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PFAFF[®] **335**

Single-Needle, Cylinder-Bed,
Unison-Feed Sewing Machine

Instruction Book

G·M·PFAFF AG · KAISERSLAUTERN BRANCH

Foreword

The operational instructions given in this booklet pertain not only to the ordinary Pfaff 335-17 binding machine, but also to all other subclass varieties.

The individual subclasses are fitted to suit different operational requirements. The various subclass organizations differ only in the type of rigid or swing-away binder or tape guide mounted on the feed-synchronized attachment bracket.

An exception are the Pfaff 335-9, -09, and -09-33 which are specially designed for portfolio work and have a rigid tape guide mounted on the cylinder arm.

The Pfaff 335-332 X 251 occupies a special position in that it is fitted with upper feed acceleration control rather than ordinary unison feed.

The operating instructions for this machine are also contained in this Instruction Book.

G. M. PFAFF AG

1. General

1. The machine is fitted with sleeve take-up and a bevel-gear-driven rotary hook, moving counter-clockwise.
2. It makes down to $5\frac{1}{2}$ stitches per inch and, depending on the material to be sewn, may be operated at speeds ranging from 1,400 to 2,500 s.p.m.
3. To avoid trouble in the mechanism, run the machine at about 75 per cent of its top speed until the parts which are in movable contact have become thoroughly glazed by their action upon each other. This should normally be the case after about two weeks' constant daily use.
4. The tape is unreeled by the motion of both the feed dog and the feed-synchronized binder so that the binding is smoothly and evenly applied even around curves.

All machines are regularly equipped with a fixed pulley which is cast in one with the balance wheel. If desired, however, these machines can be supplied with a disengageable pulley.

Such machines are dispatched with the sewing mechanism disengaged. To engage this mechanism for sewing, hold the balance wheel steady with your left hand and turn the large lock nut over from you.

2. Fundamentals of Machine Operation

Before you put the machine in operation for the first time, carefully remove all dust which has accumulated in transit and oil the machine thoroughly (see Chapter 3).

Oil the machine only with Pfaff sewing machine oil which is non-resinous and acid-free.

Never run a threaded machine unless you have fabric under the presser foot.

Before you start sewing, lay both threads back under the presser foot.

To prevent thread jamming, hold both thread ends until the machine has made a few stitches.

Do not pull the material while stitching; the machine will feed the fabric automatically.

Use needles of the correct system only (see Chapter 10).

Never use rusty needles.

Use high-grade threads only.

Always bring the take-up lever to its highest point before you remove the material.

3. Cleaning and Lubricating the Machine

Take a clean rag and remove the grease from all nickel-plated and polished parts of the machine. Rinse the sewing hook with cleaning fluid and apply a few drops of this fluid to all oiling points marked in Figs. 1, 2, 3 and 4. Place a piece of fabric under the presser foot, raise the presser bar and run the machine a short while until all grease is washed out. Wipe the machine dry and apply a drop of **Pfaff sewing machine oil No. 280-1-120 122** to all points of friction.

All points of friction should be oiled twice a week. The sewing hook, however, should be oiled every day.

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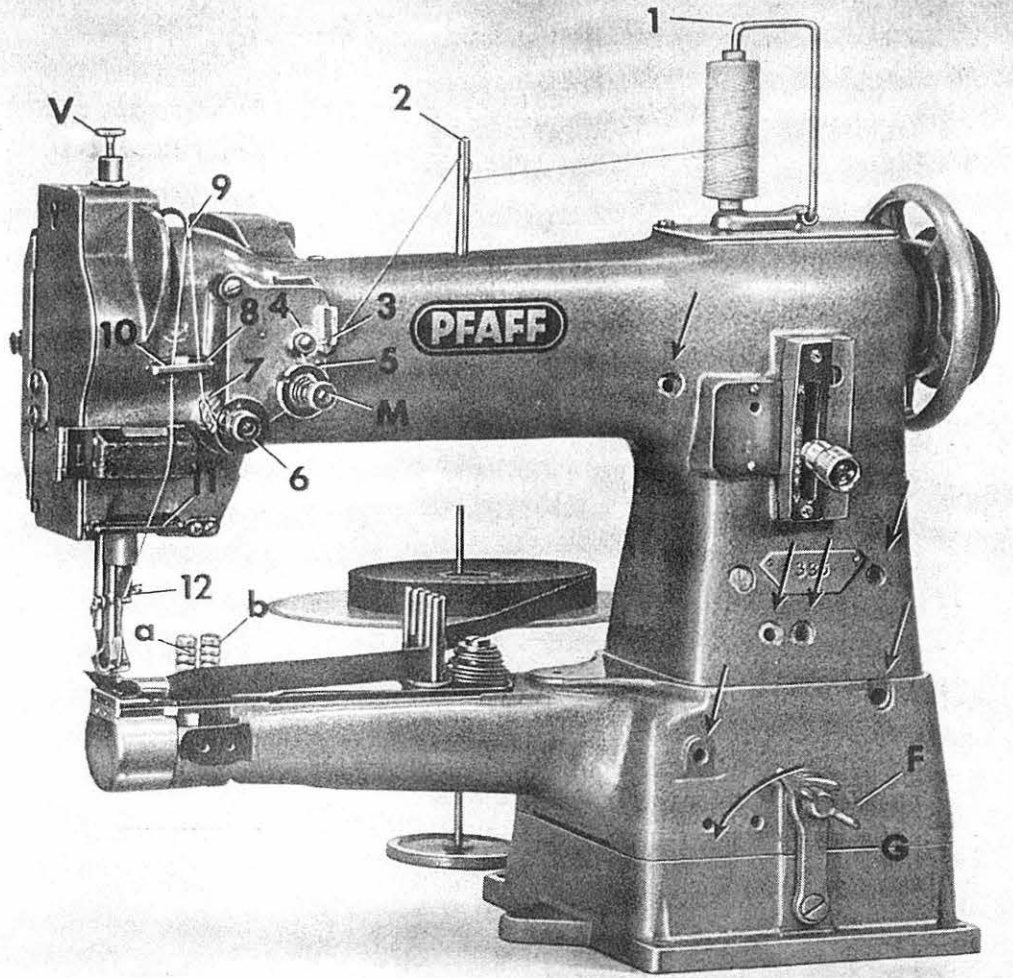


Fig. 1

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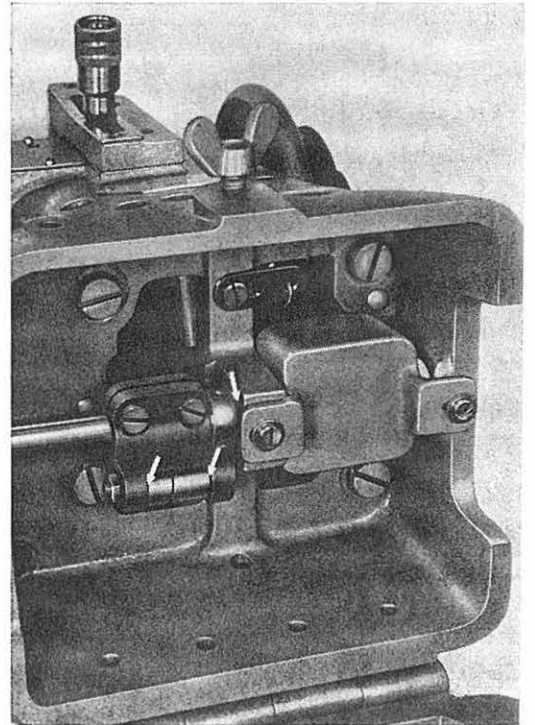


