

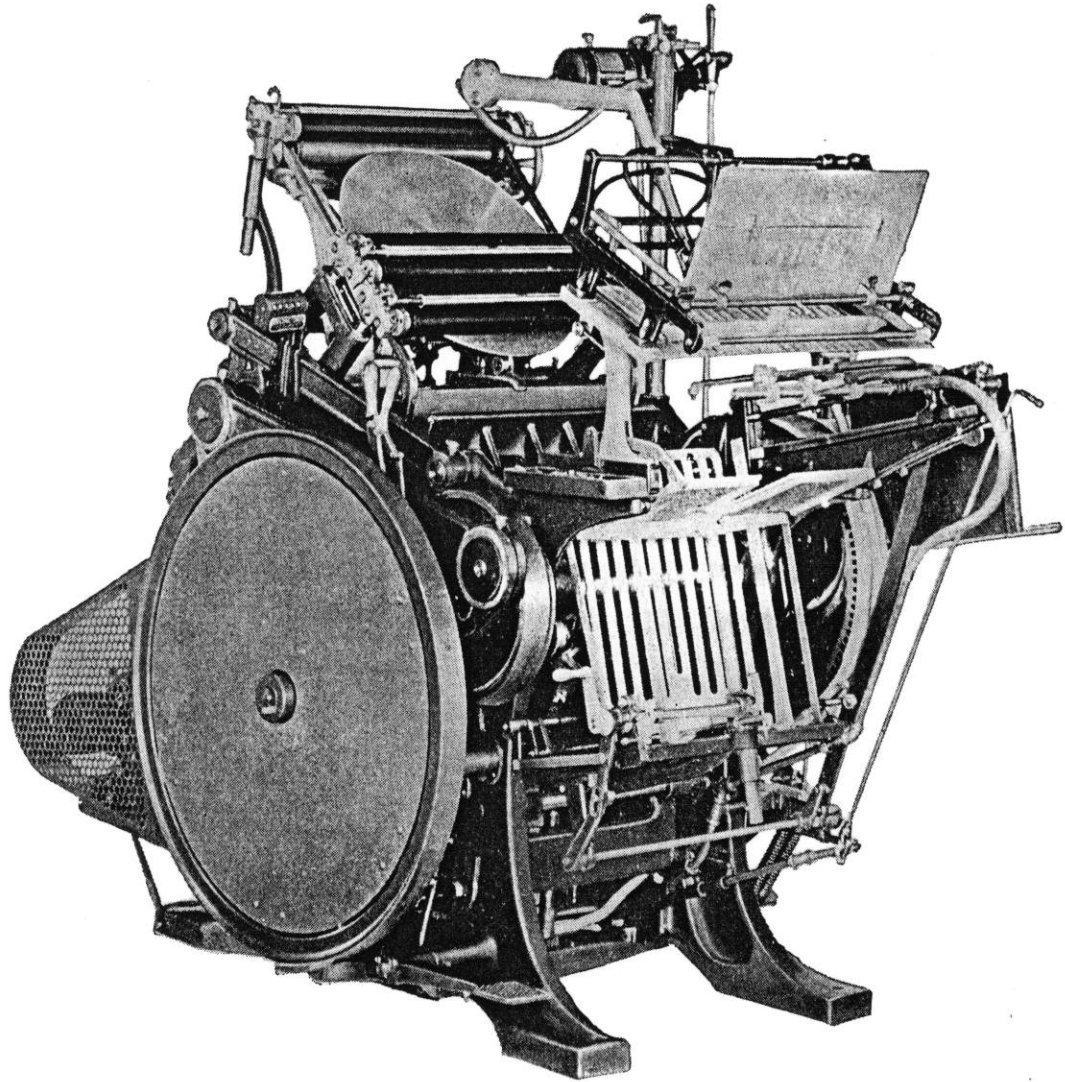
Operation
AND
Maintenance

AN INSTRUCTION BOOK
for **KLUGE**
PRESSES AND FEEDERS

The
Operation
and
Maintenance
of your
KLUGE

Brandtjen & Kluge, Inc.

Saint Paul 3, Minnesota, U. S. A.



