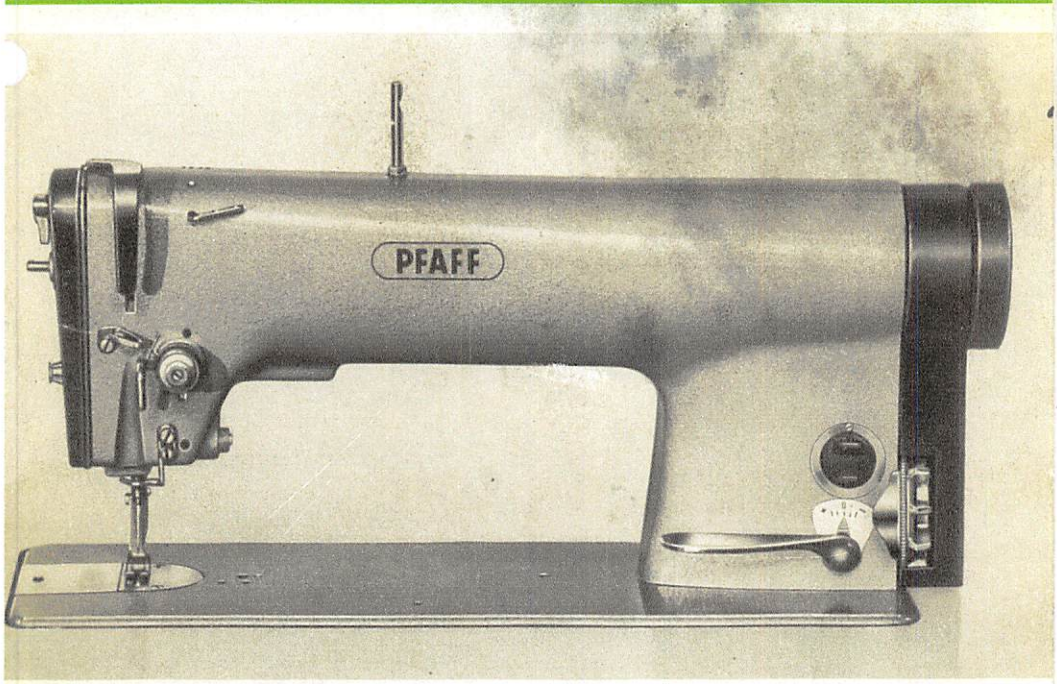
PFAFF®

469



R 8992

Instruction Book

PFAFF® 469

High-Speed Lockstitch
Differential-Feed Sewing Machine

Instruction Book

G·M·PFAFF AG · KAISERSLAUTERN BRANCH

Foreword

The scope of this book is confined to such instructions as are conditioned by variations in the design of the Pfaff 469 high-speed differential-feed sewing machine as compared with other Pfaff high-speed seamers.

An outstanding feature of the Pfaff 469 is the incorporation of sealed-for-life ball and needle bearings in the machine arm and the needle head.

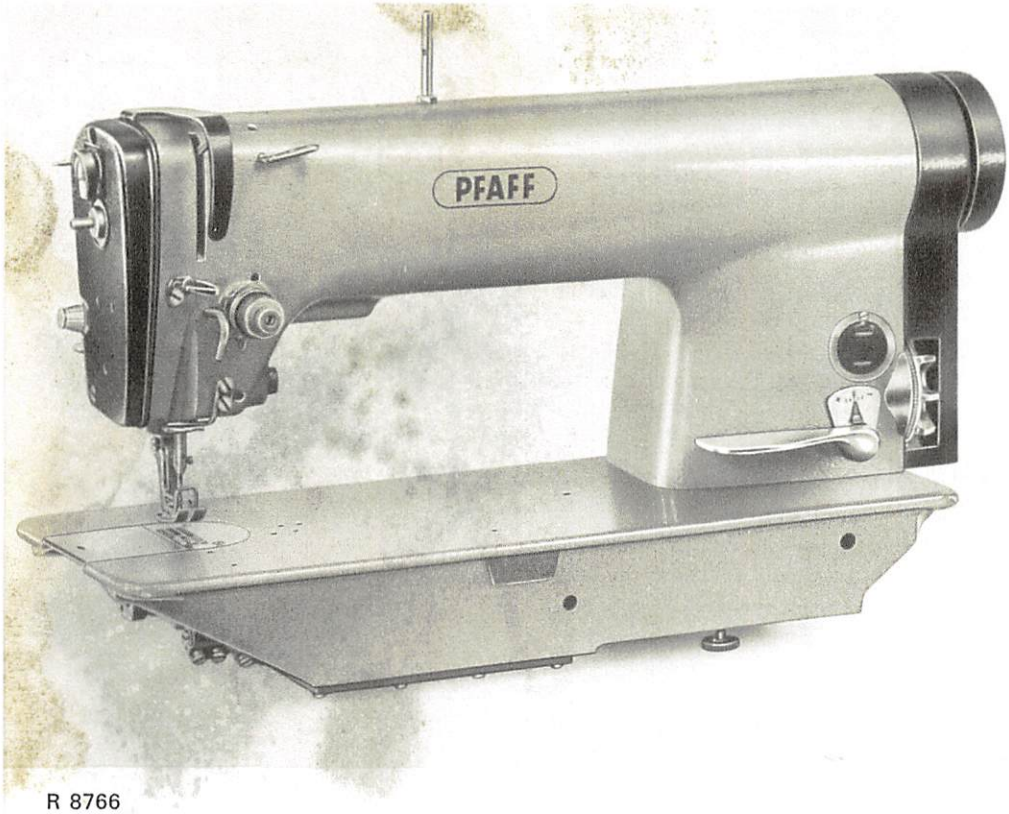
Another salient feature is the arrangement of the feed driving and feed lifting eccentrics on the bottom rather than the arm shaft. The bottom shaft is driven from the arm shaft by a cleated belt and drives the hook shaft by means of helical gears. These driving elements are enclosed in an oiltight gear case and are lubricated by an oil-soaked foam plastic sheet. The assemblies controlling the differential-feed are disposed on two shafts inside and outside the gear case.

The sewing hook is lubricated by means of a gravity lubrication system incorporating a centrifugal switch.

Since the arm shaft is belted to the motor, the machine can be tilted back without removing the V-belt.

Additional features of this new high-speed seamer are a novel stitch length control, separate forward-reverse feed control, built-in bobbin winder and built-in lifting lever.
Operators will like the modern functional design and the stream-lined belt guard which is attached to the machine arm.

G. M. PFAFF AG



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1. Setting Up the Machine

Like all the other models in the new range of high-speed seamers, the Pfaff 469 differential-feed sewing machine can only be set up on a power table fitted with the new rubber hinge bracket and cushion set.

The front corners of the bedplate are face-milled on the underside and rest on matching rubber cushions which are recessed into the tabletop.

At the back, the new-type hinge studs connect the machine with the pins in the two rubber hinge brackets. This mounting prevents the machine from coming in contact with the tabletop.

The machine is carefully balanced and causes practically no vibration. Whatever vibration there is will be absorbed almost completely by the rubber hinge brackets.