Fig. 2

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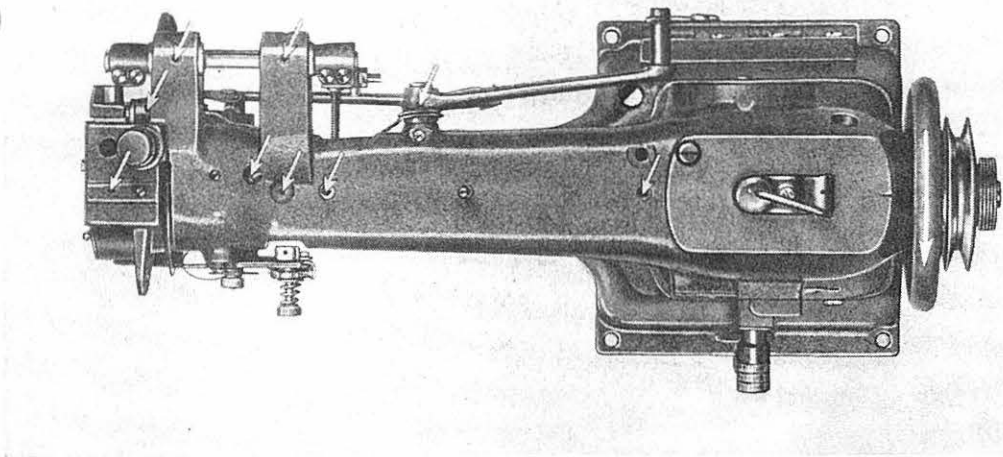


Fig. 3

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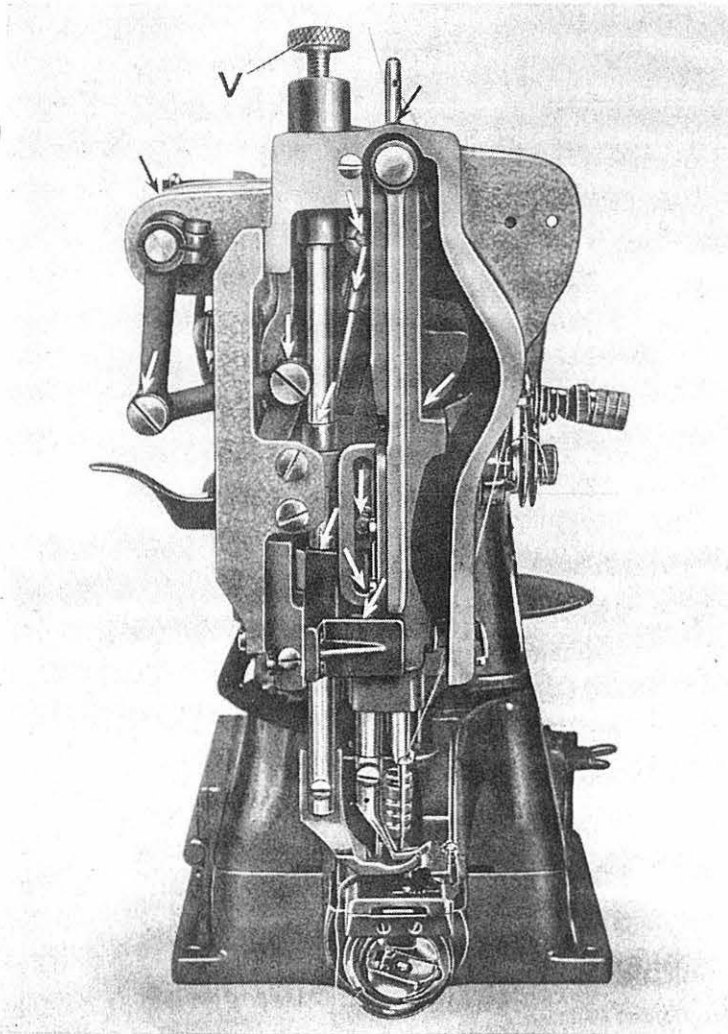


Fig. 4

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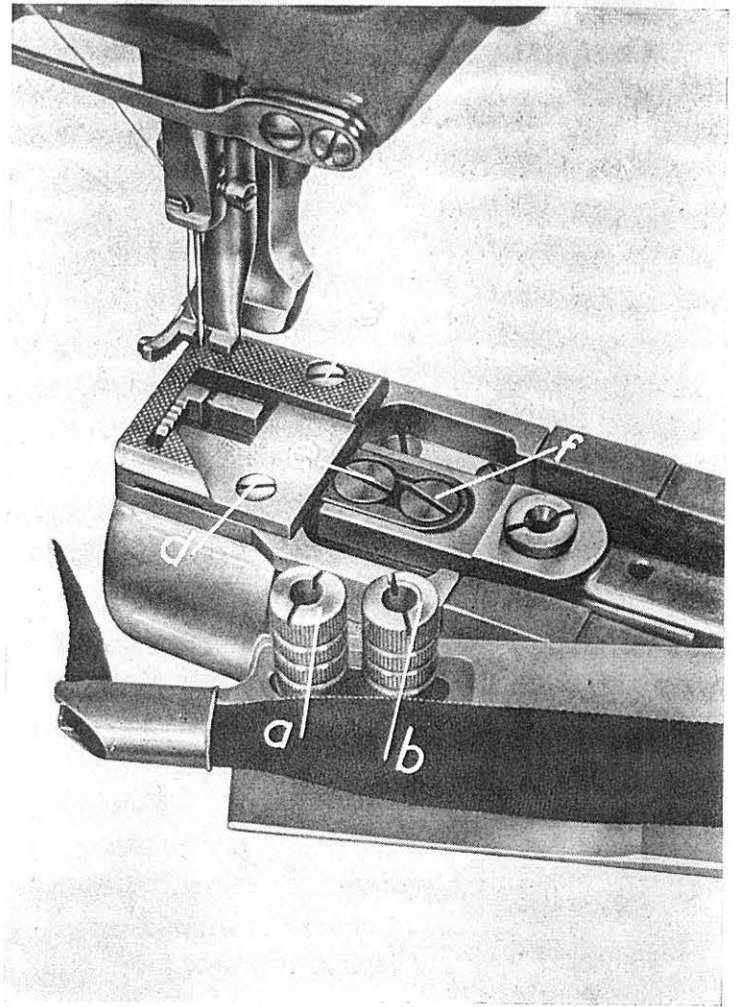


Fig. 5

Although the bevel gears enclosed in cases and require no special maintenance, it is recommended to replace the old grease by Pfaff grease No. 280-1-120 243 once a year. Owing to the special lubricating properties of this grease, the flanks of the bevel gear teeth should be greased only lightly.

To get at the oiling points inside the arm standard, loosen wing nut **F**, turn catch **G** left (Fig. 1) and tilt the machine back (Fig. 2).

Accumulations of lint packed between hook, feed dog and needle plate should be removed daily. From time to time take off the needle plate and the feed dog and remove the lint which has accumulated on these parts. To do this, slightly lift the attachment bracket by nuts **a** and **b** (Fig. 5) and swing it forward. After loosening screws **c** and **d** the needle plate can be removed. To take out the feed dog, loosen screws **e** and **f** (Fig. 5). When replacing these parts, tighten all set screws securely.

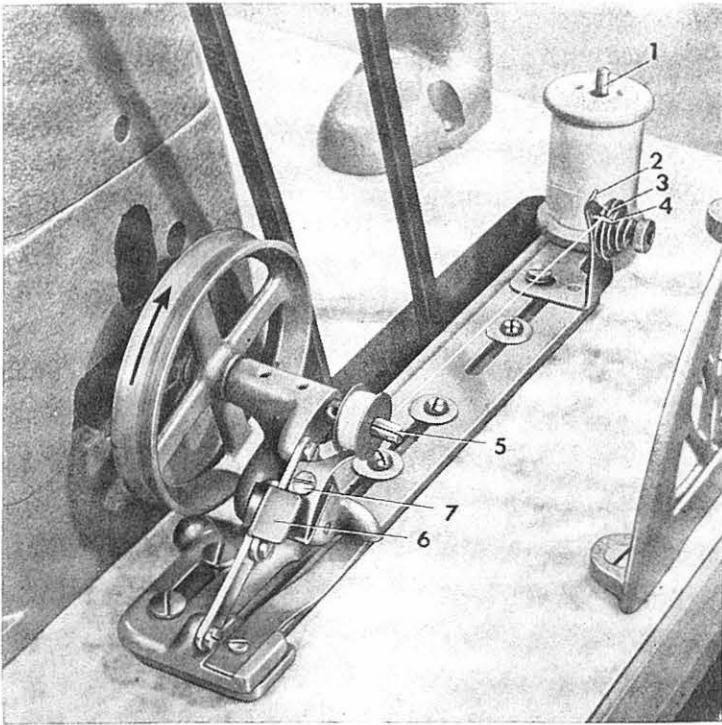


Fig. 6

4. Winding the Bobbin

Place the spool of thread on spool pin **1** (Fig. 6) and the bobbin on spindle **5**. Pass the thread through eyelet **2**, between tension discs **3**, over pin **4**, and pull it through the slot in the bobbin, from the inside. Press in lever **6** until the bobbin winder pulley contacts the belt. Hold the end of the thread and slowly start the machine. Check to see that the bobbin winder pulley rotates clockwise, as indicated by an arrow in Fig. 7. The bobbin winder will stop automatically when the bobbin is full. The amount of thread to be wound on the bobbin is regulated by screw **7**.