Foreword . . .

Our thought in preparing this book has been to pass on to you in words and pictures the main points covering the care and operation of your Kluge Automatic Press and Feeder.

To us here at Brandtjen & Kluge, for well over a quarter of a century, our foremost objective has been to build the finest printing machinery we could manufacture.

Sturdy construction and durability, coupled with brilliant performance, has always been our goal in the building of this precision made equipment. We know, when the proper care is taken, that the utmost in service, satisfaction through use, and economy of operation is going to be found in every product bearing the Kluge name.

It is our hope that you will carefully study this book so that you may receive the maximum results and lasting service from the Kluge equipment you have installed.

We have built a precision machine. Its performance depends on the care you give it.

Henry A Brandtjen Jr.

President

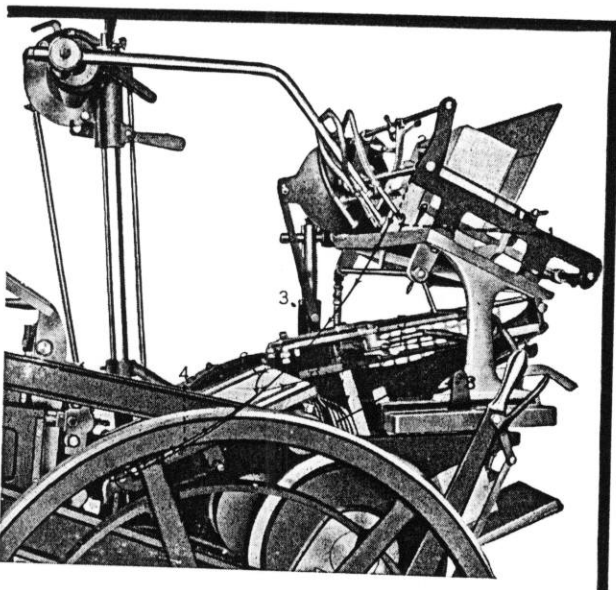
Brandtjen & Kluge, Incorporated

How To Operate...

THE principles of KLUGE operation make it an automatic press or feeder easy to set and operate. The feeding and delivery are both accomplished by suction. The simplicity of Kluge operation makes it practical on short as well as long runs and every job from light weight to heavy weight stock, printed on a platen press, is handled easily when automatically fed with a KLUGE. The job must be made-ready . . . whether you are feeding the job automatically or by hand . . . and after make-ready is completed the operator can set the feeder as quickly as he can wash his hands for hand feeding.

If you are printing a 2x3 inch card on the 10x15 or a full sheet on the 12x18 you can count on the KLUGE feeding the job . . . in fact oversize sheets extending over the top of the platen can be fed, which makes the preferred dip-feeding of letterheads a simple job for the 10x15.

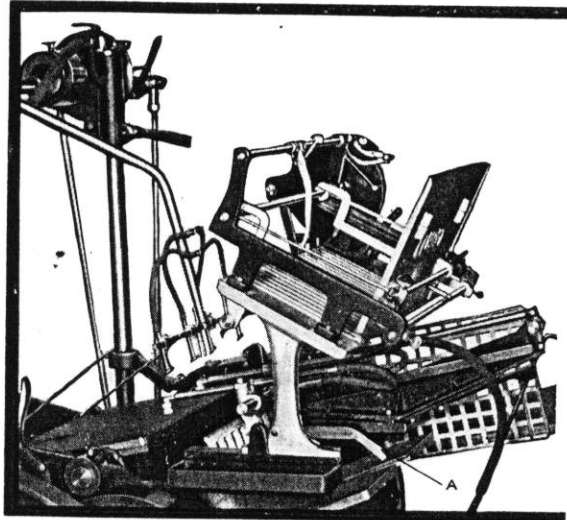
On the pages that follow we are picturing the more important steps in the operation and care of your KLUGE equipment. A careful study of the pages that follow should enable you to operate your KLUGE successfully with a little practice on various stocks.



1. Feeding arm grasps sheet, raises it slightly.
2. Moves sheet forward completing separation and
3. Delivers sheet to pins with decreasing speed.
4. Feeding arm follows through and returns fast.
5. Delivery arm goes in high.
6. Drops down to grasp sheet
- as 7. Depressible grippers release it.
8. Withdraws sheet and deposits it in position on pile.