2. Mounting the V-Belt

The machine are shipped with the belt guard removed. To mount the V-belt, lift the sewing head slightly and place the belt on the machine and motor pulleys.

Both belt guard sections are secured to the arm standard by inserting screw **d** through hole **b3** and spacing sleeve **c** in the rear section into screwhole **d1** in the machine base and tightening it securely.

Slightly turn out screws **a1** and **a2** (Fig. 1) and push the two belt guard sections together, holding them close to the machine so that the above screws enter the appropriate slots in the back wall of the belt guard.

To tighten the screws, insert the screwdriver through openings **b1** and **b2** (Fig. 2).

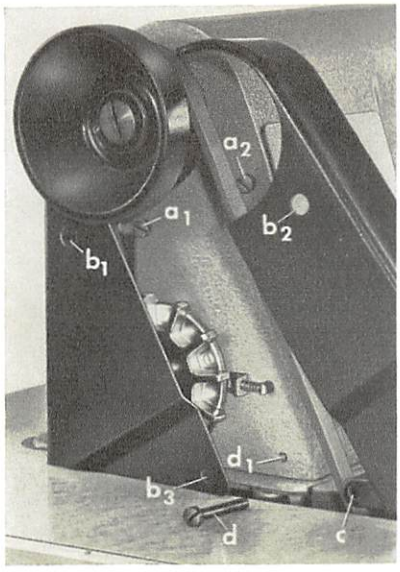
3. Test-Running the Machine

Before you test-run the machine, carefully remove all dirt which may have accumulated in transit. Be sure to use only a brush and a cleaning rag for this purpose.

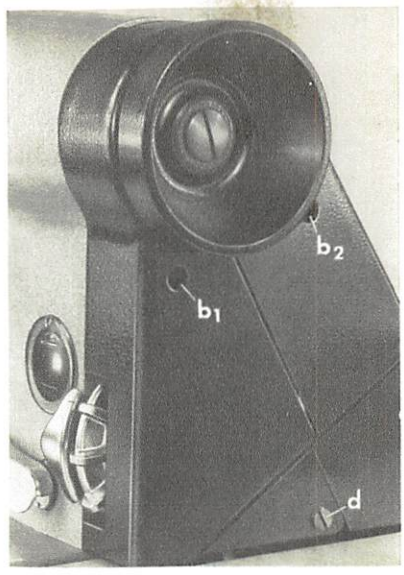
The Pfaff 469 must never be rinsed or cleaned with kerosene because there is a danger that the cleaning fluid enters the sealed-for-life bearings and dissolves the grease. For the same reason, kerosene or gasoline must not be used for the regular cleaning of the machine.

Never attempt to eliminate hard working of the machine by squirting oil freely into the bearings which you believe to be responsible for this fault. If oil enters the sealed-for-life bearings, the grease will be thinned and flung out of the bearing, thus rendering permanent lubrication ineffective.

R 9145 Fig. 1



R 9144 Fig. 2



4. Winding the Bobbin

The new high-speed seamer is fitted with a bobbin winder which is incorporated in the face cover rather than mounted at the balance-wheel end of the machine, as was customary previously (Fig. 5). Arranged at a convenient height, it is easy to operate and enables the operator to wind bobbins quickly and neatly.

The bobbin winder driving motion emanates from the take-up crank. When the bobbin winder is engaged, driving crank **F** at the rear end of spindle **17** is pushed into the circular path of stud **K** which engages the crank and, in this way, drives the bobbin winder (Fig. 3). The bobbin winder spindle is carried in a self-lubricating sintermetal bearing which requires no additional lubrication.

To engage the bobbin winder, simply depress stop latch **a** located above the bobbin winder spindle (Fig. 4). This action causes the spindle to shift slightly to the right in which position it is retained until a sufficient amount of thread has been wound on the bobbin. The thread wound on the bobbin pushes the cam up and thereby stops the bobbin winder. The amount of thread to be wound on the bobbin can be regulated by loosening screw **b** and setting cam **a** higher or lower, as may be required. Set the cam higher for more thread, or lower for less thread.

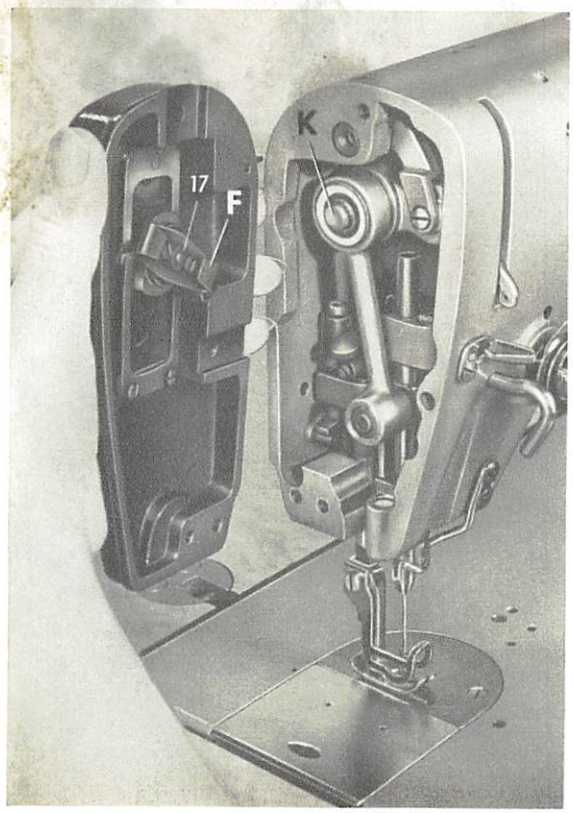


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Fig. 3

Fig. 4 shows how to thread the machine for bobbin winding. Place the spool of thread on the right-hand spool pin of the thread stand. Lead the thread from spool **1a** (Fig. 4) up and through the top thread guide of the thread stand, down and through thread guides **12, 13** and **14,** clockwise around thread tension **15** and to bobbin **16.**

It is recommended to take the thread after it has been pulled through thread guide **14** and wind a few turns on the bobbin, then lead it clockwise around thread tension **15** and place the bobbin on spindle **17.**

Depending on the type of thread used, it should be wound on the bobbin tighter or looser. The thread tension is regulated by turning thumb nut **18** back of the tension discs (Fig. 4). Turn this nut clockwise for a looser tension, or counter-clockwise for a tighter tension.

If the thread should pile up at one end of the bobbin, adjust the position of the tension stud. The set screw which secures this stud in position can be reached from below.

Whenever you have removed an empty bobbin from the machine, wind a few turns of thread on it, place it on the bobbin winder spindle and start the winder.

It is a waste of time to work with a single bobbin or a single spool of thread because this requires an additional unthreading and threading of the needle, and you cannot sew while winding the bobbin.