Turn it right for more thread;
turn it left for less thread.

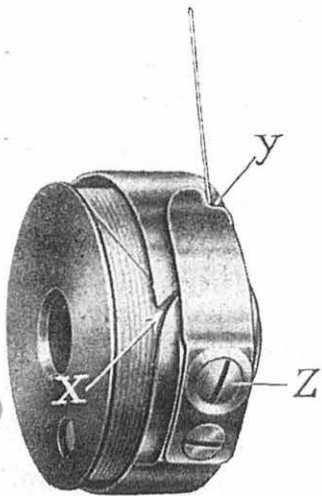


Fig. 7

If the thread should pile up at one end of the bobbin, adjust the position of the bobbin winder tension and the spool of thread sideways, as may be required. To do this, loosen the screw, adjust the tension bracket and tighten the screw again.

Check to see that the bobbin winder tension is set correctly. Turn the regulating nut clockwise for a tighter tension, or counter-clockwise for a looser tension.

5. Removing the Bobbin and Threading the Bobbin Case

Raise the needle bar to its highest position, open the cylinder arm cap, lift latch **A** with your left thumb and pull out the bobbin case with the bobbin (Fig. 8).

While you hold the bobbin case by its open latch, the bobbin cannot fall out.

Hold the bobbin firmly in the bobbin case, pull thread into slot **X** (Fig. 8) and draw it under the tension spring until it emerges from delivery eye **Y**. Leave a few inches of thread hanging from the bobbin case.

Lift the latch and push the bobbin case on center stud **T** (Fig. 16) in the bobbin case base. Release the latch and press against the bobbin case until you hear it snap into place. Failure to observe this precaution may result in bobbin case breakage. Replace the cylinder arm cap.

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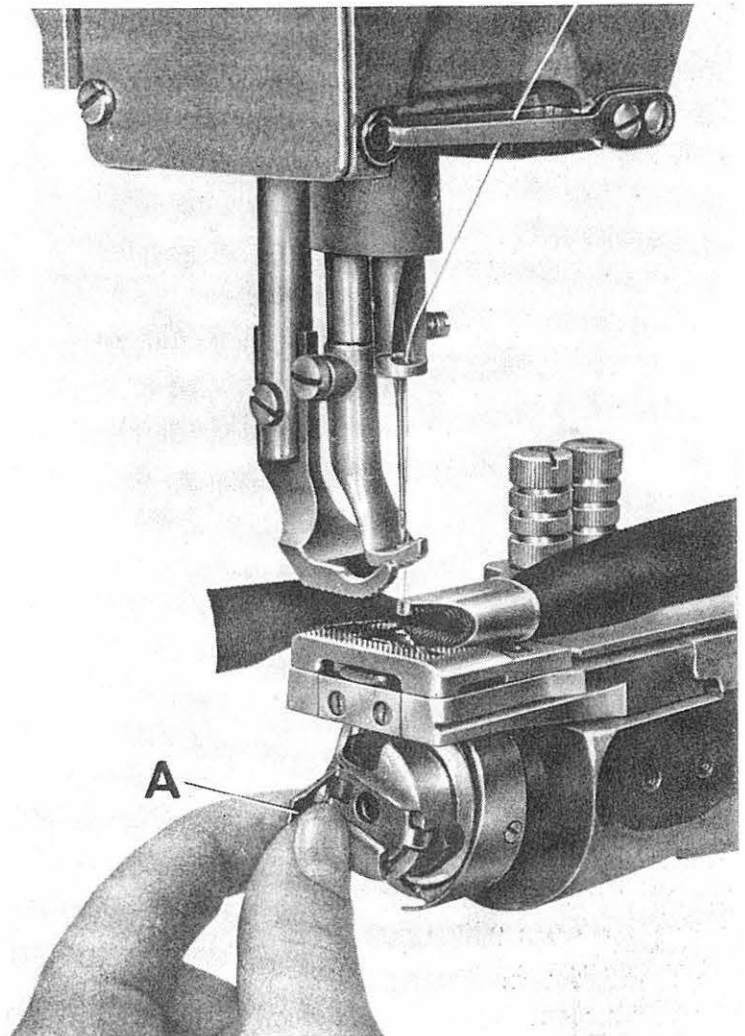


Fig. 8

6. Selecting the Correct Needle

Models H 1 and H 2 of this machine use System **134** needles, while Models H 3 and H 4 are equipped with System **134-35** needles.

The needle size depends on the material to be sewn.

Model **A** for lightweight fabrics and leather: No. 60– 80

Model **B** for medium-weight fabrics and leather: No. 90–110.

The number indicating the needle size is identical with the diameter of the needle shaft, or blade, measured in hundredths of millimeters. Thus, if the diameter of a needle is 1 mm, then its size is 100.

The appropriate needle blade diameter is dependent on the grade of thread and type of material used and should be chosen from the below chart:

Needle Size	Cotton	Silk	Synthetic	Linen
60	130/3 130/4	140/3	200/3–150/3	
70	100/3 100/4	120/3	140/3–120/3	
80	80/3 80/4	100/3	120/3–100/3	
90	70/3–60/3 70/4–60/4	80/3	100/3–80/3	70/3
100	50/3–40/3 50/4–40/4	70/3	70/3	60/3
110	30/3 30/4 30/6	60/3	60/3	50/3
120	24/3 24/6	50/3	50/3	40/3

System 134 needles have different styles of points, depending on the nature of the work for which they are intended. The various needle point styles are identified by a letter following the needle system.

The machine uses System 134 **R** round-point needles for stitching cloth, and needles with various cutting edges for stitching leather (e.g. 134 **Lr** or 134 **LI**).

Extremely thin needles require a feed dog with a small needle hole, while extremely thick needles require a large needle hole.

7. Changing the Needle

Raise the needle bar to its highest point. Loosen the needle set screw and pull out the old needle. Insert a new needle into the clamp, making sure that the **short groove faces toward** the sewing hook and that it is pushed up as far as it will go. Tighten the needle set screw securely.

Never use rusty needles.

8. Threading the Needle

As shown in Fig. 9, pass the thread from spool 1 through thread guide 2, down through thread guide 3, around thread retainer 4, clockwise around and between tension discs 5, and under and around thread controller disc 6. Pull it up until you hear it snap over the point visible through the hole in the disc and until it is properly positioned

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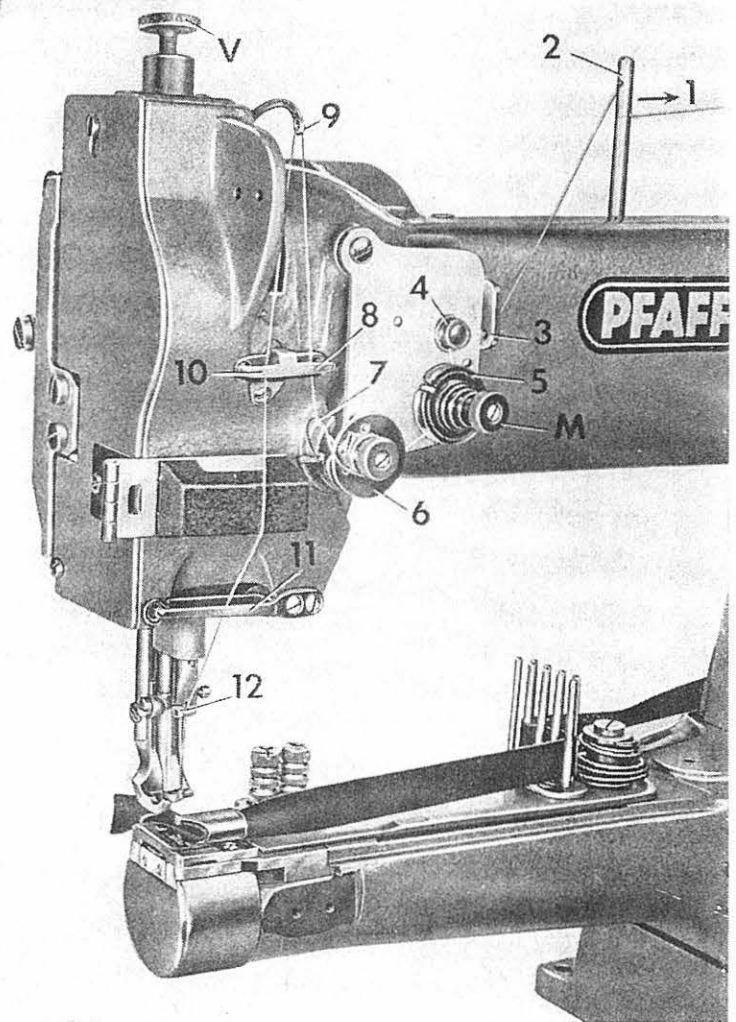


