AUTOVIC

138 4188

WORKING INSTRUCTIONS AND LIST OF AUTOMATIC FEEDER PARTS DESCRIPTION, WORKING INSTRUCTIONS

AND INDEX OF PARTS

AUTOVIC PLATENS

WITH WHEEL-AWAY SHEET-FEED

AND DELIVERY APPARATUS

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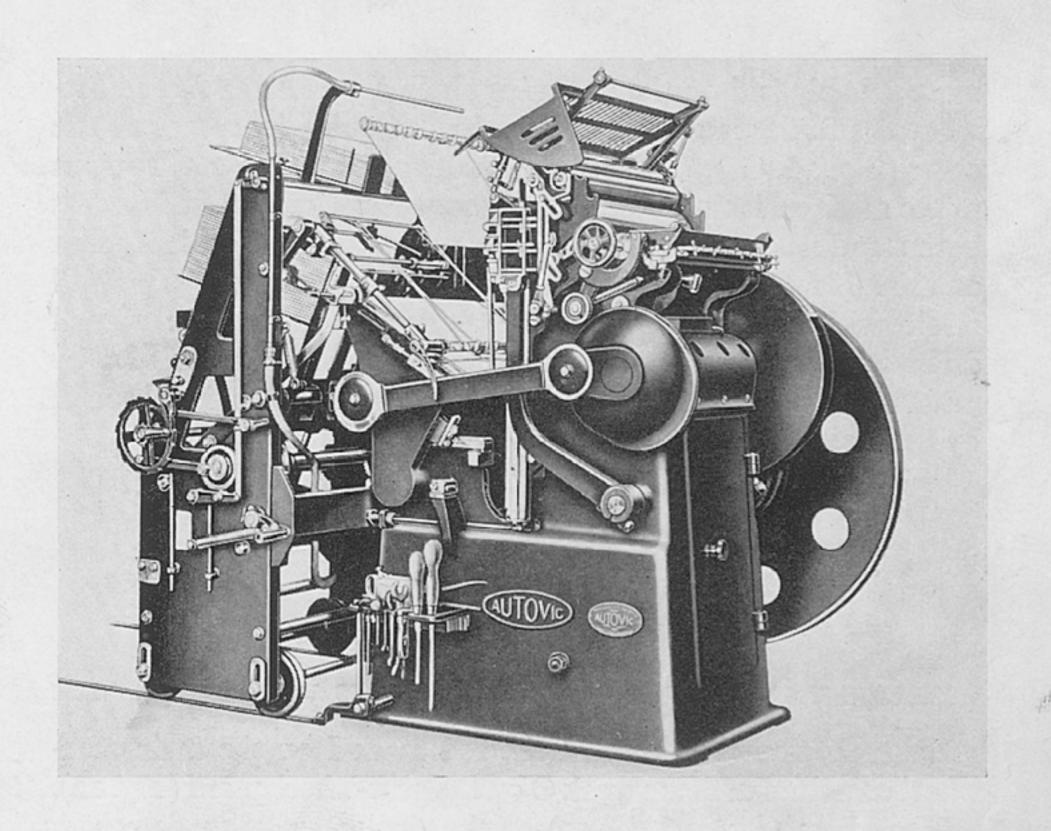
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AND DELIVERY APPARATUS TO THE AUTOVIC PLATENS

Turn the fly-wheel into the printing position so that the redmarked figure I on the main gear-wheel is level with the redmarked O on the gear-guard (Fig. 12).

The runner-wheels on the feeder are then placed on the half-round rails supplied with the machine, after these rails have been screwed to the machine-frame. Care must be taken that the feeder is in the proper position, in which the pawl (Fig. 16 G 58) engages with the red-marked tooth of the spur-wheel (Fig. 16, G 77). The feeder is then wheeled up to the machine, which must stand truly level, and adjusted until the pointers fitted on the right-hand side at the bottom of the feeder as well as on the connecting support are level with each other, and the sides of the frame of the feeder are uniformly in contact with the four spacing screws (Fig. 13, BO 50 and 51). In the course of adjustment the spirit-level is

most suitably laid on the operating shaft A 79. After this adjustment the feeder is connected with the machine by means of the claws (Fig. 16, G 55). Whilst the position of the feeder in relation to the machine is thus adjusted, particular care must be taken that both stand truly level, because their proper working is dependent on this. If feeder and machine stand correctly level, the gears will mesh without effort when the feeder is connected. Small differences can be taken up by raising or lowering the feeder by means of its adjustable runner-wheels. Turn the machine through by hand several times before starting up to work.

SETTING THE FEEDER

WHEELING THE FEEDER INTO AND OUT OF ITS WORKING POSITION

Turn the fly-wheel so that the red mark I on the main gear-wheel coincides with the mark O on the gear-wheel guard (Fig. 12).

The claws (Fig. 16, G 55) of the feeder are then detached, and the spur gear-wheel (Fig. 16, G 77) is thereby locked at the same time; the feeder can now be run out, leaving the machine free to be made ready in comfort. When it is desired to run the feeder up to the machine, and to connect it with the latter again, the press must first be brought into the marked position (I below O) by turning the fly-wheel, and the feeder is then securely connected with the machine by means of the claws. When connecting up the feeder, put the left hand on the fly-wheel, and, with the right, pull the feeder up to the machine; by moving the fly-wheel slightly backwards and forwards, the teeth of the corresponding gear-wheels will easily enter into engagement with each other. The lock fitted on the spur-wheel G 77 and on the gear-wheel BO 36 further ensures an accurate engagement at the correct tooth. The claws are then turned over, and, on the machines type B, B 2, and D, tightened up by means of the toggle.

Before putting the automatic feeding and delivery apparatus into operation, the swinging frame of the automatic hand-guard is to be folded back until the stop attachment on the left-hand side falls into position, whereby the hand-guard is securely held in this position.

FEED-MOTION

The machine is turned into position III (Fig. 12). After loosening the milled head adjustment-nut (Fig. 17, AN 155) on the suction arm and the toggle on the rocking lever I (Fig. 18, AN 119), the feeder suction-bar (Fig. 13, AN 181) is turned into such a position, by means of the star-headed handle (Fig. 18, AN 126), that the front-edge of the suction nozzle is about $\frac{1}{4}$ " to $\frac{1}{3}$ " from the edge of the fed sheet. (In this position the feed valve [Fig. 19, S 47, I] is opened for fresh air, closed for the suction air, and the sheet to be laid on is released by the suction nozzles.) When particular papers are being dealt with, the sheet should not be fed directly against the lay-marks but, after it has been released by the suction bar, allowed to glide for a millimetre up to the marks. The toggle and the milled adjustment-nut should then be tightened up again. Care should be taken that the adjustment of the feed suction-bar and of the delivery suction-bar is always effected with the impression "on," as the position of the platen is altered by taking off the impression.

The fly-wheel is then turned until the feed suction-bar is above

the paper-pile (suction position).

In order to ensure perfect suction, the suction nozzles should be placed at an angle to the paper pile. This is effected by setting the lever (Fig. 17, AN 192) according to a scale on the right-hand side-frame. For thin paper a considerable tilt or angle is used, and a slight one for thick paper. The adjustment of the tilt is facilitated by the scale which is provided. For large sheets of thin paper, which tend to fly up at the back when the machine is running fast, the holding down plates (thin steel strips) or the rubber bands (Fig. 20, AN 204) are used. The holding down plates are affixed on the feeder suction-bar when the latter is in its lowest position, i.e. close to the lay-marks, by means of the clamping rings, in such a manner that the ends are about $\frac{1}{5}$ above the sheet, but in no case upon the sheet, as this would push the sheet back again. The rubber bands are slipped over from the feeder suctionbar to the rubber band bar (Fig. 20, AN 208) mounted on the rocking lever, upon the small wooden spools fitted on the bar. The stripper-springs (Fig. 19, N 70) screwed on an adjustable rail contribute very effectively to a clean separation of the sheets from each other. For board and heavy papers these springs should stand immediately above the pile.

DELIVERY-MOTION (FIG.20)

The machine is turned into position II and, after a sheet has been fed to the front-marks, the suction-bar is set at the upper edge of the sheet so as to leave a space of about $\frac{1}{3}$ " between the edge of the sheet and the front edge of the suction nozzles.

The rubber rings (Fig. 20, AB 161) must then rest lightly on the tympan. The delivery suction-bar can be adjusted as desired by loosening the toggle (Fig. 14, AB 107) and the two nuts (Fig. 14, AB 100 and 101). Care should also be taken that the setting of the delivery suction-bar is always done with the impression "on." After setting, the nuts and the toggle must be firmly tightened up again.

The delivery table (Fig. 20, B29) must be raised or lowered according to the size of the paper; upwards for small sizes and downwards for large sizes of paper. The side-stops on the delivery table must also be set according to the size of the paper. Above the delivery table is a blower-tube (Fig. 13, B 42), which blows the printed sheets down upon the pile—a great advantage when working thin papers. The supply of blast air can be regulated by means of a cock (Fig. 20, B 48) fitted in the supply-tube, and the blower-tube can be turned after the clamping screws have been loosened.