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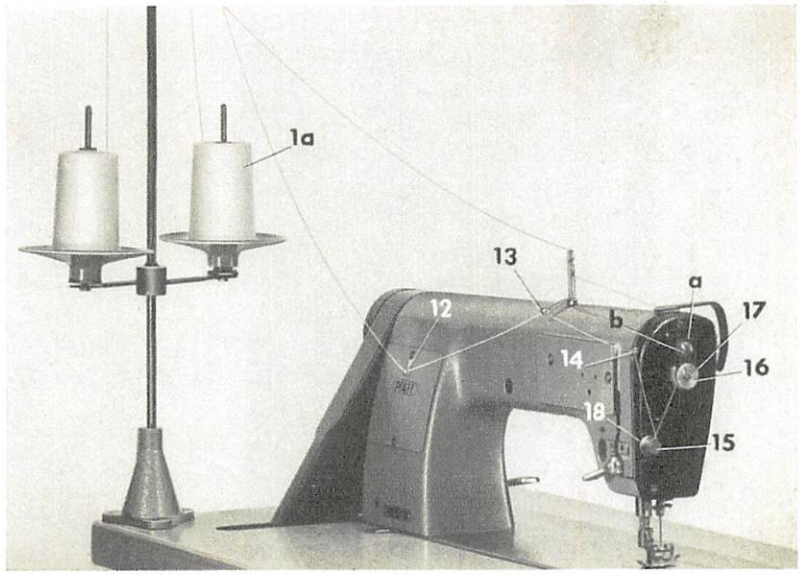

Fig. 4

5. Threading the Needle

Because of the high speed of this machine, it is particularly important that the thread passes to the needle smoothly.

Lead the thread from spool **1** up to the top thread guide of the thread stand and down to thread guide **2.** It is recommended to pass the thread first through the vertical hole from top to bottom and then through the transverse hole of the guide, as shown in Figs. 5 and 5a, in order to prevent it from snarling up on the guide and breaking.

Now lead the thread through all three holes of thread retainer **3** (from top to bottom), clockwise around and between tension discs **4,** through thread check spring **5,** under slack thread regulator **6,** through thread guide **7,** from right to left through the hole in take-up lever **8,** through thread guides **7, 9** and **10,** and from left to right through needle eye **11.**

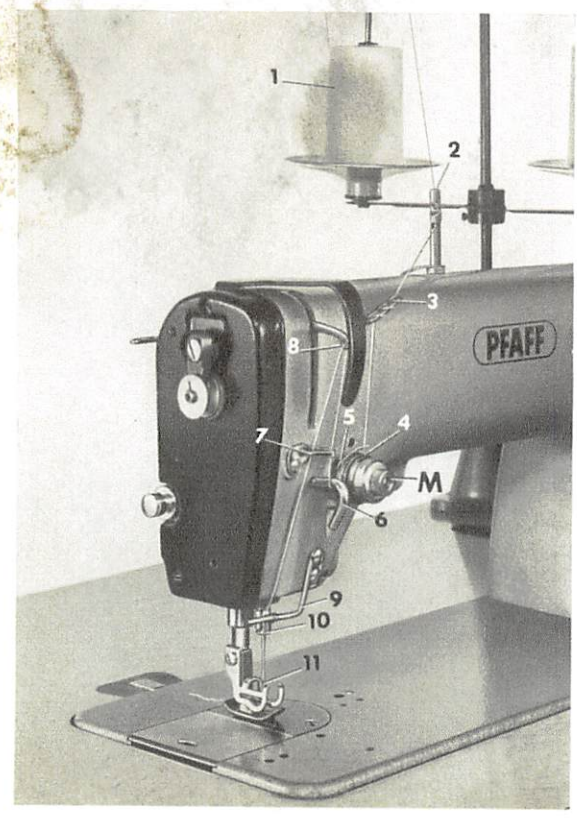

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Fig. 5

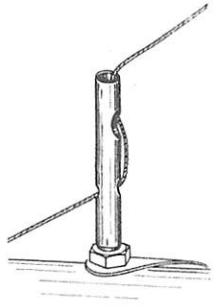


Fig. 5a

6. Regulating the Stitch Length

Two separate controls serve to regulate the length of stitch and reverse the direction of feed. The large diameter of stitch length control **St** makes for an exceedingly fine stitch length regulation. When this control is turned by one tooth, the stitch length is increased or decreased by $^1/_{64}$", or 0.5 mm. The stitch lengths from 0 to 5½ stitches per inch are marked on the teeth of the stitch length control in millimeters (Fig. 6).

In order to avoid that the stitch length setting will be disturbed while sewing, stitch length control **St** is secured in position by a locking lever marked **Sp** in Fig. 6. This lever must be pushed back slightly when setting the stitch length.

Finger-tip control **T** serves to reverse the direction of feed and is operated for backtacking. When lever **T** is pressed down, the machine will sew in reverse, making stitches of the length set. When lever **T** is released, the direction of feed is instantly reversed by spring action and the machine will resume forward stitching.

If desired, the machine can be fitted with a second treadle for switching from forward to backward sewing.

7. Regulating the Pressure on the Material

A powerful flat spring in the machine arm exerts the necessary pressure on the sewing foot. The amount of pressure is regulated by turning a small set screw which can be reached by inserting a screwdriver through hole **19** on the right of the spool pin (Fig. 6a). Turn the screw in for more pressure, or out for less pressure.

Fig. 6 R 9386

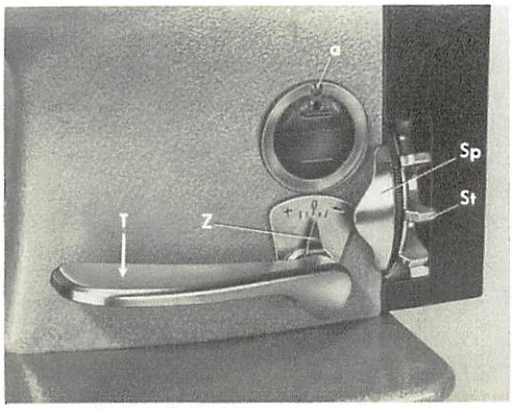
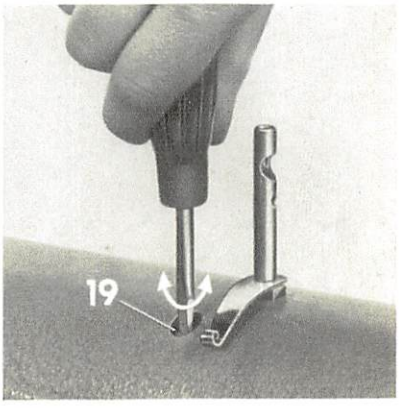


Fig. 6a R 9147



8. Lifting the Presser Bar

Since the arm standard has been set closer to the rear edge of the bedplate, the presser bar lifting mechanism could be enclosed in the machine arm so that it is not visible on the outside. To mount the knee lever, push it over the lower end of vertical shaft **r** under the tabletop. The lever is held in place by angular bracket **s** which snaps into place after transverse pin **u** has entered cutouts **t** in right-angled coupling sleeve **q** (Fig. 7). When the coupling sleeve is pushed onto the end of the shaft, resilient bracket **s** must be compressed to open it slightly (see Fig. 7).