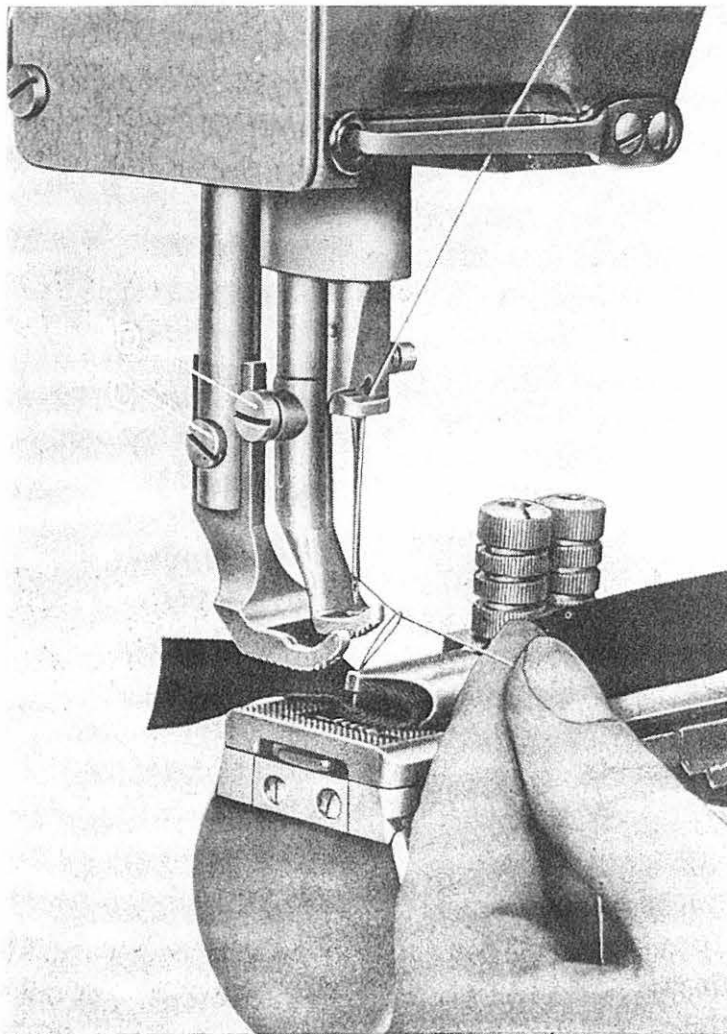
Fig. 9

in thread check spring 7. Now lead it through thread guide 8, from right to left through the hole in take-up lever 9, down and through thread guides 10 and 11, into the slot of needle holder 12, and from left to right through the needle eye.

9. Drawing Up the Bobbin Thread

Hold the end of the needle thread and turn the balance wheel toward you until the needle moves down and up again, thus catching the bobbin thread which comes up through the needle hole in a loop. Lay both threads back under the presser foot (Fig. 10) and insert the material. Then lower the foot and begin sewing.

Whenever you have to turn the balance wheel, turn it toward you (see arrow in Fig. 3). Never run a threaded machine unless you have fabric under the presser foot.



R 7767

Fig. 10

10. Regulating the Upper Tension

The upper tension is regulated by means of tension nut **M** (Fig. 9). Turn this nut right for a tighter tension, or left for a looser tension.

If the upper tension is too loose, the bobbin thread will draw the needle thread down (Fig. 11) so that small kinks will form on the underside of the material.

If the upper tension is too tight, the bobbin thread will be pulled up (Fig. 12), or the needle thread will break.

If your tensions are correctly balanced, both threads are locked in the center of the material, as shown in Fig. 13.

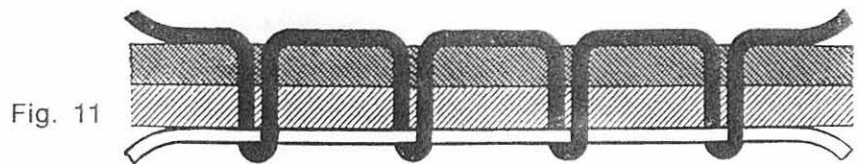


Fig. 11

Upper tension too loose or lower tension too tight

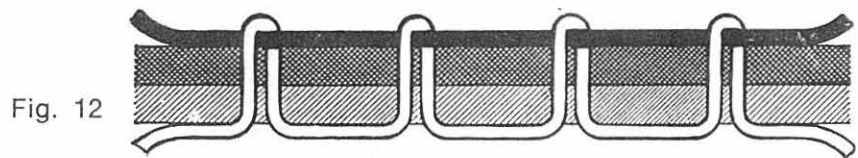


Fig. 12

Upper tension too tight or lower tension too loose

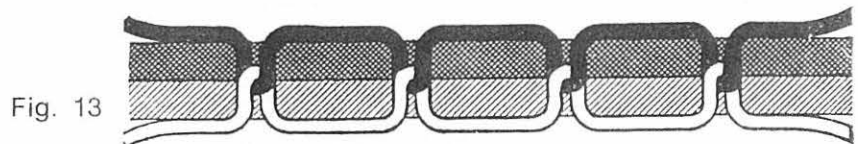


Fig. 13

Both tensions correctly balanced

Raising the presser bar will automatically release the tension. Always remove the work by pulling it back out of the machine so that the needle will not be bent. Bent needles may cause skipped stitches or thread breaking.

11. Regulating the Lower Tension

The lower tension is regulated by means of tension screw **Z** (Fig. 7) on the bobbin case. Take the bobbin case out of the machine and use the hook screwdriver to regulate the tension. Turn screw **Z** to the right for a tighter tension, or to the left for a weaker tension.

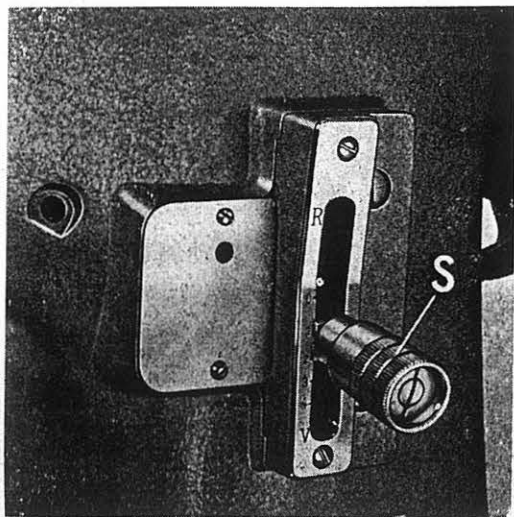
The tension is correct if a noticeable resistance of spring **y** (Fig. 7) has to be overcome when pulling the thread out of the bobbin case.

12. Regulating the Stitch Length

The stitch length is regulated by turning thumb nut **S** (Fig. 14) on the feed regulator lever. Turn the thumb nut right for shorter stitches, or left, for longer stitches.

The numbers on the left of the scale indicate the stitch length in millimeters.

In order to prevent damage to the material, the machine should not be switched to reverse stitching during the binding operation. Operate the reverse feed control only to backtack the end of the seam with 2 or 3 stitches.



R 7768

Fig. 14

13. Regulating the Pressure on the Material

The amount of pressure exerted on the material by the presser foot is regulated by screw **V** (Fig. 4). Turn the screw in for more pressure, or out for less pressure.