When the delivery suction-bar is in its highest position the valve-cover (Fig. 19, S 51) must have opened about $\frac{1}{16}$, to allow of a sufficient quantity of fresh air being supplied, and to enable the sheet to be detached from the suction nozzles in good time.

ADJUSTING THE PILE-LIFT (FIG. 13)

The pile-lift should be so adjusted that the sheets must rise up to about 1 to 3 mm. to meet the suction nozzles. The adjustment of the lift is effected by the adjusting lever ST 162 (Fig. 13) on which are marked the signs + and -. The "plus" position is for thick, and the "minus" position for thin paper. When paper of less than 8 mm. thickness is printed, the pawl ST 135 (Fig. 13) must be reversed, so as to cause the gearing to feed at the rate of only 1 tooth.

ADJUSTING THE INSTANTANEOUS CHECK (FIGS. 14 AND 19)

If no sheet is fed or delivered, the machine is stopped by the instantaneous check (Figs. 14 and 19).

As less blast and suction air is required for working with thin paper, the regulator screw (Fig. 19, M 49) is screwed out accordingly, but screwed inwards somewhat for thick paper and board. (See "Paper-Pile" on page 13.) The piston (Fig. 14, M 54) must be so regulated that, when the feeder is in operation, it springs back far enough to avoid touching the rocking check-lever (Fig. 14, M 68).

THE SUCTION-AIR CONTROL (FIG. 19)

The valve-tappets (bolts) of the two main valves S 47, I (for the feeder suction-bar) and S 47, II (for the delivery suction-bar) must be well lubricated daily and kept clean, to prevent the tappets jamming, with consequent failure of the suction air. The closely fitting fresh-air supply valve-covers S 51 on the side of the main valves should have an amplitude of lift of 1 to 2 mm.; they can be adjusted by turning or displacing the corresponding eccentrics S 28 or S 29.

CLOSING OF THE SUCTION NOZZLES

Those of the suction nozzles which are not required, when working with small sheets, or when a great deal of suction air is employed, must be closed, by means of a small lateral displacement of these nozzles, which are also rotated by a quarter turn, in such a manner that the second notch of the nozzles can be made to engage with the stop on the suction bar. A special screwdriver is supplied with the machine for the small screws of the suction nozzles.

THE DRIVING CHAIN

must be tightened up from time to time and kept taut. A loose chain is a cause of irregularity in the working of the feeder. If the chain cannot be tightened up any more, it may be shortened by one link, or by unriveting two links, and by inserting the bent link with chain fastener which is supplied with the machine, or the bent link fitted in the chain may be removed.

THE AIR-PUMP (FIG.15)

The feed and the delivery are effected by means of air suction produced by a special air-pump (Fig. 15), driven off the fly-wheel shaft of the machine. Immediately the feed suction-bar has seized a sheet, the bar conveys it to the lay-marks, If no sheet is taken up the machine stops automatically before an impression takes place on the platen. The machine is put out of action by the instantaneous check (Figs. 14 and 19), if no vacuum is created in the suction bar, with the consequence that the piston (Fig. 14, M 54) is not withdrawn. In this event the rocking check-lever (Fig. 14, M 68) carries the piston along and the pawl (Fig. 14, M 73) releases the check bar M 76 which, in its turn, stops the machine.

FAILURE OF THE SUCTION- OR BLAST-AIR SUPPLY

All flexible pipes must be tight, and their ends must be well secured on the joints. If the defect is in the pump itself, extract the bolt of the crank L 89; the bottom and the cover of the pump must be removed, and the small valve-discs, two of which are supplied with the machine as spares, must be inspected.

OPERATION OF THE AUTOVIC PLATEN

The design and construction of the Autovic Platen are extremely simple, so that its operation can be learnt in a very short time.

LUBRICATING THE MACHINE

All oil holes are marked with red paint and are either directly accessible with an oil can or, if they are concealed, are provided with small feed ducts, the mouths of which are so fitted that they cannot be overlooked. Parts requiring constant lubrication are fitted with wick oilers. For the lubrication of the oiling point of the pump plunger, remove the screw, marked in red, from the pump. Oiling must be effected daily, but only in very small quantities, and the screw must be replaced after oiling. If the pump is given too much oil, some of the latter may get into the blast air and soil the work.

LOCKING UP THE FORME

The formes are locked up in the centre. In the case of formes, the printing portions of which are of unequal weight, and are unequally distributed, the impression must be compensated by suitable counterlocking or balancing. In the case of the Autovic Platens, the lay-band and the feed and delivery-tables are provided with a pica graduation facilitating and accelerating the work of locking-up and of making ready the forme. To prevent the wire-tongues of the lay-marks being crushed, it is of advantage to use low iron furniture, instead of lead furniture.

DISCONNECTING THE FEEDER FOR MAKING READY

The entire feed and delivery apparatus is wheeled out for making ready, and the machine is thereby rendered as accessible as a Platen Printing Press. As the feeder has its own driving mechanism, no part of the press or of the feeder is removed or disengaged when the feeder is wheeled out. If the feeder is to be wheeled out for making ready purposes, the flywheel of the machine is turned so that the point marked I on the main gear wheel coincides with the point O on the wheel-guard. The claws are then released, whereby the spur-wheel is locked, and the feeder can be wheeled out. After completing the make-ready and fitting the lay-marks, the feeder is run in again (see paragraph "Wheeling the Feeder Into and Out"), and both the machine and the feeder are ready for work. All parts of the press and feeder are readily accessible at all times.

IMPRESSION ADJUSTMENT AND IMPRESSION CHECK

The degree of impression is adjusted in the usual way, as in the Victoria Platens; the impression check, likewise, is the same. The impression adjuster should, if possible, not be set below 15°.

SETTING OF THE GRIPPERS

For small size sheets the short grippers must be used. Neither the feeder bar nor the delivery bar interfere with the grippers or with the holding-down strips. The grippers can be used whenever the work renders them necessary. All usual auxiliary aids can be used; it is also possible to connect the grippers with twine, or to

use templates with sponge-rubber or cork in exactly the same way as in a hand-fed platen.

SETTING OF THE LAY-MARKS

When making ready has been effected on the platen, or larger make-ready sheets, prepared on a make-ready desk, have been stuck on the platen, a cover sheet is stretched over it and the layband and side-lays are adjusted. The sliding lay-marks on the lay-band should be set as far out as possible, as on a hand-fed machine, so that the sheets can be freely pushed straight by the side-lay. When setting the lay-marks, care must be taken that the suction nozzles of the feeder suction-bar do not strike against the wiretongues (upper marks) of the lay-marks. When using the small rubber sucker-discs, special attention must be paid to this point. The lay-band must be carefully handled, the same as when laying-on by hand. It must always be so tensioned that the marks cannot easily be displaced after the lay-band has been clamped in position. It is not necessary to stick paste-board at the back of the lay-band, or to seal up the marks, as is sometimes done for feeding thick board by hand, or in register work, provided the lay-band is properly clamped, because the feeder suction-bar does not press the work against the marks like the human hand. In double feeding, where there are four marks on the lay-band, it is advisable to paste a strip of cardboard over the centre of the lay-band where it may be inclined to be springy. The side-lay should, if possible, be below the centre of the sheet. There are three possible adjustments for the side-lays as regards height on both sides of the pushing side-lay apparatus. (Left-hand and right-hand side-lays are supplied for different paper sizes.) The side-lays must be set with the closed part of the tongue upward. It is advantageous to paste a strip of cardboard over the long side-lays to prevent an upward spring-movement at the lay-edge.

CHANGING THE SIZE OF PAPER

Changing over from one size of paper to another can be effected very quickly after completion of making ready, by merely changing the side-lays or adjusting them to the proper length. The marks on the steel strip are easily adjusted and should be as far out as possible, so that the sheet can be accurately trued by the side-lays.

PAPER-PILE

The feed table is in a convenient position in front of the machine. The paper to be printed may be put on in a pile 12" high; after putting on the pile, the paper is raised to proper feeding height by means of the crank provided. The upper sheet of the pile should be approximately level with the lower row of holes in the blower bar, as the sheets of paper should always rise a few millimetres. Air is blown through the holes in the blower bar into the pile in order to loosen and separate the paper. If the blast air is too strong, close the holes in the blower bar (Fig. 20, N 73) by means of the rotary discs. The supply of blast air can be adjusted by means of the regulating lever (Fig. 19, S 64). After the paper has been stacked, the stop must be placed at the back of the pile so that the sheets cannot be forced backwards by the air blown in from the front. The paper feed, controlled by a feeder bar (Fig. 19, ST 179) is entirely automatic. The height of the pile is automatically maintained thereby, regardless of the weight or thickness of the paper. The table can be rapidly lowered by hand in order to replenish paper. The pawl on the paper feed gear-wheel must be released for this purpose.