Motion is transmitted from the vertical shaft to the presser foot by means of a crank, a connection and a bellcrank lever which raises the presser foot. A small hand lever **C** (Fig. 9) serves to lock the presser foot in its highest position. This lever is flicked to the left to retain the presser foot after it has been raised by knee action.

To facilitate tilting the sewing head back without removing the knee lever completely, the knee lever rock shaft is no longer screwed to the angular sleeve, but rather held in place by a spring-loaded pin **V** (Fig. 7). As a result, the knee lever can be pulled forward off its shaft with a jerk.

A new feature of this knee lever is a hinged knee plate fitted with a foam plastic pad which is contoured to hug the operator's knee.

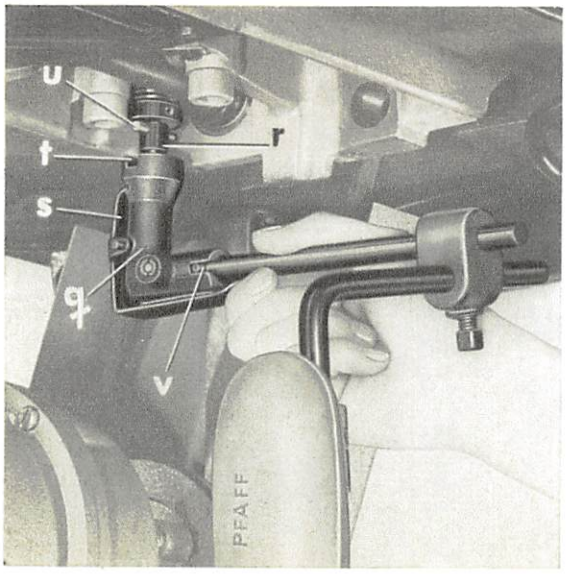


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Fig. 7

9. Lubrication

Recent advances in the design of needle bearings have made it possible to ensure a satisfactory permanent lubrication of this machine without the incorporation of an automatic lubrication system.

Thanks to the incorporation of sealed-for-life bearings, the machine does not have to have an oiltight base so that various feed mechanisms and special attachments can be easily installed, a feature which opens up a practically unlimited field of applications to this high-speed sewing machine.

With all essential points of friction having been fitted with sealed-for-life ball and needle bearings, there is no need to provide a gravity lubrication system, except for the sewing hook. The oil reservoir of the hook lubrication system is located in the machine arm and supplies oil to the sewing hook through a plastic tube. The oil flow is controlled by shut-off valve **V** which is opened by centrifugal switch **F** on the hook shaft when the machine is running, and closed when it stops, thus preventing any oil leakage (Fig. 10).

The oil level in the reservoir of the hook lubrication system can be inspected through the oil sight glass. If it is below the mark on the oil sight glass, top up the reservoir by inserting the spout of an ordinary oil can into the small hole above the oil sight glass. The flow of oil to the sewing hook, in addition, can be regulated by screw **w** (Fig. 8) to suit different operational requirements. Turn this screw in for less oil, or out for more oil.

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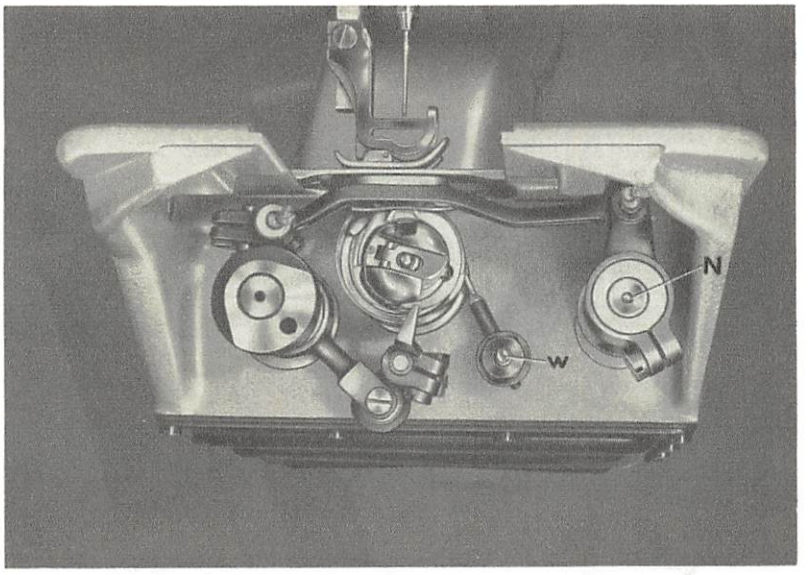

Fig. 8

The correct setting for normal operation can be determined by a simple test, as follows: Remove needle plate and feed dog and place a sheet of paper over the opening. Then run the machine for about ten seconds at top speed. The setting is correct if two thin lines of spray oil appear on the paper.

In contrast to the sealed-for-life ball and needle bearings in the needle head which must never be oiled, take-up lever link z is lubricated by a wick which is enclosed in an oil tube and is soaked with oil from the hook oil reservoir (Fig. 9).

To oil the needle bar bearings, put a few drops of oil into the foam-plastic-lined oil dents x and y on the upper and lower needle bar bushings (Fig. 9). This should be done rather frequently during the first few weeks of operation. Occasionally, also apply some oil to the presser bar.

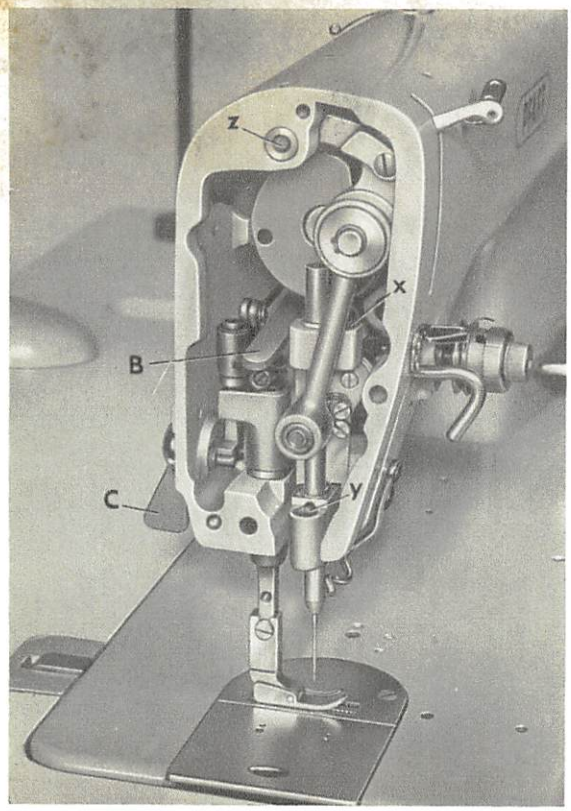

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Fig. 9

Pressure on the material is exerted by flat spring **B**. After the presser foot has been raised by knee action, it is retained in this position by lever **C**.

The feed driving and feed regulating mechanisms as well as the hook shaft driving gears in the gear case are lubricated by two oil-soaked foam plastic sheets (pad lubrication).
Oil has to be changed only once a year. To do this, tilt the machine back and unscrew the gear case cover.