The amount of pressure to be exerted by the presser foot must be adapted to the material to be sewn. The pressure is set correctly if the material is advanced through the machine evenly without being injured by the teeth of the feed dog.

14. The Horizontal Rotary Hook

The time-tested System 134 hook features a welcome improvement over the old-type sewing hook in that its gib is secured by only **one** screw (**e** in Fig. 15) instead of the three screws used previously.

The gib can be easily removed for a thorough cleaning of the hook or in case of thread jamming in the hook raceway. Since the hook gib is secured by one screw, and the hook thread guard by three, the two parts cannot possibly be confused.

Since the new hook gib is resilient, the sewing hook will hardly be jammed completely if thread should enter the hook raceway.

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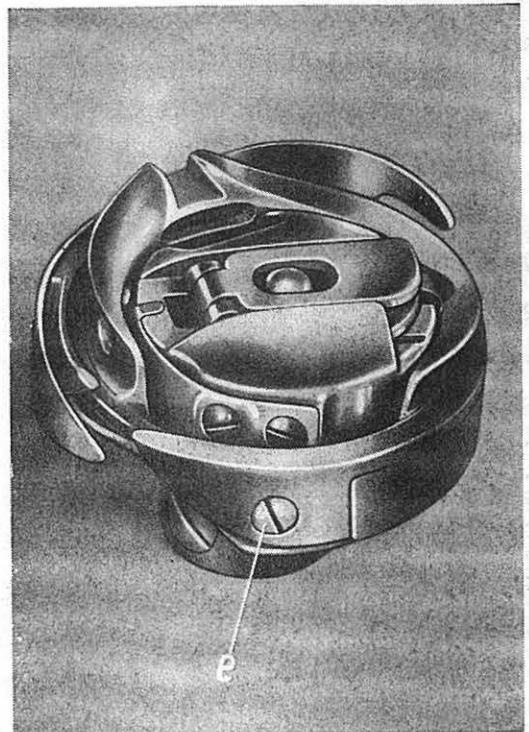


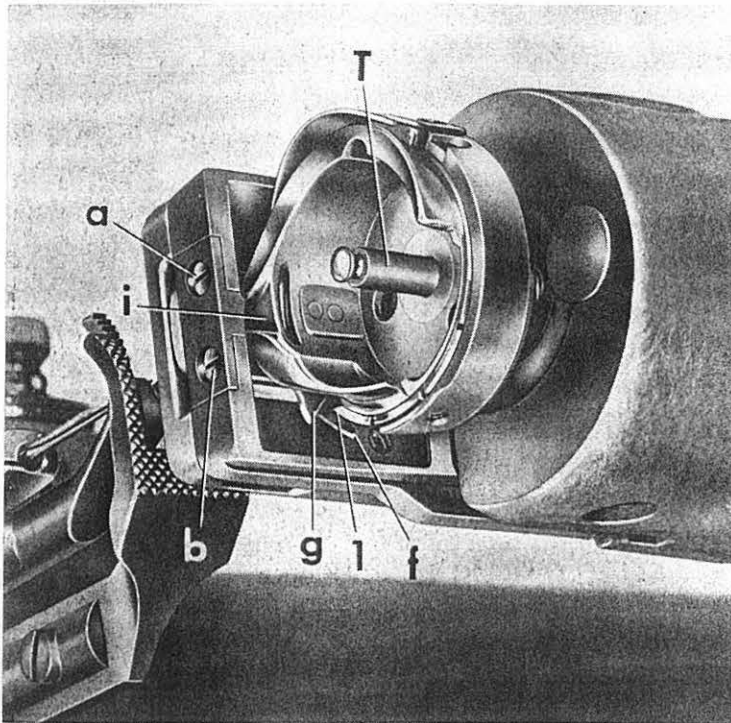
Fig. 15

15. Dismantling the Sewing Hook

Practised operators who have formed the habit of holding the thread ends and of bringing the take-up lever to its highest point when beginning or ending a seam will hardly encounter thread jamming in the hook raceway. Yet, admittedly, there is always an exception to the rule.

If thread should happen to jam in the hook raceway, try to pull it out as you turn the balance wheel back and forth slightly. If this action does not free the jammed thread, dismantle the sewing hook, as instructed below:

1. Tilt the machine back.
2. If the balance wheel can still be turned without applying force, raise needle bar and take-up lever. If not, turn out screws **a** and **b** (Fig. 16) and remove bobbin case position finger.
3. Remove bobbin case cap and bobbin.
4. Loosen set screw **e** (Fig. 15) and remove hook gib.
5. Turn balance wheel until point **1** of the hook raceway is between hook point **g** and point **f** of the thread pull-off flange (Fig. 16). Only in this position can the bobbin case base be removed.



R 7764

Fig. 16

6. Pull out bobbin case base.
7. Clean the hook raceway thoroughly and remove remnants of thread with a pointed wooden instrument, but never with a screwdriver or scissors.
8. Replace bobbin case position finger and bobbin case base, making sure that the bobbin case position finger enters groove *i* in the base.
9. Slide the rear end of hook gib *d* into the small groove, as shown in Fig. 17, and insert and tighten screw *e*.

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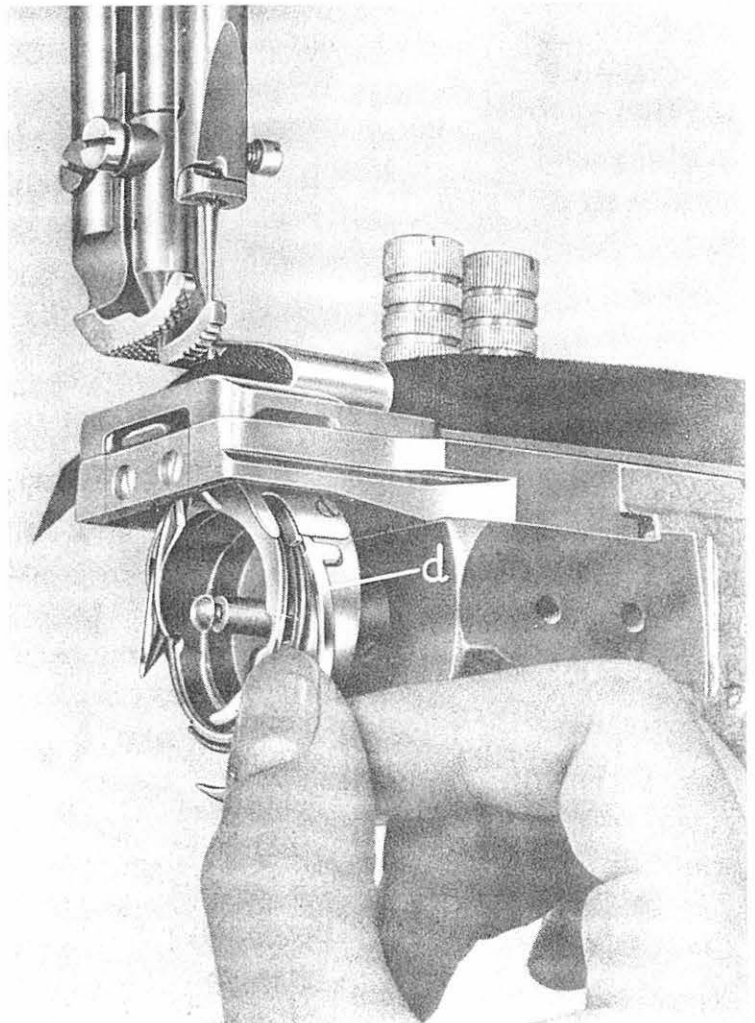