THE SHEET FEEDER

The feeder suction-bar takes up the sheet, loosened by the blowers, by a reliable suction movement, and releases it by opening a valve only when the sheet is in the desired position, about \(\frac{1}{4}\)" to \(\frac{1}{3}\)", in front of the lays. Exactly as in hand feeding, the feeder delivers the sheet to the front-lays in accurate register. According to the weight of the paper, it is of advantage if the suction-bar releases the sheet about I mm. in front of the laymarks, so that the sheet can drop to the marks.

THE SHEET DELIVERY

Here again a natural movement is provided, similar to that performed by a person taking off the sheet by hand. The delivery suction-bar passes with a steady motion over the upper edge of the platen, sinks gently almost on to the upper edge of the printed sheet, takes it up by the surface and delivers it on to the top of the delivery table provided above the feed pile. For dealing with small sizes, the suction nozzles which are not required

must be closed. This is done by a lateral displacement and rotation of the suction nozzles. For heavy board and smooth paper small rubber discs are provided as auxiliary suckers. For dealing with printed matter with a narrow unprinted margin, and with thick lettering or lines at the upper edge, the use of these rubber discs will not always allow of smudging of the work being avoided, especially if the inking is heavy. In such exceptional cases, small pieces of para rubber tubing, $\frac{1}{4}$ long ($\frac{1}{3}$ diameter with $\frac{1}{4}$ hole), are slipped over the suction nozzles instead of the rubber discs. These small rubber tubes, which have a reduced suction area, can be employed advantageously on art paper and smooth card.

DELIVERY TABLE

The delivery table is located above the feed table. Both the unprinted and the printed paper and also the platen and forme are always fully visible to the machine minder. The tilted delivery table can be placed more forward or more backward, and the uniformity of delivery of the sheets ensured in this manner is such that the necessity for jogging is obviated, particularly as the blast-pipe fitted above the delivery table blows down the sheets. The latter can be taken away without risk while the machine is running. In addition, special work can be interleaved without difficulty.

THE PRINTING

Printing can be started as soon as the feed, suction bars, and paper pile are in order. Care should be taken that the tilt of the feeder suction-bar is regulated according to the paper, and that the stripper-springs hold the second sheet back. When the machine is in the feed position, one sheet must be laid on by hand, as otherwise the platen will be printed upon. Before the machine is struck on, the instantaneous check valve (Fig. 19, M 46) must be put out of action, which is done by withdrawing the plunger locking-hook (Fig. 19, M 55), and securing the plunger of the instantaneous check-valve. If, during the run, the machine has been brought to a standstill by the instantaneous automatic check so that the platen is just in front of the forme, and it is no longer possible to feed a sheet by hand, the impression is first taken off, and the machine is restarted, but the striker lever of the

machine is held in the left hand until the sheet delivery suction-bar has reached the delivery table, and the valve cover (Fig. 19, S 51) has opened. Meanwhile, the feeder suction-bar has taken up a sheet, and printing proceeds after putting on the impression again. Care must be taken that, when the sheet is lifted off the platen, the impression is always "on," as otherwise the platen is too far away from the sheet delivery suction-bar, and the sheet cannot jump the gap.

Never forget to release the plunger locking-hook, as otherwise the instantaneous automatic check cannot act in the event of the passage of torn sheets, etc., and, in the case of very heavy formes, the machine may get stuck on the impression. Should the machine nevertheless, inadvertently, get stuck on the impression, it must be turned backwards from the impression position. Use is made, for this purpose, of the pin supplied, which is inserted, through the hole in the flywheel, into the clutch-ring. Care must be taken to withdraw this pin, after the machine has been freed. The printed sheets can be taken away on the run, without risk. For special work, the printed sheets can also be interleaved without difficulty.

RELIABLE REGISTER

The Autovic Platen is equipped with a double-sided acting sliding side-lay for accurately trueing up the sheet. This device will lay all kinds of paper perfectly to accurate register, and may be used to register either to the right or to the left, for work and turn jobs.

PRINTING ON ART PAPER AND CARD

Specially smooth paper (art paper, parchment, and flint paper) and card cannot be held by the suction nozzles in the same way as uncoated and thin papers. In order to prevent such papers from dropping off, the small rubber discs supplied are slipped over the suction nozzles. They provide a larger and more effective suction surface, ensuring perfect feed and delivery of the sheets. When these small rubber discs or the para rubber tubes are employed, the distance between the delivery suction-bar and the platen must be increased accordingly. As regards the feed suction-bar this difference is compensated by an adjustment of the paper lift.

PRINTING ON HEAVY CARDBOARD

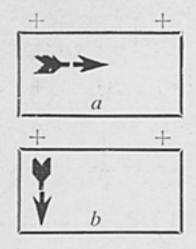
In the case of thick and heavy cardboard, a considerable amount of blast air and of suction air is required, and very little tilt. The supply of blast air is adjusted by a regulating lever S 64, and that of suction air by a regulating screw S 67, which are both fitted on the regulation plate (Fig. 19, S 62). Slight tilt of the sheet feeder suction-bar is effected by setting the lever (Fig. 17, AN 192) of the tilt-control (Fig. 13, AN 195). For the delivery of a large quantity of blast air for small sizes, in exceptional cases, the outermost holes of the blower rail may be closed by means of the milled discs. (Glazed cardboard $\frac{1}{25}$ " thick and pasteboard $\frac{1}{16}$ " thick [size 9" × 12" = 4 oz. in weight], have been satisfactorily printed on the Autovic A 2.)

PRINTING ON VERY THIN PAPER

Tissue paper, duplicating paper, imitation parchment, and parchment paper should only be worked with very little blast air. The adjustment of the blast air supply is effected by means of the regulating lever fitted on the suction and blast air regulation plate. When thin paper is worked, the blast-air holes in the regulation plate must be opened by the regulating lever (Fig. 19, S 64).

DIFFICULTIES WITH CURLING PAPER

Thin papers, and those which are inclined to curl, give trouble on being taken away from the platen and at the delivery. The delivery suction-bar strikes against sheets, the upper edge of which rises when they are sucked away from the platen, thus producing stoppages. Such paper must therefore be stacked with the curling edge downwards towards the platen, and particularly troublesome paper must be bent back. The taking into consideration of the direction of the paper run when cutting sheets is as important for the perfect feeding and delivering of parts of sheets on automatic presses as for register work in general. Sheets or



parts of sheets, the narrow side of which is the direction of the paper run (a), will curl up at the lay-edge (+) and at the back edge. Thin papers which buckle up on the platen, should be worked so that the broad side (b) of the sheets is the more resisting direction of the paper run. To ensure good

delivery of thin and curling papers on to the delivery table, the primary condition is a sufficiently early timing of the release of the sheets by the delivery suction-bar (Fig. 20, AB 154). (See "Suction-Air Control", Fig. 19.) Further, use the blower tube (Fig. 14, B 42), fitted over the delivery table, through which a quantity of blast air, which can be increased or decreased as required by means of a regulating cock (Fig. 20, B 48), is blown on to the pile. This blower-tube (Fig. 14, B 42) can be pivoted by loosening its clamps. In particular cases, a number of blowholes can also be closed by sticking paper on them, according to the size of sheet to be dealt with.

PRINTING ON FULL-SIZE SHEETS

Sheets of the maximum size must not project beyond the upper edge of the platen, as they would be caught by the current of air, and blown high before the delivery suction-bar reaches its proper suction position. In case of need, when printing large size sheets, replace the ½" wide lay-band by long primer quads pasted on the tympan. As regards the maximum width, care must be taken that the printed sheets, on their way to the delivery, do not strike the rubber rollers or their adjustment ring screws and tear. The register is not affected if the rubber rollers of the feed suction-bar run on the paper.

ENVELOPE PRINTING

Envelopes are best printed with the flap turned in the direction of the side-lay, so that it does not flap up during feed and delivery. As envelopes very often stick together and thereby produce stoppages, they should be well separated before being piled.

DOUBLE FEED

For double feeding envelopes, the wooden bar (Fig. 19, N 57) supplied with the machine should be suspended in the central slot of the feed table, and the T-square guide B 43, also supplied, placed on the delivery table. It is advisable to set the feed according to the envelope feed-guide given by the central bar, and to lock the forme correspondingly.

PRINTING ON FOLDED SHEETS

For reasons arising out of the technique of printing, the paper is seldom folded before printing. In such exceptional cases, folded sheets are fed with the fold turned towards the side-lay. The stripper-springs (Fig. 19, N 70) are removed, as they might catch on the bottom page, which is, of course, not held by the suckers. With folded sheets a good deal of suction air must be used and the small rubber discs employed. To prevent the bottom page, which is not directly held by the suction, being turned over, use can be made of pieces of type, a little below type height, such as "plus" signs, by way of "blind" impressions, in particular on the upper edge, where strips of board pasted on the platen are not in the way.