If the foam plastic sheets are to be re-used, they should first be washed in gasoline in order to remove the metal grit which has accumulated on them.

In most instances, however, it will be better to replace the old foam plastic sheets by new ones which may be ordered by Nos. 91-069299-05 and 91-069302-05. These new sheets must be well soaked with sewing machine oil (2.7°E/50°C), Order No. 280-1-120110, the same that is used in the hook lubrication system.

To soak both sheets thoroughly requires about 4 fl. oz., or 130 cu. cm., of oil.

When replacing the foam plastic sheets, make sure they fit properly and the large spur gear runs freely in the cutout of the large sheet. As you replace the gear case cover, check to see that the gasket is not defective and make sure you tighten all screws evenly in order to prevent oil from seeping out.

The oscillating feed rock shaft is grease-lubricated. Grease is replenished through nipple **N** at the left end of the shaft (Fig. 10).

Note

When filling the hook oil reservoir or topping it up, take care that no air bubbles remain in the oil tube leading to shut-off valve **V** (Fig. 10) because this would interrupt the flow of oil. If an air bubble should nevertheless have formed ahead of shut-off valve **V**, pull the oil tube off the shut-off valve nipple, hold its end up so that the air bubble rises to the surface. Cautiously replace the oil tube on the nipple, making sure no air is trapped in it.

An air bubble which may have formed in the short section of the oil tube is immaterial because it can escape through oil flow regulating valve **w** (Fig. 10).

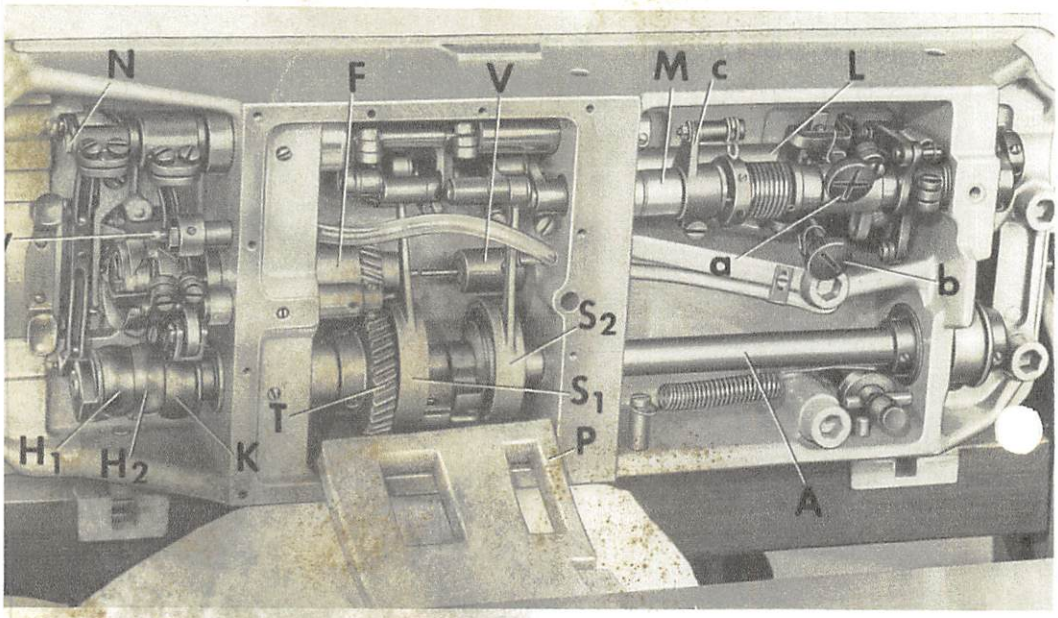

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Fig. 10

The gear case cover and foam-plastic sheet **P** are removed. To absorb dripping oil, place a cellucotton pad under the machine. Bottom drive shaft **A** carries both feed driving eccentrics **S1** and **S2** and hook shaft driving gear **T** in the gear case, and feed lifting eccentrics **H1** and **H2** as well as bobbin case opener eccentric **K** near its left end. The hook shaft carries centrifugal switch **F** whose stud pushes the valve stem to the right when the machine is in operation, thereby opening hook lubrication shut-off valve **V**. When in its inoperative position, the valve stem should be positioned $^1/_{16}$", or 1.5 mm, from the stud. The valve prevents the oil from seeping out when the machine is not in operation.

The stitch length setting of the front feed dog is transmitted to shaft **L**, the left crank mechanism in the gear case, the inner feed rock shaft, and the left adjustable crank which, in turn, transmits it to the left feed bar.

The stroke of the back feed dog is varied by means of two large thumb screws, **a** and **b**, on shaft **M** and lever **c** which connects with the treadle chain. This lever varies the stroke of the right feed bar by means of the right crank mechanism in the gear case.

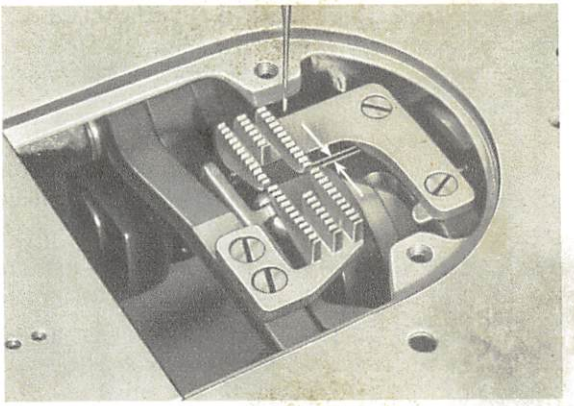

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Fig. 11

The clearance between both feed dogs is smallest when the differential feed is disengaged or when both feed dogs are at the beginning or end of their strokes in stretching and gathering, respectively.

10. Differential Feed

In order to produce durable seams or prevent seam puckering, the sewing industry frequently employs machines fitted with differential feed which can be set to gather or stretch the fabric while sewing.

To this end, the Pfaff 469 is equipped with two feed dogs arranged in tandem. For ordinary sewing, both feed dogs are set so that their length of travel is the same. If they are set to move differentially, the machine gathers or stretches.

The Pfaff 469 is set for ordinary sewing, gathering or stretching by turning the two large thumb screws **a** and **b** below the bedplate (Fig. 10).

11. Setting the Machine for Ordinary Sewing

To set both feed dogs so that their length of travel is the same, turn in thumb screws **a** and **b** as far as they will go. Set the stitch length control on "0" and check to see that crank **c**, which connects with the treadle pitman, is in its horizontal position. To double-check this setting, watch the feed motion and check whether both feed dogs rise and fall exactly perpendicularly. If adjustment is required, turn both thumb screws in or out, as may be required.

The machine can now be set for any desired stitch length without disturbing the relative positions of the feed dogs.

12. Setting the Machine for Gathering

To produce a gathering effect, the stroke of the front feed dog must be longer than the stroke of the rear feed dog. This is accomplished by turning out thumb screw **a** (Fig. 10).

The differential feed motion is controlled by a small treadle. The harder this treadle is depressed, the longer the stroke of the front feed dog will be and the more the fabric will be gathered.