Fig. 17

16. Changing the Vibrating Presser

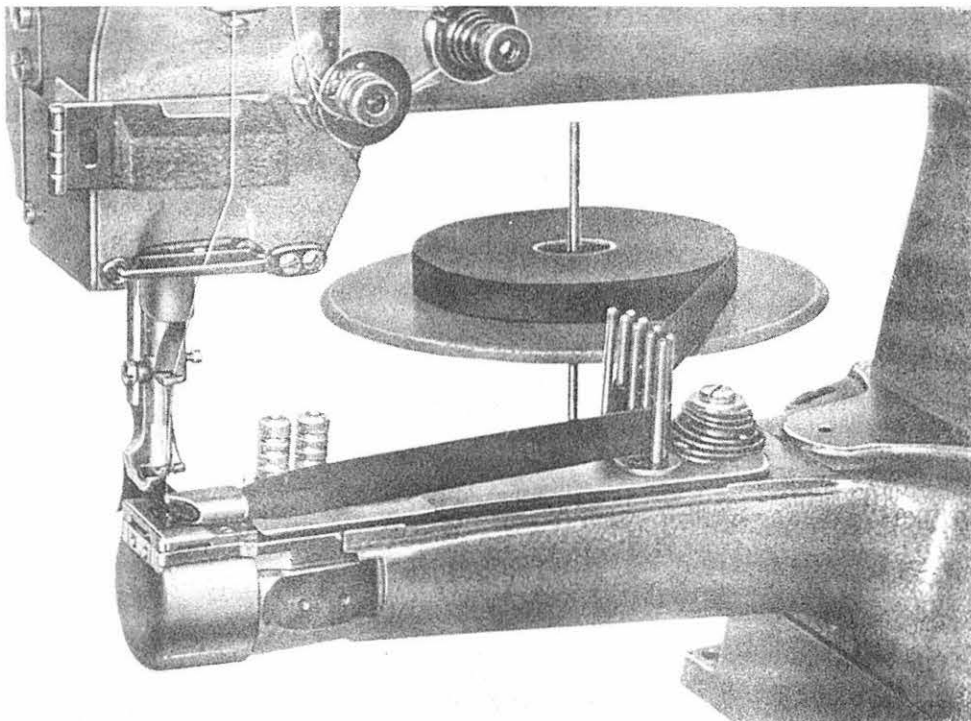
Raise the presser bar lifter and bring the needle bar to its highest point. Loosen screw **b** (Fig. 10) and pull out the vibrating presser, turning it slightly to the right and left.

In replacing the vibrating presser, take care that you push it up as far as it will go and orient it so that the needle is centered correctly in its needle hole. Tighten screw **b** securely.

17. Changing the Lifting Presser

The lifting presser can be removed only when the presser bar is raised. Take out screw **c** (Fig. 10) and pull the lifting presser out of the machine, tilting it back and forth in sewing direction slightly.

In replacing the lifting presser, take care that you push it up as far as it will go. Insert and tighten screw **c** securely.



R 7771

Fig. 18

18. Ordering Attachments

When ordering attachments, such as tape guides and binders, please submit sufficient sample swatches and tape for testing purposes, and state the maximum thickness of fabric to clear the binder (allowing for cross seams, etc.).

A number is stamped on every binder, e. g.

40425 x 10.0 x 3.5

which indicates the part number of the binder (40425), the width of binding accommodated (10.0 = 10.0 mm), and the clearance of the binder lips (3.5) in millimeters.

If the band width varies considerably, it may be necessary to exchange the feed dog, the needle plate and the presser foot as well.

19. Different Subclass Machines

Fig. 19 shows the binding of a shoe upper with the Pfaff 335-17. The machine is fitted with a feed-synchronized binder which pulls the binding from the tape reel after each stitch.

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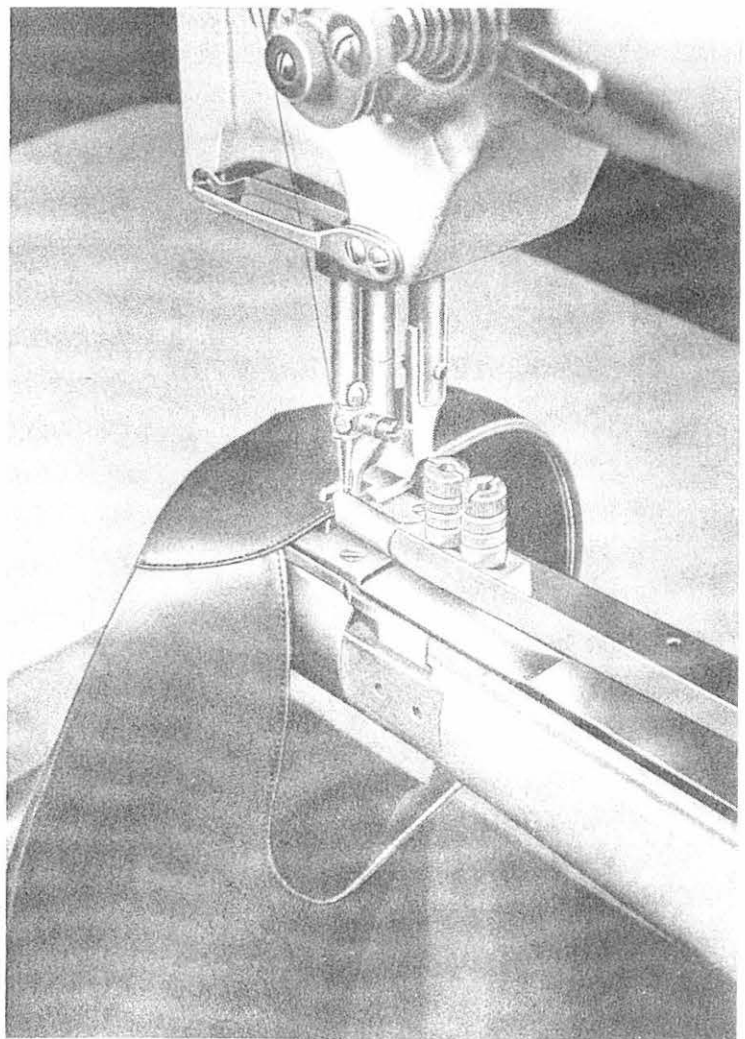


Fig. 19

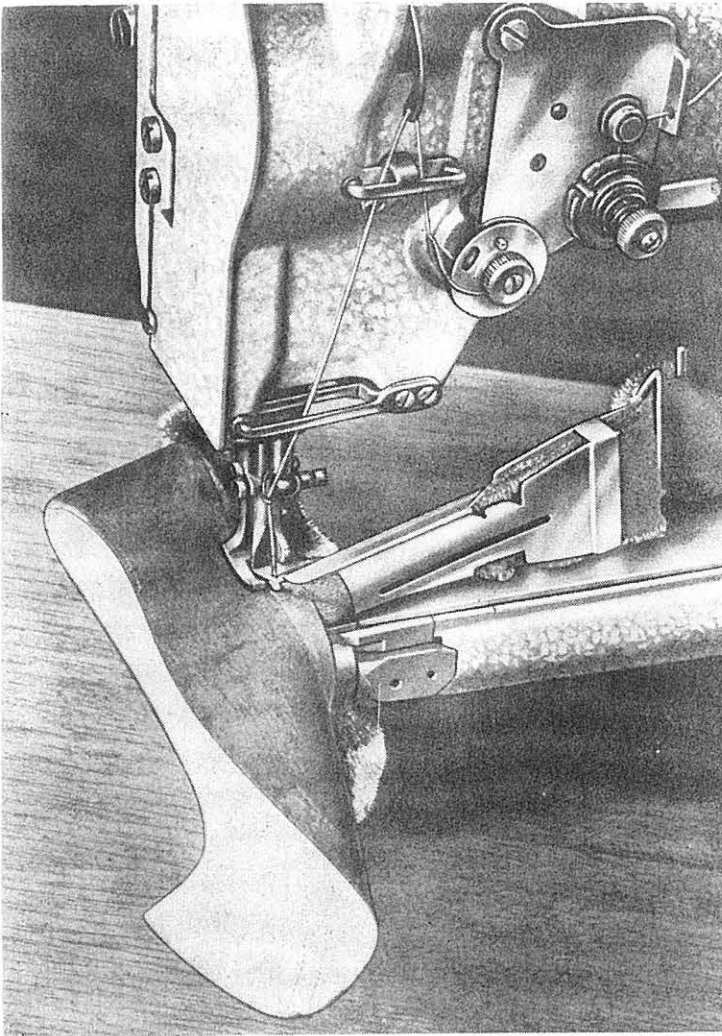


Fig. 20

The **Pfaff 335-39** is fitted with a binder which folds down both edges of the bias binding simultaneously.

The machine shown in Fig. 20 is a **Pfaff 335-39-154** which is used for applying plush or chinchilla binding with torn or cut edges.

With this type binding, the edges are folded down also. The binder and the tape guide are mounted on the feed-synchronized attachment bracket.