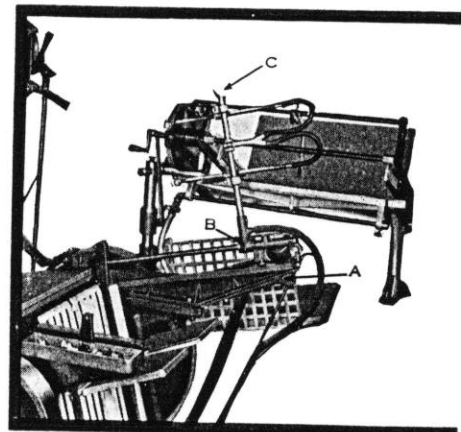
1 - Open the Magazine

Turn the press forward by hand until the delivery arm mechanism is clear of the bottom of the magazine. Raise the magazine latch "A" so as to release it from the pin to which it is fastened. Now swing the magazine open to the right as far as it will go. Note: On the Kluge Feeder attached to C&P Presses there is a thumb nut on the left hand side which fastens the magazine to the feeder.



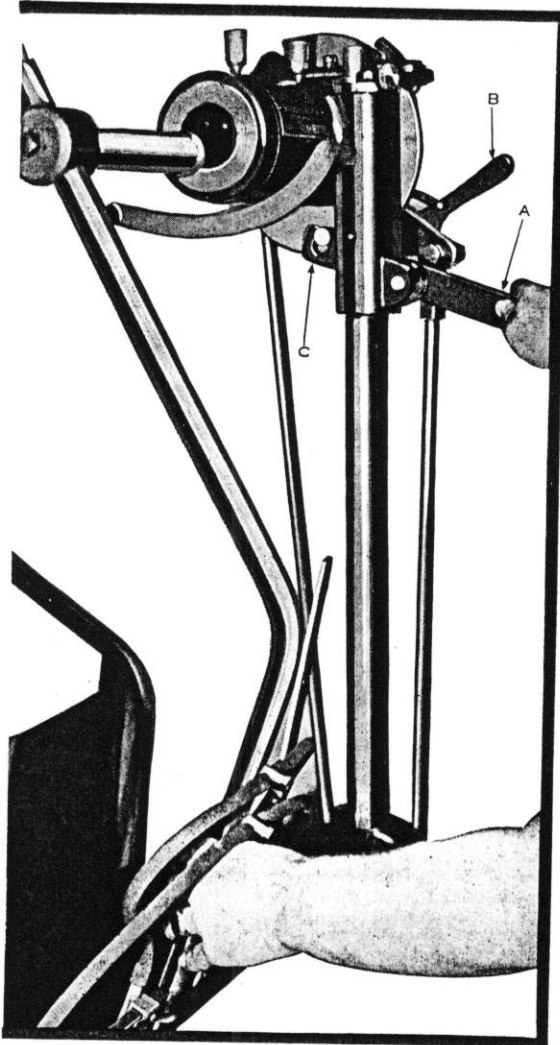
2 - Raise the Delivery Arm

Pull the delivery arm back as far as it will go and lock. The lock "A" is located directly under the delivery track bracket. The arm is locked by pushing the delivery arm lock lever to the right. After the delivery arm is locked, then loosen bolt "B". Raise delivery arm "C" by swinging it up to the right. Tighten bolt "B". Note: On the Kluge Feeder attached to C&P Presses the lock bolt for the delivery arm is found on the delivery track bracket, but is a hook arrangement instead of the delivery lock lever found on the Kluge Automatic Press. The delivery arm shown in the illustration has been pulled back, locked, and raised in the correct manner.



3 - Lock the Feeding Arm Head

Locking the head is a precaution which must be observed to prevent damage which will occur if the press is run during make-ready. Form the habit of locking the head before raising the feeding arm.



Turn the press by hand until the feeding arm is in locking position. This is accomplished when the pin "C" on the feeding arm head fits into the slot on latch "A". Now lock the feeding arm. This is done by pressing down on latch "A". The feeding arm mechanism will now be locked and held in place by the pin.