For gathering, the stitches must not be set too long because the stroke of the front feed dog is dependent on the stitch length set, i.e. the amount of gathering decreases as the stitch length increases. How far thumb screw **a** has to be turned out for the amount of gathering desired can be easily determined by a few test runs.

Each thumb screw has two flat spots on its threaded stud which are engaged by a spring. This spring secures the screw in position and prevents it from turning as a result of machine vibration. In addition, this spring makes it easier to cound the number of turns when turning the screw in or out for adjustment.

When the small treadle is released, both feed dogs again move forward in unison. As a result, the machine ceases gathering and resumes ordinary sewing, making stitches of the length set.

If the machine is to be used for continuous gathering, its setting can be fixed by turning in thumb screw **b** (Fig. 10) as far as it will go. This eliminates the necessity of keeping the small treadle depressed all the time.

13. Setting the Machine for Stretching

To convert the Pfaff 469 from gathering to stretching, or vice versa, requires no exchanging or interchanging of feed dogs.

Begin by turning thumb screw **a** in as far as it will go so that both feed dogs move forward in unison and their length of travel corresponds to the stitch length set.

For stretching, the stroke of the front feed dog must be shorter than the stroke of the rear feed dog so that the former retains the material slightly while the latter advances it in accordance with the stitch length set. The amount of stretching is regulated by turning thumb screw **b** out, as appropriate. To establish the correct relationship between both feeding motions requires but little practice.

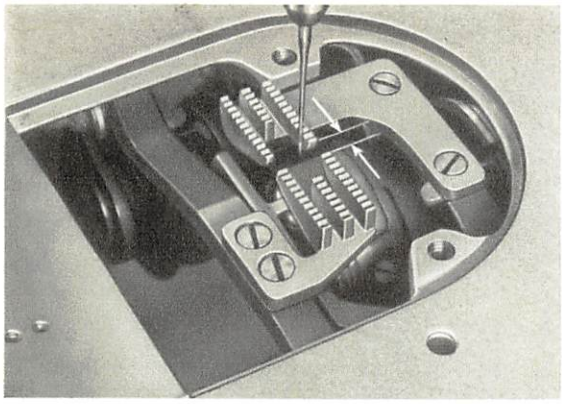

Fig. 12

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The clearance between both feed dogs is largest when both feed dogs are at the beginning or end of their strokes in gathering and stretching, respectively.

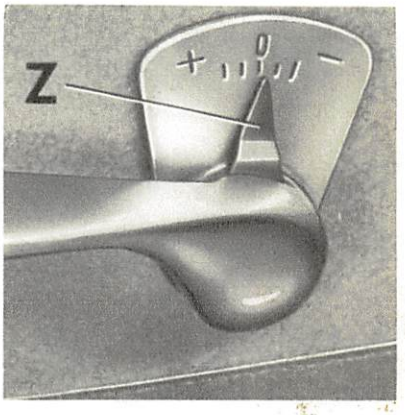


Fig. 13

R 8770 A

When setting the machine for stretching, care must be taken that thumb screw **b** is not turned out beyond the point at which the front feed dog begins to feed in reverse.

Setting the machine for a longer stitch will automatically increase the amount of stretching.

The maximum amount of stretching will be obtained by setting the rear feed dog for its longest forward stroke and turning out thumb nut **b** to set the front feed dog for its maximum backward stroke.

When the machine is set for stretching, depressing the small treadle will decrease the amount of stretching and switch the machine to ordinary sewing. The operator can thus reduce the amount of stretching, as desired, or eliminate stretching altogether.

14. Setting the Machine for Alternate Gathering and Stretching

After turning thumb screws **a** and **b** out as far as they will go, practised operators will be able to stretch and gather the fabric alternately while sewing.

If you start sewing with this setting and without actuating the small treadle, the fabric will be stretched more or less, depending on the stitch length set. The more you depress the treadle, the more the amount of stretching will be reduced until the machine changes over to ordinary sewing and then to gathering. The maximum amount of gathering is obtained when the treadle is pressed down as far as it will go.

Changing over from gathering to stretching and vice versa by simply pressing the treadle down more or less requires a great deal of skill on the part of the operator. Most operators will therefore prefer to set the desired amount of gathering or stretching by turning the regulating screws in or out, as may be required.

A scale and a pointer are provided on the arm standard as a visual aid in setting the differential feed. Pointer **Z** indicates the amount of gathering or stretching on the scale. The graduations from 0 to + indicate the amount of gathering, while the graduations between 0 and — indicate the amount of stretching. The graduation marks on the scale enable the operator to restore any desired setting without having to sew a trial seam first (Fig. 13).

15. Varieties

To suit different operational requirements, the Pfaff 469 can be easily converted into the following varieties by exchanging its organizational parts.

Model	Needle Hole Dia. in mm	Max. Stitch Length in s.p.m.	Machine Speed in r.p.m.	Motor Pulley		Needle Size in 1/100 mm	Needle System
				Dia** in mm	Order No.		
*A (1.0)	1.0	7	5000	118	16-437120-55	60	134
*A	1.2	7	5000	118	16-437120-55	70	134
*A (1.4)	1.4	7	5000	118	16-437120-55	80	134
B	1.6	5½	4800	112	16-437110-55	90–100	134
B (1.8)	1.8	5½	4800	112	16-437110-55	100–110	134
C (2.0)	2.0	5½	4300	100	16-437090-55	120	134
C	2.2	5½	4300	100	16-437090-55	140	134

*) If desired, fitted with Needle System 133.
**) Primarily intended for stretching.
***) dm = mean diameter.

16. The Pfaff 469-431

A trimming machine organized with differential feed, the Pfaff 469-431 occupies a prominent position among the subclasses of the Pfaff 469.

The vertical trimmer is arranged to the right of the needle and produces a clean cut, regardless whether the machine is set for ordinary sewing, gathering or stretching.

The knife driving mechanism is arranged at the back of the machine arm. The knife driving motion emanates from an eccentric on the arm shaft and is transmitted to the knife holder bracket via a connection, an oscillating frame, a crank and a ball-joint connection. The knife holder bracket moves up and down on a post.

Thanks to its favorable kinematical design and its pad and reservoir lubrication, the trimming mechanism is capable of paring the edge of the fabric while the machine operates at top speed. The trimmer is engaged and disengaged by operating a lever which is arranged within easy reach of the operator and protrudes from under the machine arm. When this lever is actuated, its rear end, via a link, rotates the knife engaging shaft. A cam secured on this shaft operates a locking latch which keeps the knife engaging lever engaged in either one of two notches in the engaging shaft flange.

The trimming margin, i.e. the distance from the trimmed edge to the line of stitching, is predetermined and can only be changed by replacing the needle plate insert.

Setting the knife higher or lower is accomplished by shortening or lengthening the drive connection. The setting is correct if the upper end of the cutting edge is about $^{1}/_{32}$", or 1.0 mm, below the cutting edge of the stationary knife when the top knife is at the lowest point of its stroke.

Attached to the knife holder by means of a shim previously, the knife is now secured in place by adjustable jaws, but must still be pushed up as far as it will go.