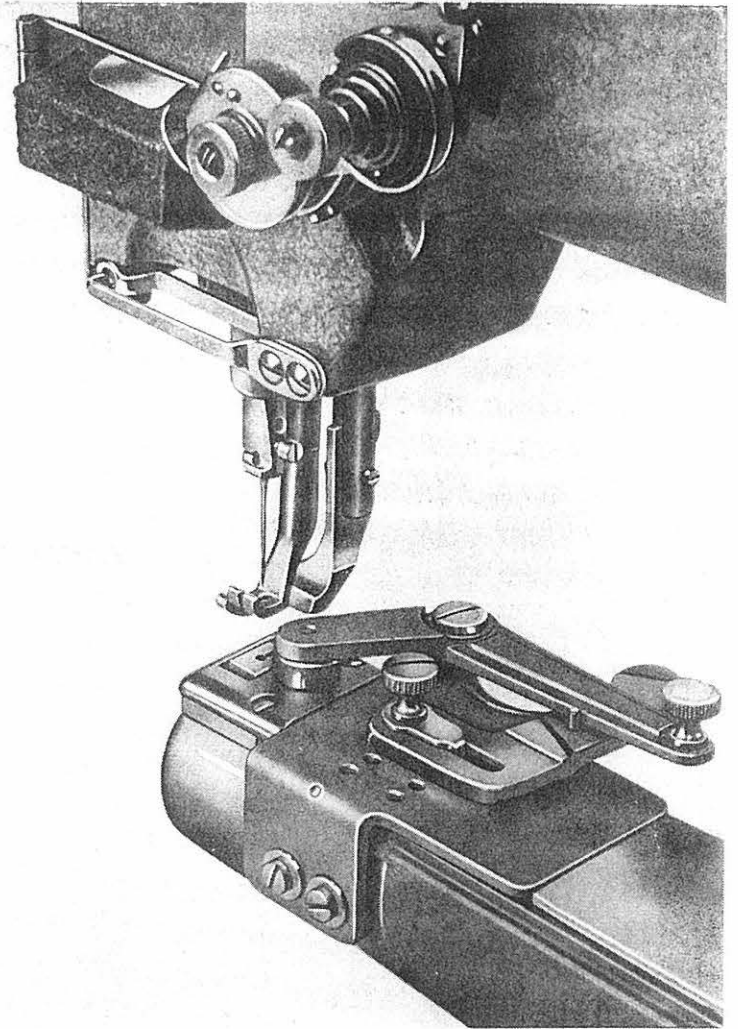


Fig. 21

Like subclass -09 and -09-33 machines, the **Pfaff 335-9** (Fig. 21) is designed to make portfolio work. For this purpose it is fitted with special feet and a swing-away roller guide.

The roller guide is rigidly connected to the attachment bracket and can be moved side-ways to set it to the desired stitching margin (Fig. 21).

If the material is guided free-hand, the roller guide can be swung out. A notch on the bracket prevents the roller guide from being swung in inadvertently.

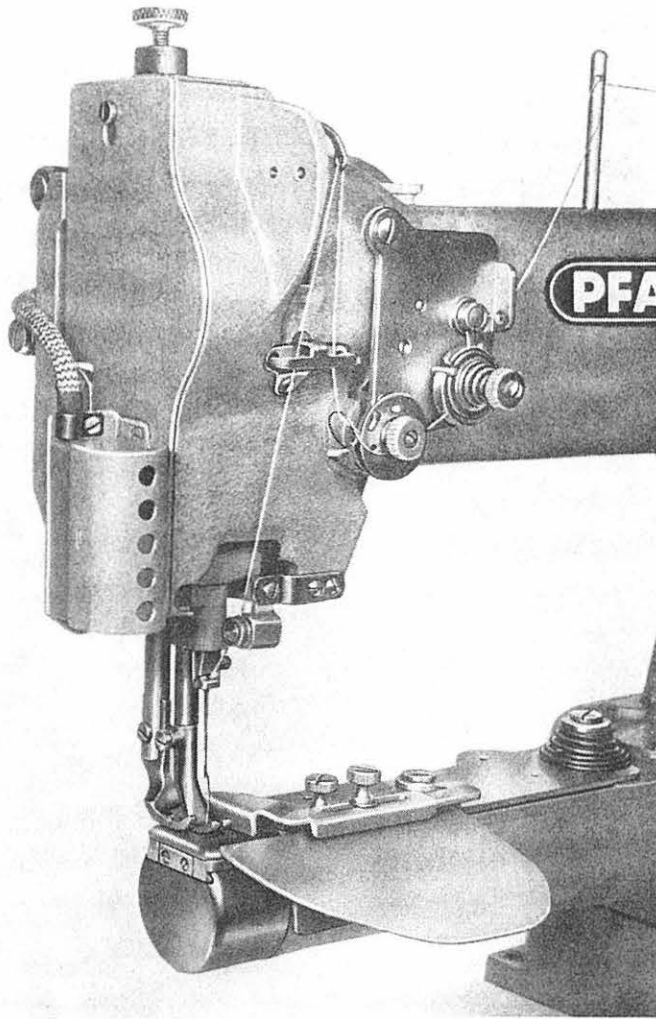


Fig. 22

Special Features of the Pfaff 335-332 X 251

An improved version of the Pfaff 335-132, this machine is specially designed for setting sleeves in overcoats, sackcoats, ladies' suits and similar garments.

On the Pfaff 335-132, the operator had to work in the extra fullness by hand, while on the Pfaff 335-332 X 251 his task is performed by the upper feed accelerator mechanism.

When the knee lever is in its normal position, both the upper and under feed mechanisms operate at the same rate of speed, as set on the feed regulator. The upper feed is accelerated by pressing the knee lever to the right or by operating the left treadle (on specially fitted machines).

An optical acceleration indicator permits to read off the rate of upper feed acceleration at a glance. If all five dots light up (Fig. 22), the upper feed works at its highest speed which then is about 25 per cent faster than that of the under feed.

When the stitch length is reduced, the speed ratio between upper and under feed is reduced accordingly.

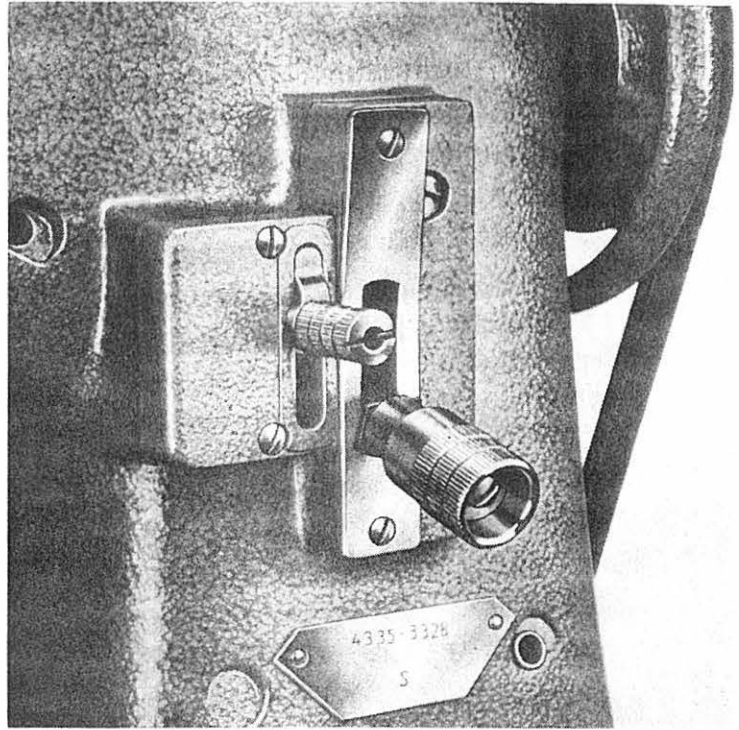


Fig. 23

On the left of the large feed regulator lever there is a small lever with a lock nut which serves to fix the rate of upper feed acceleration (Fig. 23). This device enables the operator to join two plies of fabric with or without gathering. By simply pressing against the knee lever or by actuating the left treadle, the machine is switched from plain sewing to gathering. Since the throw of this lever is limited by the above-mentioned lock nut, the same amount of fullness is worked in at all times.