4 - Raise the Feeding Arm

After the feeding arm is locked in position, the next operation is to raise the feeding arm. This is done by releasing the feeding arm lock lever "B" . . . then with the hand, as shown in the illustration, raise the feeding arm with an upward movement following through until it has gone as far back as it will go. The press may

now be operated in the same manner as an open press.

It is important to remember that the feeding arm head must be locked before the feeding arm is raised.

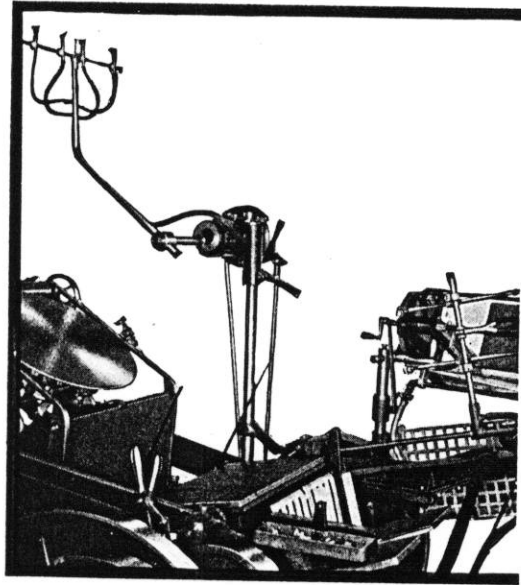
5 - Make-Ready

Turn the press by hand until the grippers are up as far as they will go. Remove the bottom guides and sheet holder tongue from the platen. Release the nut holding the side guide in position, raise the side guide, tighten the bolt. This will keep the side guide free from interfering as the old packing and tympan paper is removed and the new packing and tympan paper inserted. When the packing and tympan paper have been put on the platen, then release the side guide and allow it to come back to a flat position.

The type form should be locked in the chase so that the printed sheet will be in the center of the platen from left to right. The form should be locked so that the guides are never more than $3\frac{1}{2}$ inches from the lower edge of the platen.

The chase containing the form can now be placed in the press. The grippers and side guide must be moved out of position so as to clear the form as the impression is made on the tympan. Proceed now with the usual make-ready and set the bottom guides.

The bottom guides should be evenly spaced . . . not too close together nor too far apart . . . so that the feeding arm will deposit the sheet in a position where it can immediately be placed in register by the side guide. On certain jobs it may be advisable to use four guides or gauge pins at the bottom instead of two. This is especially true on larger sized sheets of stock for it allows the sheet to remain in position against the guides or gauge pins. Place outer suction tips of feeder arm half way between lower gauge pins and outer edge of sheet, and place the two center tips inside lower gauge pins, dividing space equally. Adjust dummy suction foot to insure sheet being placed under side guide. These positions may have to be varied according to weight of stock.

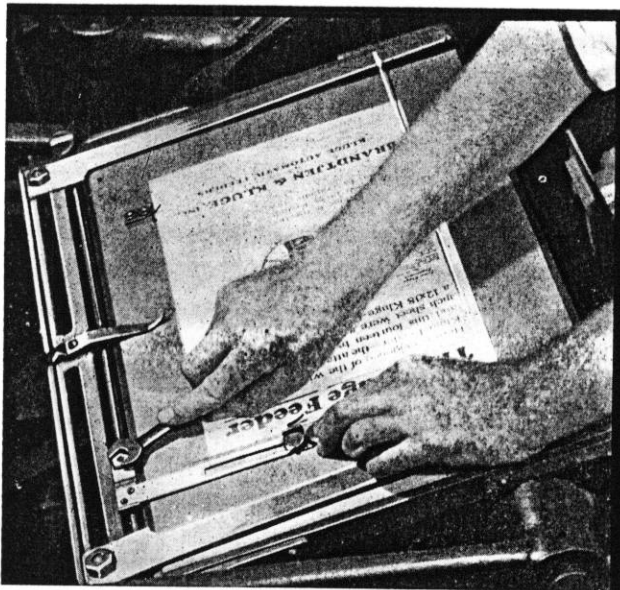


6 - Set the Side Guide

The side guide on the Kluge Automatic Press and Feeder may be operated from either the right or left side of the platen. Your Kluge Press has been shipped from the factory with the side guide on the left. All that is necessary to change it to the right side is to locate the small cam to be found at the bottom and at the extreme right of the platen. Remove this cam and replace it with the right side guide cam furnished. Remove the left side guide and replace it on the RIGHT of the platen with the right side guide.