STACKING THE PAPER

Good stacking ensures smooth operation. The paper, before piling, should always be well fanned out, especially soft kinds and art printing papers, which very often have a burr on the cut edge and stick together, when papers of this kind have been cut with a blunt knife. For the purpose of setting the paper pile sidewards, two rods (Fig. 19, N 62) adjustable by means of thumb screws are fitted on the frame and pass through the pile table. Care must be taken that the paper pile is not jammed by the side rods; similarly the stop placed behind the pile must not press against the paper.

ABSENCE OF SUCTION- OR BLAST-AIR

If the suction- or blast-air for the feed or for the delivery does not operate, the fault may be that the supply tubes are not tight. The tubes must, therefore, be examined and, above all, care must be taken to ascertain that the tubes close tight upon the connections. If the tubes and the connections are in order, the fault may be in the air pump itself, inasmuch as the small valve spring may be out of order. To insert new valve springs it is necessary to take the air pump out of the machine. To do this, the bolt for the crank (L 89) is first pulled out, then the set rings left and right on the shaft are loosened and the locking washer on the right-hand side of the shaft is screwed off. After loosening the fly-wheel, the pump shaft is driven through, by means of a brass bolt or a piece

of wood, sufficiently far in the opposite direction for the pump to be removed. The two small covers of the pump are now unscrewed, and new valve springs inserted in the place of those which may be damaged. It is furthermore possible that the large cover at the bottom may have to be unscrewed in order to renew the small valve springs which are fitted here. After screwing on again the covers, the air pump is built in again by following the above instructions in the reverse direction, and refixed.

FEEDING BY HAND

is an operation which has to be performed only on the rarest of occasions with a fully automatic platen. If it should prove necessary, however, it can easily be done. The Autovic Platen has a reliable automatic hand-guard, connected with the friction brake and clutch which, in case of danger, automatically stops the machine and applies the brake. With the feeder wheeled out of its operating position, these machines cannot be started unless the hand-guard has been lowered. As feeding by hand will be required only in very exceptional cases, feed and delivery tables are only supplied if specially ordered.

THE SETTING OF THE LAY-BAND AND THE SIDE-LAY MARKS

can be read by the minder from the locked-up forme (type matter plus paper margin). For instance, when printing a broadside size of $(9'' \times 7^{1''}_2)$ with a 2-pica blank space from the top edge of the paper, the space of 15 picas in the width of the chase and 28 picas in the depth of the chase have to be filled up with furniture. The upper edge of the lay-band would therefore have to be level with No. 15 of the pica scale cut on the right and on the left of the platen. The lay-marks projecting 2 mm. $(\frac{1}{12})''$ beyond the lay-band are then exactly 2 picas distant from the first line of type. In this job there are to be on each side (left and right) of the type locked up in the centre, a paper margin of 3 picas. The position of the side-lay can now be read from the lay-band (type matter plus paper margin), and the second longest of the left-hand side-lays supplied should be set on No. 25, after it has been pushed out about $\frac{3}{8}$ ", corresponding to its lateral movement.

THE POSITION OF THE PAPER-PILE ON THE STACK BOARD

can be read either from the properly locked-up forme (type matter plus paper margin) or from the lay-band. The paper must be stacked against the left-hand stop on the feed board, if the left side-lay is used, or against the right-hand stop if, when reversing the sheets or when feeding two sheets side by side, the right side-lay is applied. The sheets thus stacked are brought upon the platen about 5 mm. $\binom{1}{5}$ distant from the receded side-lay, against the lower lay-marks, and then pushed into the correct position by the side-lay. In the case of double feed the lay-marks on both sides are used, apart from four lower lay-marks; some free space is then left between the piles on the stack board.

THE SETTING OF THE LATERAL STOPS ON THE DELIVERY TABLE

is effected according to the number on which the side-lay has pushed the sheet. In the instance cited above, the left-hand stop would be on No. 25 and the one on the right-hand side would be set with the aid of a sheet of paper of the job. The forme having been locked in the centre, and the paper margins on both sides being equal, the right-hand stop should also be on No. 25, the numbers running on both sides from the outside to the centre in exactly the same way.

Out of the number of side-lays of various lengths supplied with the machine, seven are for the left-hand and seven for the righthand lay. The steel tongues on the side-lays should be turned with the side on which they are fastened towards the paper-pile.

INDEX OF ALL PARTS

OF THE WHEEL-AWAY
SHEET-FEED AND
DELIVERY APPARATUS
ON THE

AUTOVIC PLATEN

CONNECTING BRACKET

во	27	Connecting bracket	во	47	Claw-bolt
во	28	Fixation screw	во	48	Nut
во	29	Washer	во	49	Washer
во	30		ВО	50	Spacing screw
во	31	Bolt for same	ВО	51	Spacing screw,
во	32	Nut			black head
во	33	Washer	ВО	52	Nut
во	34	Chain sprocket	ВО	53	Gear-wheel guard
во	35	Taper pin	во	54	Screw
во	36	Gear-wheel	во	55	Air-supply conn. rail
во	37	Taper pin	во	56	Washer
во	38	Driving shaft	во	57	Screw
во	39	Bronze bush 33 mm.	во	58	Rubber ring for air
во	40	Bronze bush 40 mm.			conn.
во	41	Gear-wheel guard	во	59	3/8 Chain
ВО	42	Washer	во	60	Chain fastener
во	43	Screw 25 mm. lg.	ВО	61	Bent link
во	44	Screw 55 mm. lg.	во	62	Lubricator
во	45	Locking device	во	63	Tooth-gap for the
во	46	Screw			driving gear-wheel

FRAME

G	31	Left-hand side-frame	G	57	Washer
G	32	Right-hand side-frame	G	58	Pawl
G	33	Tubular cross-piece	G	59	Screw
G	34	Screw	G	60	Washer
G	35	Stack-rail cross-piece	G	61	Air-supply connection
G	36	Screw	G	62	Screw 80 mm. lg.
G	37	Delivery table cross-	G	63	Washer
		piece	G	64	Nut
G	38	Screw	G	65	Clamping lever
G	39	Washer	G	66	Screw
G	40	Runner cross-piece	G	67	Washer
G	41	Screw	G	68	Runner-rail
G	42	Inner washer	G	69	Screw
G	43	Outer washer	G	70	Wood-screw
G	44	Runner	G	71	Bracket for the runner-
G	45	Set-ring			rail
G	46	Screw	G	72	Screw
G	47	Claw-shaft	G	73	Bolt
G	48	Set-ring	G	74	Washer
G	49	Screw	G	75	Nut
G	50	Claw-lever with handle	G	76	Lubricator
G	51	Screw	G	77	Driving spur-wheel
G	52	Spring bolt in the	G	78	Taper pin
		claw-lever	G	79	Operating shaft of
G	53	Spring-bolt in side- frame			35 mm. Ø
C	51	Spring of 125 mm. lg.	G	80	Rocking-lever guard
G	54	Claws	G	81	Screw
G	55	Screw	G	82	Tooth for the spur- wheel
u	20	OCICW			WIICCI

FEED ACTION

AN 105 AN 106	Main cam Clamping screw	AN 136	Clamping ring for the spring rod
AN 107	Stud-bolt	AN 137	Clamping screw
AN 108	Cam lever for the	AN 138	Bearing for spring-rod
1111 100	main cam	AN 139	Screw
AN 109	Cam tumbler	AN 140	Cam for lowering action
AN IIO	Bolt for cam tumbler	AN 141	Screw
AN III	Nut	AN 142	Stud-bolt
AN 112 AN 113	Washer Bolt for the cam-lever	AN 143	Angle-lever for the lowering action
	and draw-bar	AN 144	Tumbler for angle-lever
AN 114	Stud-bolt	AN 145	Bolt for same
AN 115	Draw-bar	AN 146	Washer
AN 116	Bolt for the draw-bar	AN 147	Nut
AN 117	Nut	AN 148	Draw-bar for angle-
AN 118	Washer		lever
AN 119	Toggle	AN 149	Screw for angle-lever
AN 120	Rocking lever	AN 150	Washer
AN 121	Bearing-bolt for same	AN 151	Nut
AN 122	Nut	AN 152	Split pin
AN 123	Washer Flat iron angle for the	AN 153	Bolt for the draw-bar and slot-guide
AN 124	fine setting	AN 154	Washer
AN 125	Spindle for the fine	AN 155	Milled set-nut
	setting	AN 156	Slot-guide
AN 126	Star wheel	AN 157	Taper pin for same
AN 127	Nut for the spindle	AN 158	Spring-bolt in the
AN 128	Pin for the nut	137 7 #0	angle-lever
AN 129	Washer for the spindle	AN 159	Spring-bolt in the side frame
AN 130	Square-headed bolt for the spindle	AN 160	Link for the spring-bolt
AN 131	Nut	AN 161	Screw
AN 132	Washer	AN 162	Spring for the angle-
AN 133	Spring-rod for the rocking lever	AN 163	lever Upper T-piece
AN 134	Bolt for the spring-rod	AN 164	Clamping screw
AN 135	Spring for the rocking lever	AN 165	Bolt for the upper T-piece