The knife holder can be adjusted lengthwise and crosswise.

The only time the knife holder has to be adjusted is after the needle plate insert has been exchanged to obtain a different trimming margin.

To do this, engage the trimming mechanism and rotate the balance wheel until the knife is at the lowest point of its stroke. Loosen the two set screws on the front of the knife holder and adjust the latter so that the knife contacts the stationary knife on the needle plate insert. Tighten both screws securely. Make sure the knife is set correctly lengthwise. Its lengthwise setting is correct if it is centered in the needle plate cutout. To adjust, loosen the screw on the right-hand side of the knife holder and move the knife forward or backward, as may be required. After the adjustment, tighten this screw securely.

Needle plate inserts are available for trimming margins ranging from about $^{3}/_{32}$" to $^{9}/_{32}$" (2.5–7.0 mm) in steps of about $^{1}/_{64}$", or 0.5 mm. On special request, subclass -431/2 and -431/4 machines can be supplied for trimming margins ranging from about $^{5}/_{16}$" to $^{15}/_{32}$" (8.0–12.0 mm) in steps of about $^{3}/_{64}$", or 1.0 mm.

Upper and lower knives (the latter incorporated in the needle plate insert) are available in the following varieties:

Subclass -431/1	Tool-steel top knife and tool-steel needle plate insert with cutting edge
Subclass -431/2	Tool-steel top knife and carbide-edged needle plate insert
Subclass -431/3	Carbide-edged top knife and tool-steel needle plate insert with cutting edge
Subclass -431/4	Carbide-edged top knife and carbide-edged needle plate insert

Unless specified otherwise on the order, subclass -431 machines will be supplied in version /4 fitted with a carbide-edged top knife and needle plate insert. This version is rated very highly because both the top knife and the needle plate insert retain an exceptionally keen cutting edge even when put to hard use. In this case, Model A and B machines will be fitted for a trimming margin of $^{1}/_{8}$", or 3.0 mm, and Model C machines for $^{5}/_{32}$", or 4.0 mm, these margins being the most customary.

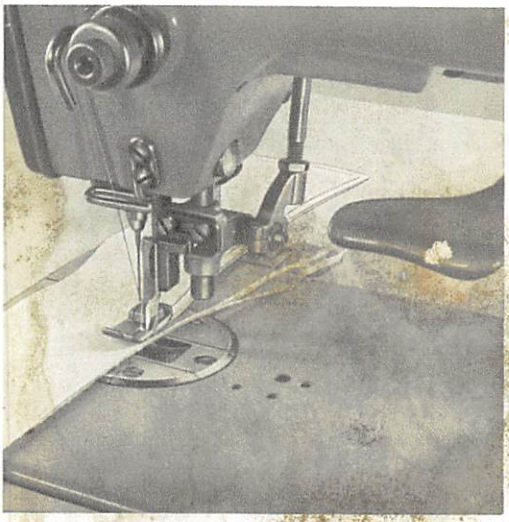


Fig. 14 R 9003

Employed for the simultaneous stitching and trimming of collars and cuffs previous to turning over. Ideally suited for the production of shirts, blouses, etc.

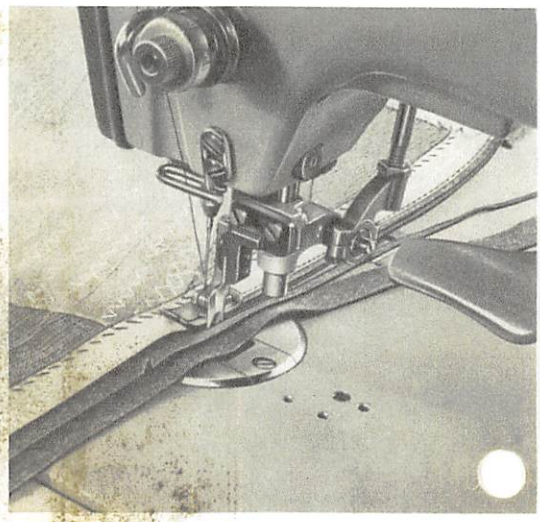


Fig. 15 R 8973

Stitching and trimming the front edge of a sackcoat previous to turning over. The edge tape is attached simultaneously.

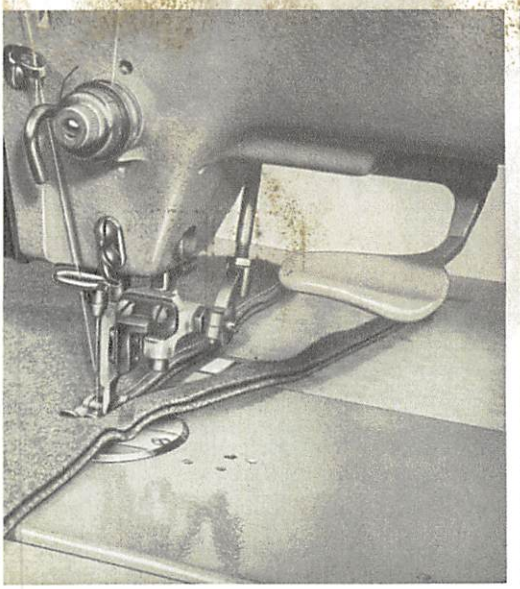


Fig. 16 R 8999

The knife actuating lever has a handy plate which protrudes from under the machine arm.

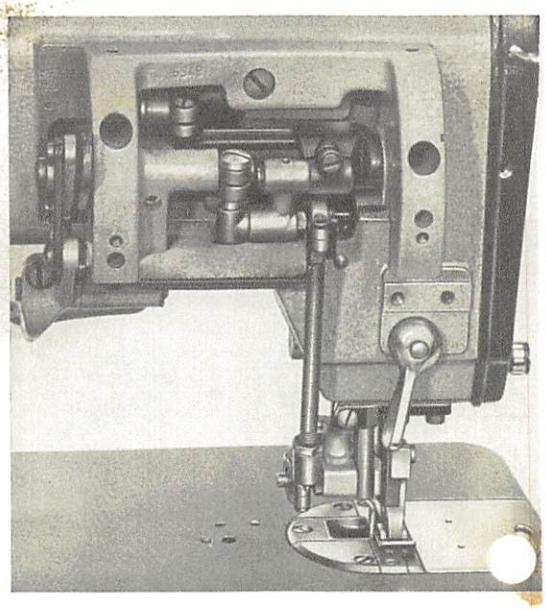


Fig. 17 R 9043

Knife driving mechanism of the Pfaff 469-431, as seen from the rear (cover removed).

17. Treadle Operation

The Pfaff 469 without thread trimmer is supplied with two treadles if it is desired to control the differential feed and reverse the direction of feed by foot action (Fig. 18).
If the functions performed by the left treadle are to be reversed (Fig. 18a), a mechanic must be called in to adjust the differential feed regulating shaft crank.