Left Side . . . to set the side guide on the left, pull the grippers to the platen, by hand, and with the grippers in that position move the side guide to the side register mark. Tighten the nut to keep the side guide in position. Allow the grippers to return to "up" position . . . you will notice that the side guide has moved to the left but when you bring the grippers down again it has moved to the right. The action of the side guide in operation is that when the grippers are down the side guide will have moved the sheet to the right into proper register.

Right Side . . . only occasionally is it necessary to register in a sheet on the platen with the side guide on the right. However, as explained above, this is a simple change and is quickly and easily made. When the change has been made you may proceed to set the right side guide the same as the left, except that when the grippers have been allowed to return to "up" position you will notice that the side guide has moved to the right.



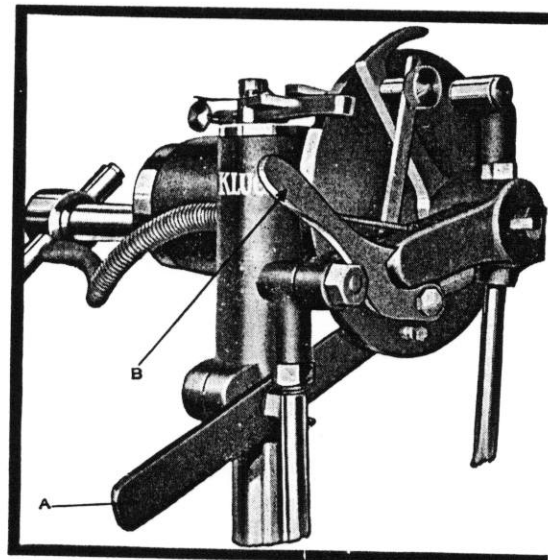
Caution . . . in either case, whether the right or left side guide is used, be sure that you have tightened the nut on the side guide so that it will remain in proper position during the length of the run to be made on the press. After the side guide has been tightened in position, further and more accurate setting may be had by turning the knurled screw on the guide to either the right or left.

7 - Set the Sheet Holder Tongue *

With the grippers "up" and with a sheet of the stock to be run hand fed to the proper position on the platen, select a sheet holder tongue which, when fastened to the sheet holder tongue assembly, found at the bottom center of the platen, will be ON the sheet approximately $\frac{1}{4}$ inch. Now pull the grippers better than half-way down . . . the tongue should be OFF the sheet. If the tongue is not OFF the sheet then select a shorter tongue to insure its being OFF the sheet before the side guide touches the sheet to move it to register. Note: The tongue must "ride" the tympan all the way . . . if it raises as the grippers are almost touching the platen, then bend the tongue so that it remains on the tympan. It should be remembered that the sheet holder tongue is used only to hold the sheet from bouncing as it comes in with the feeding arm. The tongue should never be so tight against the tympan that it will keep the sheet from going under it.

8 - Lower the Feeding Arm

Turn the press by hand until the grippers are laying flat on the platen. Now lower the feeding arm until it slips in the catch on lever "B". Unlock the feeding arm head by raising up on latch "A". This will release the feeding arm from the pin on the feeding arm head. Turn the press by hand making certain that the suction tips on the feeding arm clear the side and bottom guides. The suction tips should be placed in position NEXT to the guides, allowing room for suction tips to easily pass the guides as the feeding arm moves down.