Fig. 24 is a wiring diagram of the upper feed acceleration control which includes a reed assembly whose contact reeds close a circuit to the individual indicator lamps when the knee lever or the left treadle is pressed.

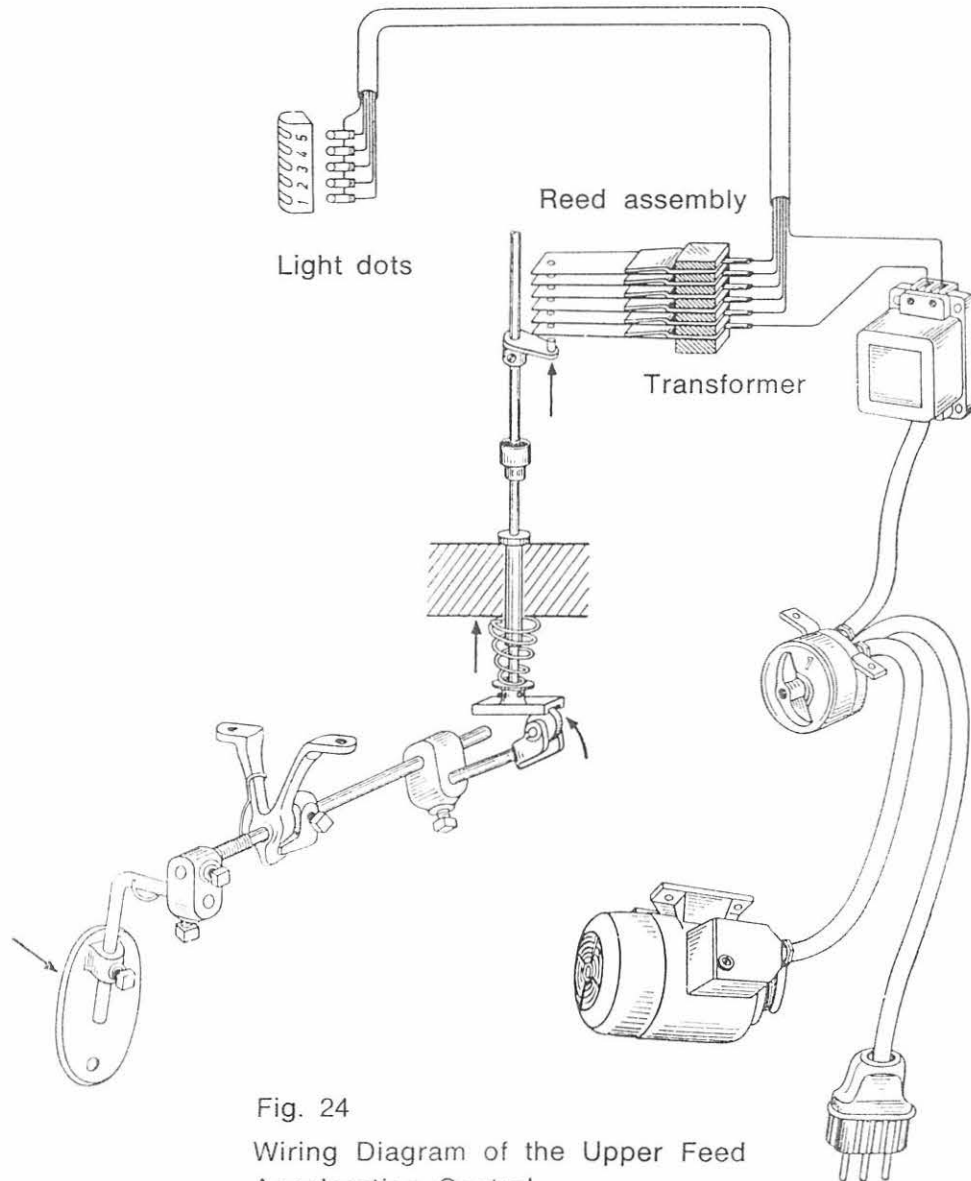


Fig. 24
Wiring Diagram of the Upper Feed
Acceleration Control

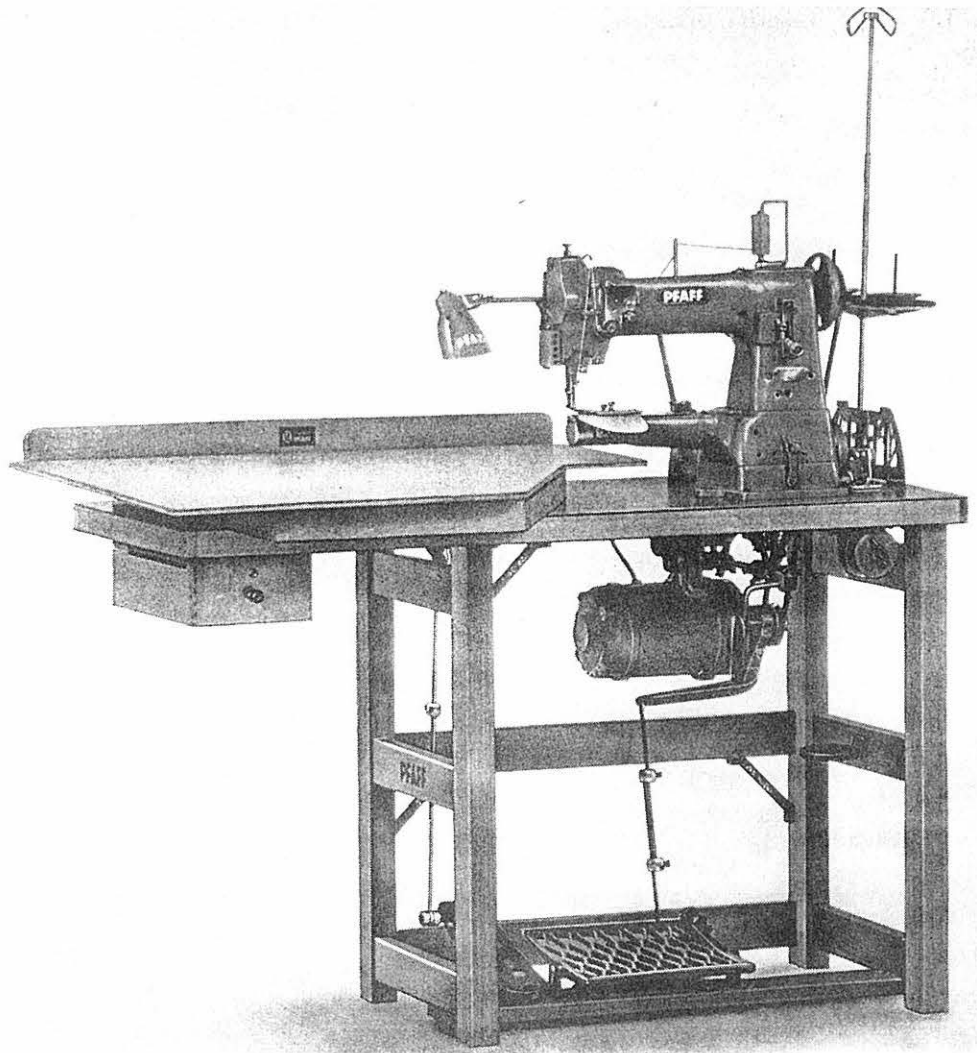


Fig. 25

To facilitate the insertion and the removal of the work piece, the machine is fitted with a small treadle (Fig. 25) which serves to raise the presser foot and may be arranged on the right or left, as desired.

The swing-away edge guide is laterally adjustable and is mounted on a hand rest which is rigidly connected to the cylinder arm.

A detachable work support abets the handling of bulky garments.

20. Trouble Shooting

Machine Skips Stitches

1. Needle incorrectly inserted
2. Wrong needle
3. Needle bent or too fine for the thread used

Thread Breaks

1. Any of the above-mentioned conditions may cause thread breakage
2. Tension too tight
3. Poor or knotty thread used
4. Thread snarled up on spool pin

Faulty Stitch Formation

1. Tension either too tight or too loose
2. Needle and thread sizes do not match. Bobbin thread may be thinner, but not thicker, than needle thread
3. Lint accumulated between tension discs or under bobbin case tension spring

Machine Works Heavily

1. Pieces of thread jammed in hook raceway
2. Mechanism clogged or lack of oil

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