AN 166	Washer	AN 190	Washer
AN 167	Nut	AN 191	Screw
AN 168	Rubber-band bar	AN 192	Tilting lever on the
AN 169	Link for same		side frame
AN 170	Screw	AN 193	Bolt for same
AN 171	Steel tube	AN 194	Nut
AN 172	Lower T-piece	AN 195	Tilting lever motion
AN 173	Clamping screw		limit-stop
AN 174	Spacing roller on the	AN 196	Taper pin
	lower T-piece	AN 197	Air-supply connection
AN 175	Rubber ring for same	0	on the upper T-piece
AN 176 AN 177	Set-ring Screw	AN 198	Air-supply connection for the flexible tube
AN 178	Spring for the tilt motion	AN 199	Bolt for the air-supply connection
AN 179	Lever for the tilt motion	AN 200	Spring washer
AN 180	Stud-bolt for same	AN 201	Nut
AN 181	Feed suction-bar	AN 202	Packing
AN 182	Plug for same	AN 203	Flexible tube $27\frac{1}{2}''$ lg.
AN 183	Suction nozzles	AN 204	Rubber bands
AN 184	Clamping screw	AN 205	Down-holder
AN 185	Stop-screw	AN 206	Clamping ring
AN 186	Spacing roller on the suction-bar	AN 207	Rubber sucker
AN 187	Rubber ring for same	AN 208	Rubber-band bar
AN 188	Set-ring	AN 209	Link
AN 189	Screw	AN 210	Screw

DELIVERY ACTION

AB	66	Crank cam	AB 99	Washer
AB	67	Washer	AB 100	Milled nut with pane
AB	68	Screw	AB IOI	Milled pane
AB	69	Stud-bolt	AB 102	Stop-washer
AB	70	Crank-sleeve	AB 103	Screw
AB	71	Bolt for crank-sleeve	AB 104	Cast iron draw-bar
AB AB	72 73	Tumbler Bolt for the tumbler	AB 105	Bolt for the c. i. draw- bar and the control- lever
AB	74	Nut	AB 106	Washer
AB	75	Control-lever	AB 107	Toggle
AB	76	Tumbler 70 mm.	AB 107	Bolt for the c. i. draw-
AB AB	77 78	Tumbler bolt Washer	AB 100	bar and the rocking fork
AB		Nut	AB 109	Washer
° AB		Spring of 30 mm. Ø	AB IIO	Nut
		315 mm. lg.		Rocking lever
AB	81	Flat iron for the spring	AB 112	Bolt for same
AB	82	Screw	AB 113	Covering disc
AB	83	Spring-bolt	AB 114	Screw
AB	84	Washer	AB 115	Clamping bearing
AB	85	Nut	AB 116	Clamping screw
AB	86	Draw-bar	AB 117	Washer
AB	87	Draw-bar knob		Fixation screw
AB	88	Taper pin	AB 119	Washer
AB	89	Bolt for draw-bar knob	AB 120	Lower rocking fork
AB	90	$\frac{1}{2}$ " Nut	AB 121	Upper rocking fork
AB	91	Washer	AB 122	Bolt for same
AB	92	3" Nut	AB 123	
AB	93	Washer	AB 124	Tube for the suction arm
AB	94	Draw-bar shackle,	AB 125	Plug
		30 × 30 mm.		Bolt for the lower
AB	95	Bolt for the draw-bar shackle		rocking fork and the suction arm
AB	96	$\frac{1}{2}''$ Nut	AB 127	Taper pin
AB	97	Washer	AB 128	Plug for the bolt
AB	98	$\frac{3}{8}$ " Nut	AB 129	Set-rings

AB 130	Screws for same	AB 151	Screw
AB 131	T-piece for the air- supply connection	AB 152	T-piece for the suction-bar
AB 132	Bolt for the upper rock- ing fork	AB 153	Clamping screw
AB 133	Washer	AB 154	Delivery suction-bar
AB 134	Nut	AB 155	Plug
AB 135	Taper pin	AB 156	Tension ring
AB 136	Cams for the suction-	AB 157	Screw for same
	air supply control	AB 158	Twister spring
AB 137	Screw	AB 159	Screw
AB 138	Angle-lever	AB 160	Holders for the spacing
AB 139	Bearing screw		roller
AB 140	Washer	AB 161	Rubber rings for same
AB 141	Nut	AB 162	Set-rings
AB 142	Tumbler for the angle- lever	AB 163	Screws for same
AB 143	Screw	AB 164	Sucker
AB 144	Washer	AB 165	Clamping screw
AB 145	Nut	AB 166	Stud-bolt stop
AB 146	Draw-bar	AB 167	Flexible tube 20" lg.
AB 147	Screws	AB 168	Lubricator for the
AB 148	Washers		rocking lever
AB 149	Nuts Clamping lever for the	AB 169	Safety stop for the control lever
AB 150	suction-bar	AB 170	Screw

AIR-PUMP

L	54	Pump-body	L	72	Hemp
L	55	Pump-body cover	L	73	Valve-plate
L	56	Pump-body bottom	L	74	Screw
L	57	Screw	L	75	Stauffer box
L	58	Valve-cover	L	76	Tube for same
L	59	Screw	L	77	Reduction piece
L	60	Piston	L	78	Nut
L	61	Taper pin	L	79	Flexible tube joint
L	62	Piston-ring	L	80	2 Flexible tubes 23½" lg.
L	63	Piston-rod	L	81	Lubricator screw
L	64	Piston-rod knob	L	82	Shaft of the air-pump
L	65	Taper pin	L	83	Set-ring
L	66	Packing for cover and	L	84	Screw
		bottom	L	85	End-washer
L	67	Packing for the valve-	L	86	Screw
		cover	L	87	Crank
L	68	Stuffing-box with phase	L	88	Screw
L	69	Bottom stuffing-box	L	89	Bolt for the crank
L	70	Locking nut	L	90	Screw
L	71	Leather packing	L	91	Stauffer box for No. 89

INSTANTANEOUS CHECK

M	46	Instantaneous valve	M	72	Tumbler-bolt
M	47	Clamping screw	M	73	Ratchet
M	48	Washer	M	74	Screw
M	49	Set-screw	M	75	Washer
M	50	Milled nut	M	76	Striker bar
M	51	Threaded plug	M	77	Guide
M	52	Nut with 3 edges	M	78	Screw
M	53	Compression spring	M	79	Handle
M	54	Piston	M	80	Spring-bolt
M	55	Piston locking hook	M	81	Spring-bolt in the side-
M	56	Spring washer			frame
M	57	Washer	M	82	Draw-spring for the striker bar
M	58	Screw	M	92	Locking lever
M	59	Handle	M	83	
M	60	Spring-bolt	M		Bolt
M	61	Spring-bolt in the side-	M	85	Washer Tumbler
		frame	M	86	
M	62	Draw-spring of the	M	87	Nut Intermediate lever
	6-	instantaneous valve	M	88	Intermediate lever
M	63	Valve-tube	M	89	Screw Bearing halt
M	64	Taper pin	M	90	Bearing-bolt
M	65	Outer clamping joint	M	91	Set-ring
M	66	Screw	M	92	Screw
M	67	Washer	M	93	Stop-angle-bar for the locking lever
M	68	Striker-lever	M	94	Flexible tube 5" lg. for
M	69	Screw			the instantaneous
M	70	Nut			valve
M	71	Tumbler on the spur-	M	95	Inner clamping joint
		wheel	M	96	Screw

SUCTION-AIR CONTROL-GEAR

S	38	Air control cam for the	S	55	Tumbler lever
		feeder action I	S	56	Tumbler
S	39	Air control cam for the delivery action II	S	57	Pin for the tumbler and tumbler lever
S	40	Clamping screw	S	58	Double nipple for main
S	41	Stud-bolt		VA.	valve II
S	42	Washer	S	59	Angle-piece
·S	43	Flap control cams I and	S	60	Flexible tube joint
		II	S	61	Flexible tube 5" lg. for
S	44	Clamping screw			main valve II
	45	Stud-bolt	S	62	Regulation plate
S	46	Washer	S	63	Stud-bolt
S	47	Main valve I and II	S	64	Regulating lever
S	- 48	Clamping screw	S	65	End washer
S	49	Stud-bolt	S	66	Spring-ring
S	50	Washer	S	67	Regulating screw
S	51	Valve-cover	S	68	Milled nut
S	52	Taper pin	S	69	Compression spring
S	53	Valve tappet	S	70	Ball
S	54	Compression spring	S	71	2 Flexible tubes 15" lg.