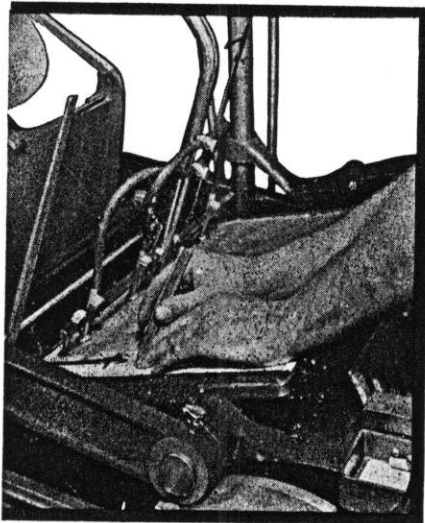
* For 10x15 presses starting with serial number MA102153 and 12x18 presses starting with serial number NA125561-C, turn to page .27

The inverted "V" . . . it is advisable to cut two inverted "V" shapes in the tympan at the right of the side guide . . . cut one at the top and one at the bottom of the side guide tongue. This will prevent the sheet from going under the side guide. Note illustration.

Dummy Suckers . . . a dummy sucker "C" shown in the illustration should now be placed in position about $\frac{1}{8}$ inch from the register mark on the left side of the platen.

Suction Tips . . . determine the correct suction tips or suckers for the job. Furnished with the press are aluminum, straight side rubber, and bell shaped rubber suction tips. For the average job the aluminum suction tips are usually the ones to use. For heavier

stock the straight side rubber suckers may be used or it may be that you will want to use the bell shaped suckers. This is an operating adjustment and a little practice on this point will clear it in the mind of the operator.



It should be remembered that under certain conditions two suckers are more efficient for a specific job than four suckers. This is particularly true of "wavy" stock where concentrated suction in two spots is needed to carry the sheet to the gauge pins. In the event you are using only two suckers be certain that you shut off the air on the two unused suckers by closing the

screw valve on the feeding arm at the point where the unused hoses are fastened.

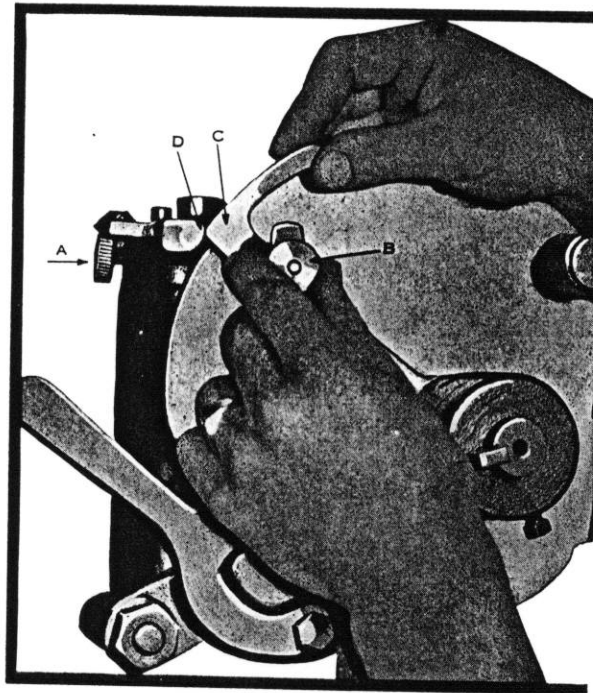
To change from one set of suction tips to the other you need only detach the individual hose, slide the aluminum feeding vacuum tips off of the bar and put on the ones designed to hold the rubber suction tips. If you want to change from the straight side rubber tips to the bell shaped rubber tips, remove the screw collar which holds the rubber tip, take out the straight side tip and replace it with the bell shaped tip.

9 - Set the Air Release Valve

Turn the regulating screw "A" on the feeding arm head to the left until the point of the screw is entirely free from the suction shut-off ball. Turn the press by hand until the suction tips on the feeding arm come to within $\frac{1}{2}$ inch or more of the bottom gauge pins, depending upon the weight of stock to be used or the speed at which the press is to be run. Now release regulating screw "B" and allow points "C" and "D" to meet as shown in the illustration. Tighten the regulating screw "B". Allow "A" to remain released until further instructions which are contained in Operation 16.

* *Adjustment of the Feeding Arm* . . . if the feeding arm is too close or too far away from the tympan it may be properly set by making a simple adjustment at the point where the feeding arm is connected to the shaft which extends from the feeding arm head. By releasing the bolt at that connection the feeding arm can be raised or lowered at will. When the proper adjustment is made, tighten the bolt.