Fig. 18

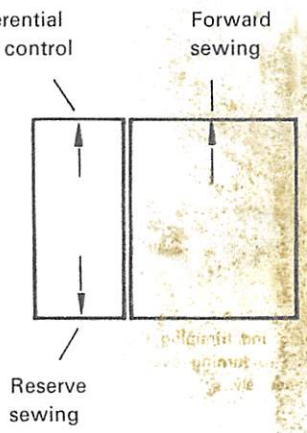
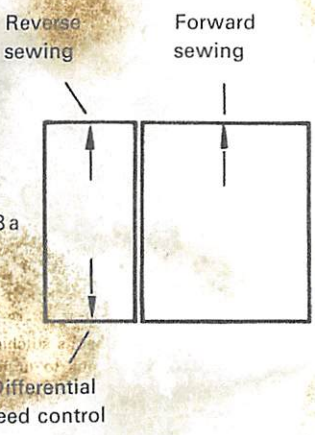


Fig. 18a



On Pfaff 469-900 machines fitted with Stop motor and automatic thread trimmer, the two treadles perform the functions illustrated in Figs. 19 and 19a.

Fig. 19

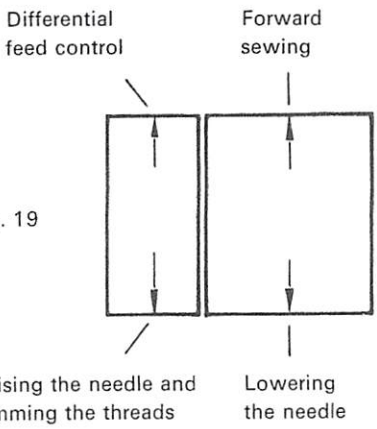
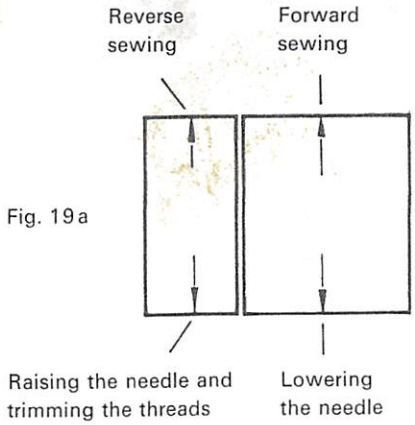


Fig. 19a



When the tip of the right treadle is pressed down, the machine sews forward. The more the treadle is depressed, the faster the machine will sew.

When the treadle is released again, the machine stops. When depressing the heel of the right treadle, the needle is lowered for turning corners.

Depressing the tips of both treadles causes the machine to gather or stretch, depending on the setting of the differential feed.

By depressing the heel of the left treadle, the needle is raised and both threads are trimmed, leaving ends of the proper length for starting the next seam.

The addition of new functions and the advantage afforded by combining all functions in one treadle have necessitated a redistribution of these functions on both treadles.

Pfaff 469-900/2 machines are so designed that sewing and thread trimming, the two most important phases of machine operation, are controlled by the right treadle. Varying the differential feed and reversing the direction of feed, like on all machines having no automatic thread trimmer, are controlled by the left treadle.

The various possibilities existing are illustrated in Figs. 20 and 20a.

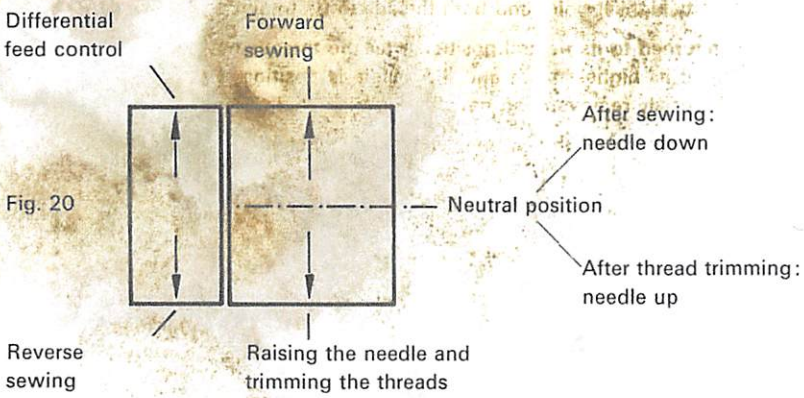


Fig. 20

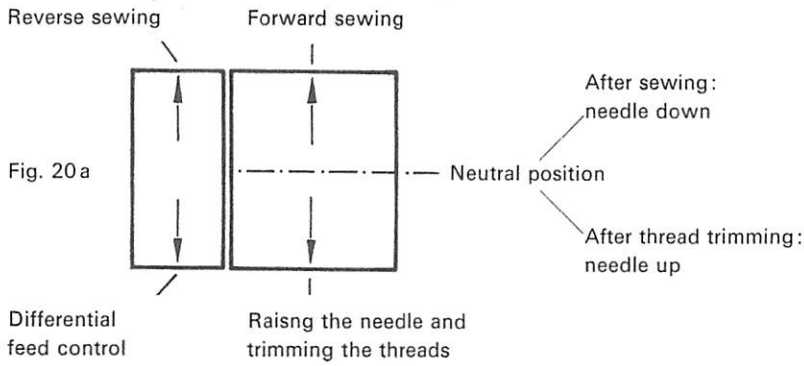


Fig. 20a

18. Inching Device

If desired, every Pfaff 469 featuring an automatic needle positioner and thread trimmer can, in addition, be fitted with an inching device which permits slow stitch-by-stitch sewing. This device is attached to the Stop motor and controlled by depressing the right treadle. When the tip of the right treadle is depressed lightly, the inching device is energized. As you continue to press down the tip of the treadle, the sewing speed increases until top speed is reached. If you want to sew at top speed right away, quickly depress the tip of the treadle as far as it will go. In this way, the inching device will not become operative.

When you have to turn a corner or sew an intricate section of the seam, relieve the pressure on the treadle until the inching device becomes operative and the machine sews stitch by stitch.

If you allow the treadle to return to its neutral position, the needle of subcl. -900/2 machines is lowered automatically. To bring the needle of a subcl. -900 machine to its lowest position, press down the heel of the right treadle. The work can then be turned and sewing be resumed.

After sewing has been completed, press down the heel of the right treadle on subcl. -900/2 machines, or the heel of the left treadle on subcl. -900 machines. This action causes the needle to be raised to its highest point and both threads to be trimmed to the proper length.

When the treadle is returned to its neutral position after the threads have been trimmed, the take-up lever remains at its highest point and the needle is positioned outside the material. The work can now be easily removed and new work be inserted.

All machines fitted with automatic thread trimmer can be switched from full speed to thread trimming without being slowed down first.

19. Raising the Needle without Thread Trimming

Machines fitted with automatic needle positioner and thread trimmer can, in addition, be equipped with a knee lever for raising not only the presser foot, but also the needle without initiating the thread trimming action. This feature makes it possible to raise the presser foot for repositioning the work.

On these machines, a light pressure against the knee plate raises the presser foot and a stronger pressure exerted subsequently, which moves the knee lever through the last third of its travel, also raises the needle to its highest point. A locking lever retains the needle at this position even after the pressure on the knee lever and the treadle has been relieved.

When you operate the treadle to resume sewing, the locking lever is released.

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