PILE-LIFT AND FEELER

ST	113	Cross-piece	ST	148	Screws for same
ST	114	Threaded spindle	ST	149	Nut
ST	115	Cone-wheel with thread	ST	150	Spring-bolt, pawl-lever
ST	116	Cone-wheel, plain	ST	151	Spring counter-support
ST	117	Taper pin	ST	152	Nut
ST	118	Shaft for the cone-	ST	153	Spring
ST	119	and ratchet wheels Clamping bearing	ST	154	Spring-bolt of the starting lever
ST	120	Screw	ST	155	Spring counter-support
ST	121	Fibre washer	ST	156	Nut
ST	122	Spring	ST	157	Spring
ST	123	Set-ring	ST	158	Link of the feeler
ST	124	Screw	ST	159	Bolt in the link
ST	125	Ratchet wheel	ST	160	Screws for the link
ST	126	Taper pin	ST	161	Pawl of the feeler
ST	127	Handle, ratchet wheel			release
ST	128	Lever for the pawl		162	Adjustment lever
ST	129	Pawl		-	Bolt for same
	130	Bolt			Spring-ring Nut
	131	Taper pin		165 166	Lever for feeler & link
	132	Stop cam		167	Screw
	133	Screw		168	Feeler spindle ½" Ø
	134	Lever for the table lift		169	Set-ring
	135	Pawl		170	Pin for same
	136 -	Screw	ST	171	Lever for the draw-bar
	137	Spring-ring	ST	172	Taper pin for same
		Taper pin stop	ST	173	Screws for lever & link
	139	Connecting rod	ST	174	Link for the angle-lever
		Bolt in table lift lever		175	Angle-lever
	141	Bolt in the cam		176	Bolts for same
		Taper pins for same		177	
	143	Feeler cam		,	2 Washers
	144	Screw .			Feeler bar 2 Washers
	145	Starting lever		181	Nut
	146	Screw			Small wooden roller
	147	Tumbler		183	Clamping rings
0.1	- 1/			- 5	1 0 0

FEED-TABLE

N	44	Feed-table	N	69	Washers
N	45	Table flange	N	70	Stripper springs
N	46	Lowering screws	N	71	Screws
N	47	Hexagonal screws	N	72	Washers
N	48	Screw for tightening up	N	73	Blower rail
N	49	Left-hand graduated	N	74	Fixation screw
		strip	N	75	Washer
N	50	Right-hand graduated	N	76	Regulating discs
		strip	N	77	Spring washers
N	51	Rivets for same	N	78	Screws
N	52	Stack-board	N	79	Gas-pipe
N	53	Bolt	N	80	Clamping supports
N	54	Screw	N	81	Small brackets for the
N	55	2 Outer stack-rails			runner bar
N	56	2 Inner stack rails	N	82	Screws
N	57	Central stack rail	N	83	Washers
N	58	Connecting rail	N	84	
N	59	$\frac{3}{8}$ " Fixation screws	N	85	Screw
N	60	$\frac{5}{16}$ " Fixation screws	N	86	Runner
N		Wooden central bar	N	87	Small plate for same
N	62	Lateral stack bars	N	88	Wing-nut
N	63	Angle-piece for same	N	89	Round bar 8 mm. Ø
N	64	Square-headed screws	N	90	Round bar 6 mm. Ø
N	65	Washers	N	91	Paper-stops
N	66	Wing-nuts	N	92	Clamping rings
N	67	Flat iron rail for the	N	93	Link for the round bars
		stripper springs	N	94	Flexible tube 13½" lg.
N	68	Fixation screws	- 3		for the blower-bar

DELIVERY-TABLE

В	29	Delivery table	43	В	42	Blast-tube on the
В	30	Holder				delivery table
В	31	Rail		В	43	Tube-clips for same
В	32	Small spacing plate		В	44	Tube on the side-frame
В	33	Lowering screws		В		Tube-clips
В	34	Stop pin in the rail		В	46	Screws
В	35	Milled head screw	T.	В	47	Screws
В	36	Side-lays		В	48	Cock
В	37	Screws		В	49	Flexible tube 12" lg.
В	38	Wing-nuts		В		Flexible tube 32" lg.
В	39	Stop screws for the		В	51	Clip for the 32" lg.
		side-lays				flexible tube
В	40	Graduated strip		В	52	Screw
В	41	Rivets for same		В	53	T-square guide
						•

ILLUSTRATIONS

REFERRING TO THE
HANDLING AND WORKING
AND TO THE INDEX OF PARTS
OF THE WHEEL-AWAY
SHEET-FEED AND DELIVERY
APPARATUS OF THE

AUTOVIC PLATENS

FIG. 12

I below O:

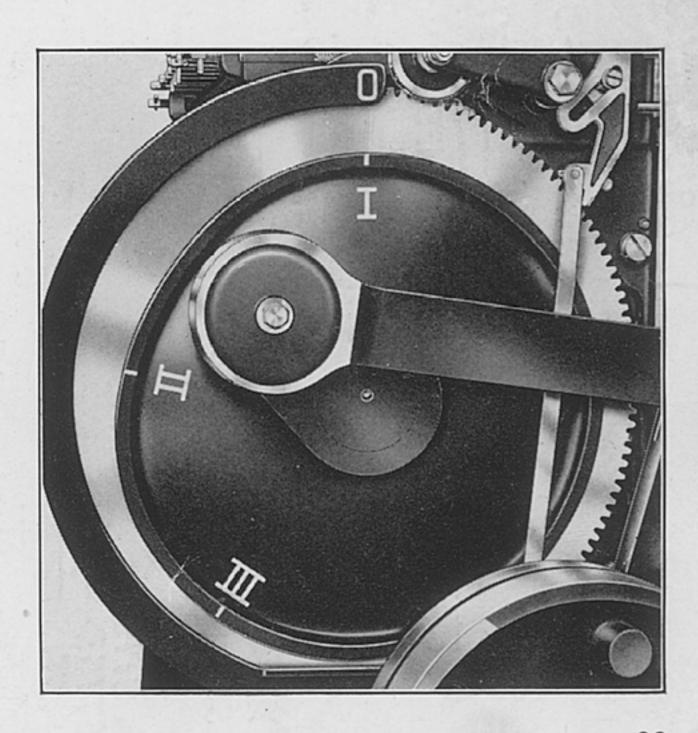
For disconnecting the feeder

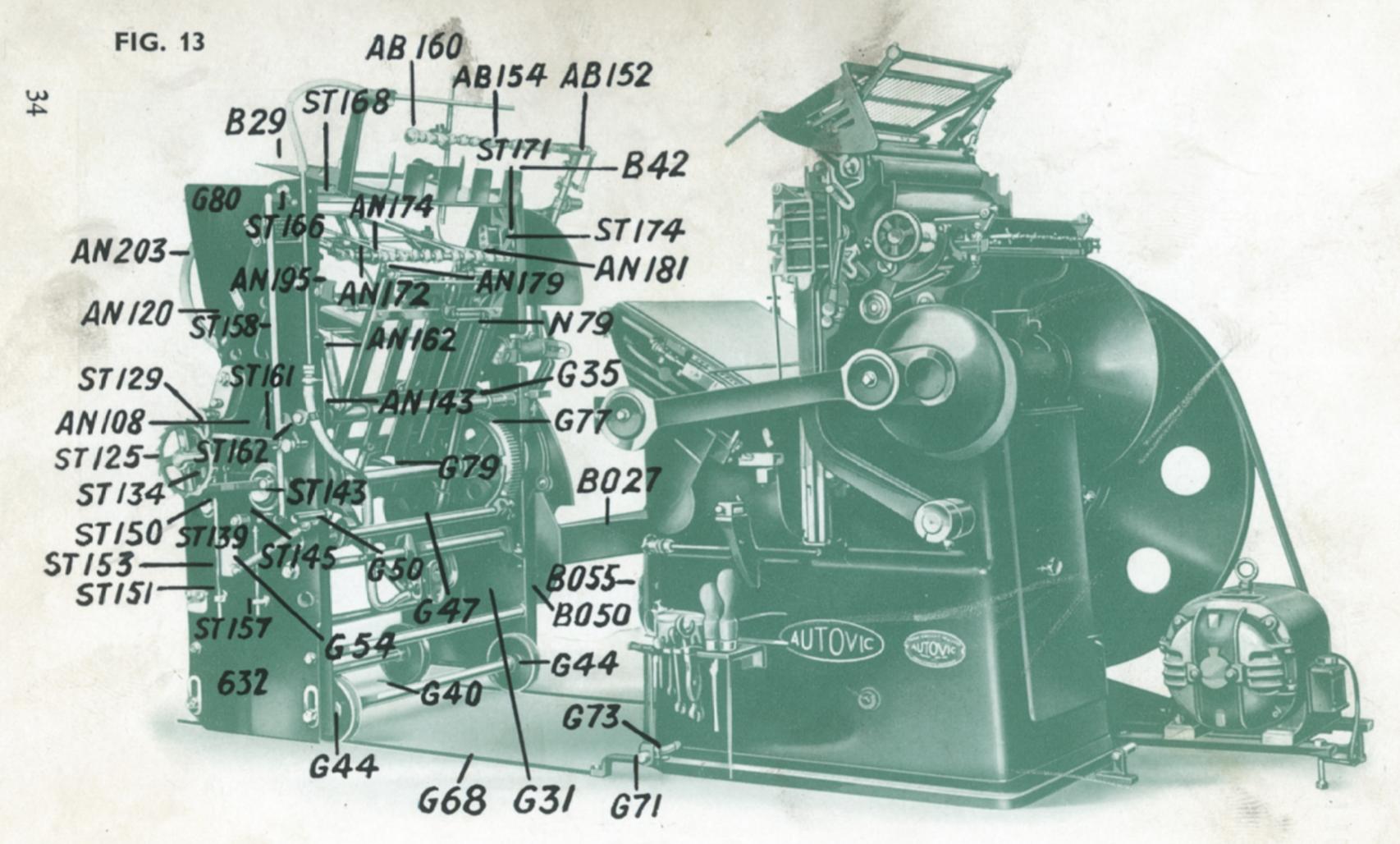
II below O:

For setting the delivery suction-bar

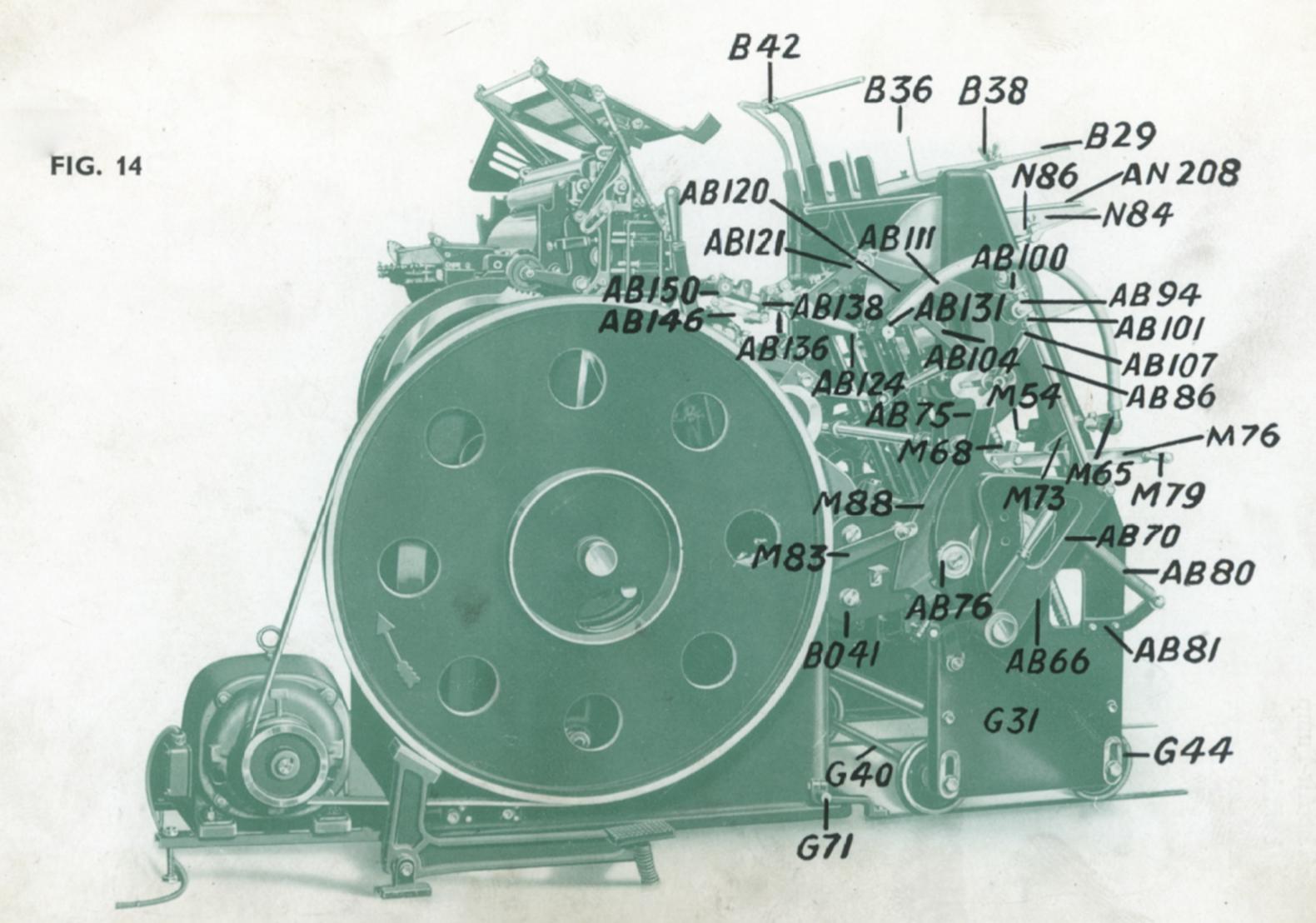
III below O:

For setting the feeder suction-bar

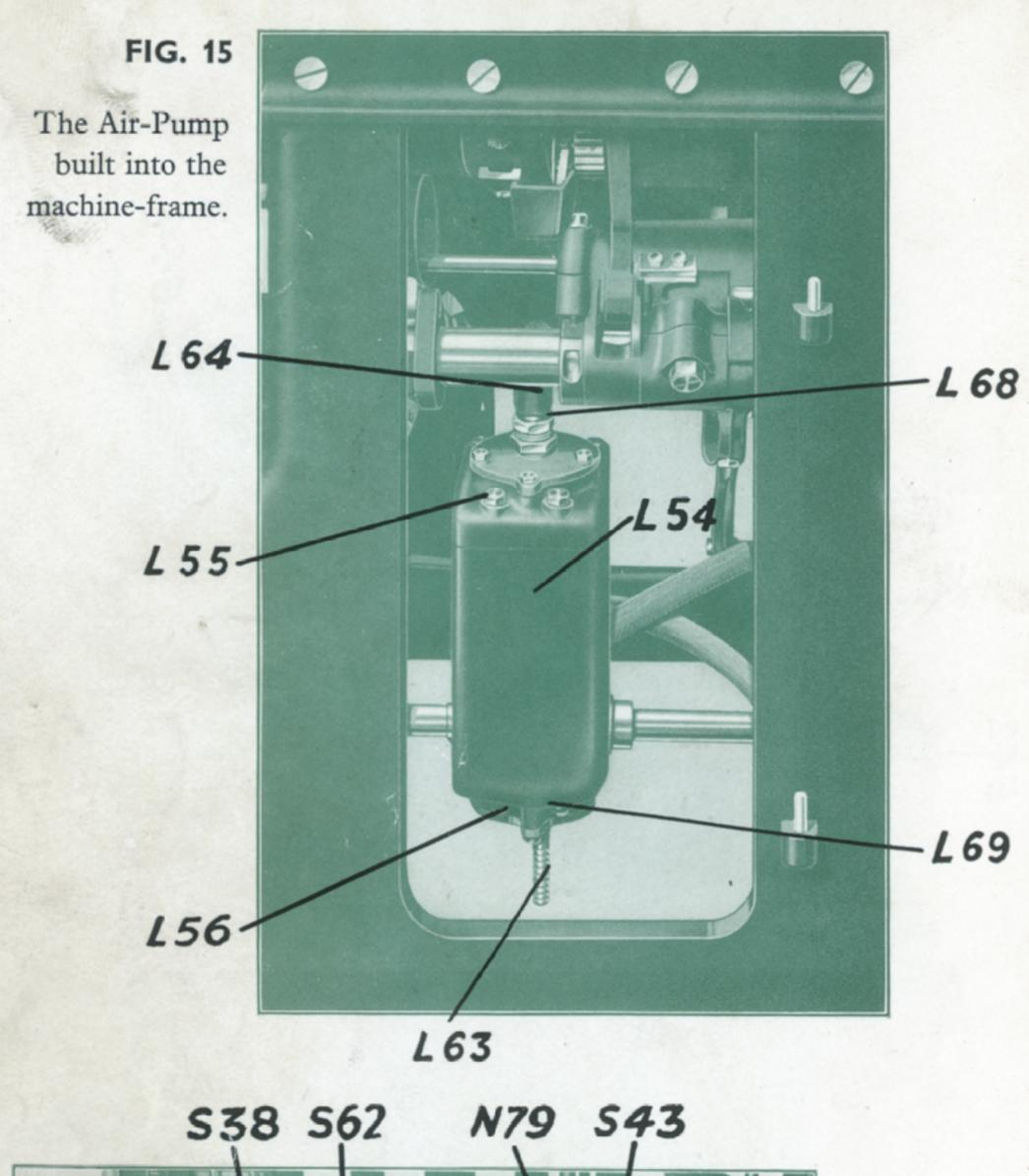


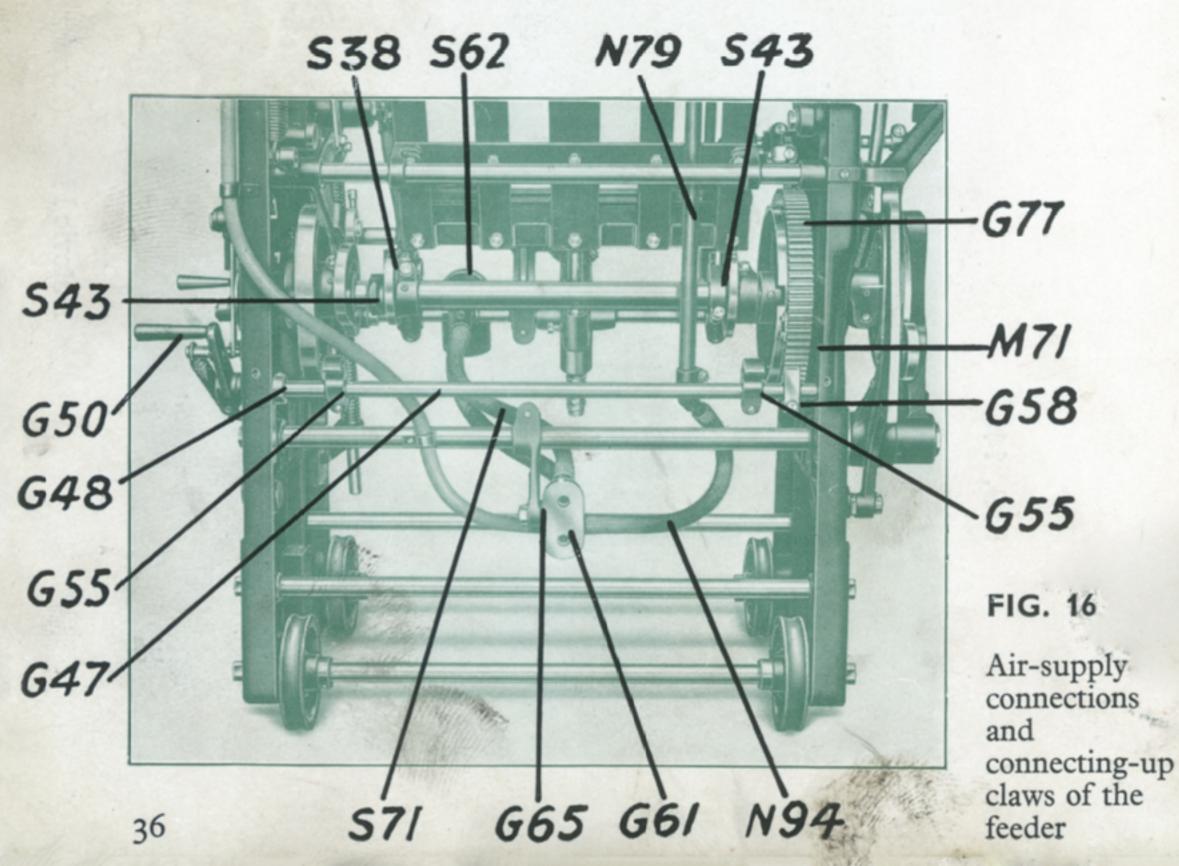


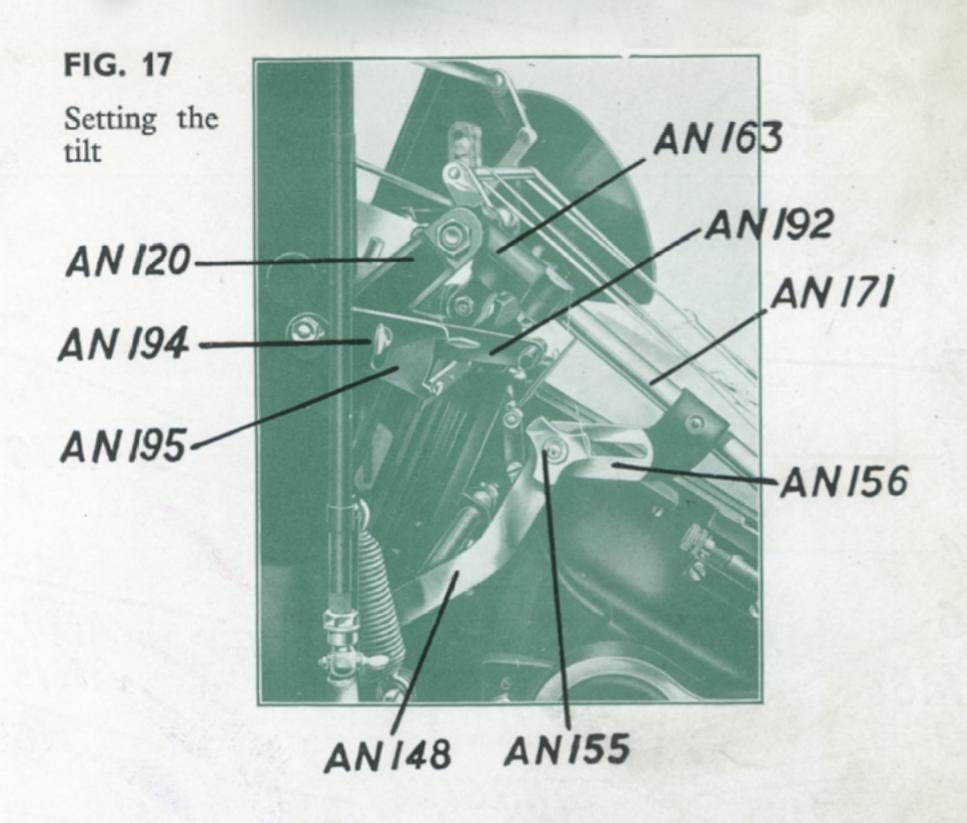
Autovic Platen (showing the Automatic Feeder disconnected)

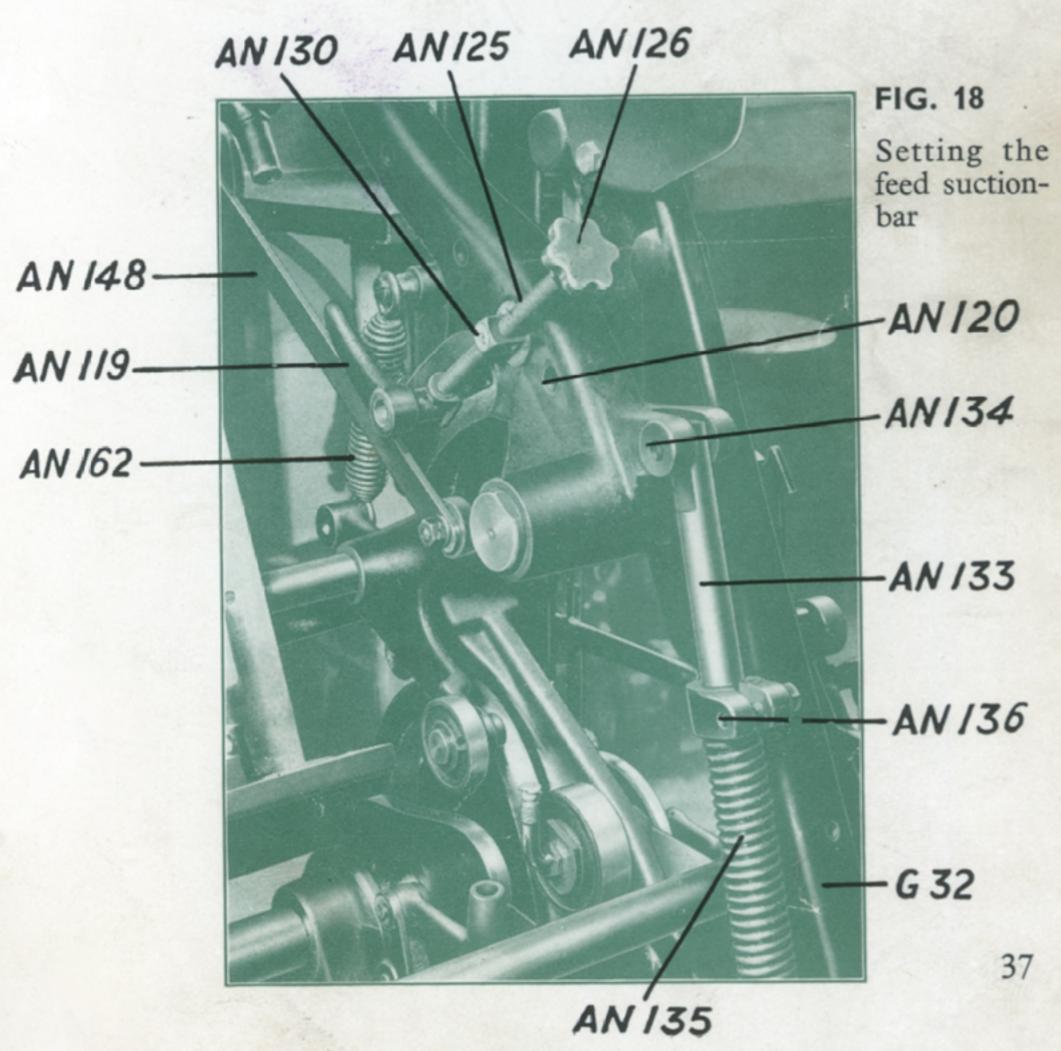


Autovic Platen (showing the Automatic Feeder in its working position)









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