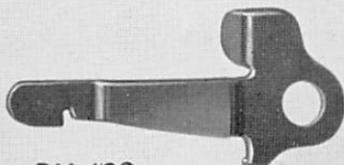
FOR CLASS 144
AND LATER MODELS



DM-77



DM-38

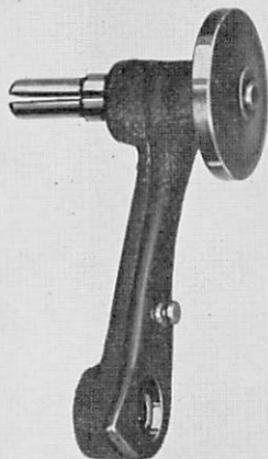


DM-169

FOR CLASS 136, 138
AND 140 MODELS

Parts List

| | |
|------------------|--|
| DM- 5-AS | Bobbin Winder Assembled |
| DM-178 | Bobbin Winder Spindle |
| DM- 22 | Bobbin Winder Wheel |
| DM-110 | Bobbin |
| DM-136 | Bobbin Winder Tension Spring |
| DM-183-AS | Bobbin Winder Tension Strap, Assembled |
| DM- 24 | Presser Foot |
| DM-104 | Presser Foot Hand Lifter |
| DM-113 | Take-Up Lever |
| DM- 55 | Take-Up Fulcrum Hub Stud |
| DM- 32 | Take-Up Yoke Rod |
| DM- 9 | Needle Bar Conn. Link |
| DM- 34 | Needle Bar Conn. Stud |
| DM- 10A | Take-Up Fulcrum Hub |
| DM- 8 | Take-Up Yoke |
| DM- 81 | Needle Clamp Screw |



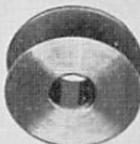
DM-5-AS



DM-178



DM-22



DM-110



DM-136



DM-183-AS



DM-24



DM-104



DM-113



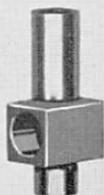
DM-55



DM-32



DM-9



DM-34



DM-10A



DM-8



DM-81



Chandler "Flat Work" Plate

An indispensable accessory easily attached to the cylindrical arm of the Darning Machine.

By the use of this plate, sheets, towels, napkins and even laundry nets can be easily and conveniently mended. Slips on or off merely by the single twist of the binding screw located under the plate. An opening slide is provided for convenience in placing or removing the bobbins.

Will fit any model having a 2" diameter cylindrical arm. When ordering, be sure to specify model and serial number of machine for which plate is required.

A real practical accessory for your Darner; you should not be without one.

**CHANDLER MFG. COMPANY
AYER, MASS.**

Manufacturers of the famous CHANDLER DARNER



Chandler Darning Thread

A large supply of **Special** Darning Thread is stocked for the convenience of our many customers. Chandler Darning Thread is of a soft mercerized nature which lends itself to machine darning without making hard, lumpy spots. Available in black, white and 32 **vat dyed—boiled fast** colors.

Ready Wound Bobbins

These paper bobbins are all wound, ready to insert into the Chandler Darner, **Saves winding time.** Ready wound bobbins packed in half gross boxes—black and white only.



Chandler Sewing Light

A complete unit which clamps on any sewing machine table at any location the operator finds most convenient.

A flexible socket attached to a flexible arm gives DOUBLE FEATURE light adjustment. The complete unit is held to the edge of the table by means of an adjustable clamp which can be expanded to fit a table with a maximum thickness of 2". The Chandler Light although designed for the Chandler Darner can also be used on other types of sewing equipment.

You will find this light indispensable on rainy days or in the winter when the light is weak. If your sewing equipment is not well lighted, by all means order a Chandler Light today! It pays big dividends.

SAVE EYESTRAIN — DO NEATER WORK

Comes complete with cord

CHANDLER MFG. COMPANY

AYER, MASS.

Manufacturers of the famous **CHANDLER DARNER**

CHANDLER

- ◆ DARNING AND MENDING MACHINES.
- ◆ FLUTING MACHINES, HAND OR POWER
- ◆ HAND OR POWER BUTTON SEWERS.
- ◆ SEWING THREADS.
- ◆ REBUILT TAILORING MACHINES.
- ◆ PLEATING MACHINES.
- ◆ RUFFLE IRONERS.
- ◆ CUFF TACKERS.
- ◆ LABEL TAGGERS.