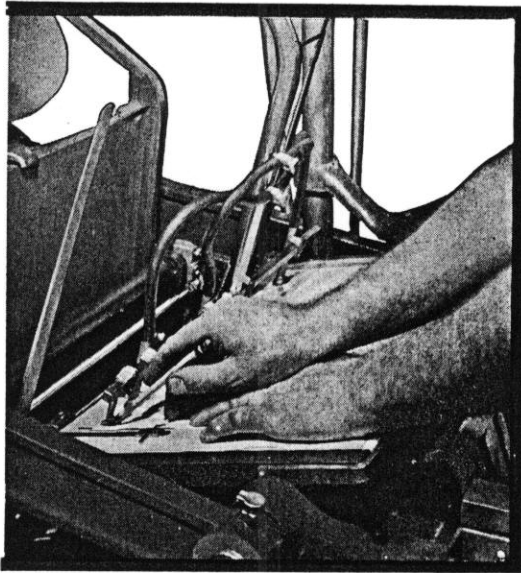
* *Lining up the Feeding Arm* . . . if the feeding arm is not properly lined up, turn the press until the suction tips are parallel with the top of the platen. You can then determine just how much, if any, the feeding arm is out of adjustment. If the suction-tips are not parallel with the top of the platen, then loosen the same bolt referred to in the paragraph above and move the feeding arm to the right or left until perfect alignment is had. Tighten the bolt to keep the feeding arm in position.



* For 10x15 presses starting with serial number MA102153 and 12x18 presses starting with serial number NA125561-C, turn to page 29.

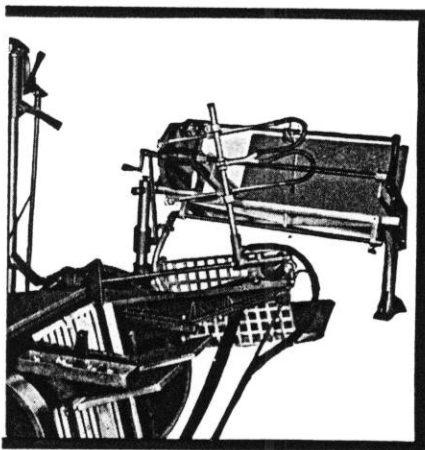
10 - Mark the Sheet for Position

Place the sheet half-way between the left hand register mark and the side guide . . . the grippers must be in "up" position. See illustration. Place a pencil mark on the paper immediately to the



left of the dummy sucker which has been set to assure the sheet going under the side guide tongue. This mark will be your guide as to where and how to set the stock in the magazine. Later instructions will follow on this particular operation. Refer to Operation 14. Note: If you are using the guide on the right side of the platen, then the sheet should be placed half-way between the right hand register mark and the side guide, or just reverse the instructions for the left side guide which appear in this paragraph.

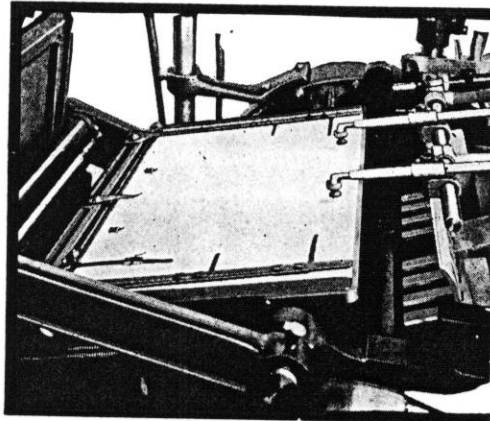
11 - Lower the Delivery Arm



Loosen the bolt on the delivery arm and lower the delivery arm. Tighten the bolt. Unlock the delivery arm . . . and when doing so be sure to hold on to the delivery arm so as to retard its natural downward motion. When it has stopped, then turn the press until the delivery arm fingers have gone all the way in and down.

12 - Set the Delivery Arm Fingers

... now set the delivery arm finger suction-tips in the upper section of the sheet. They should be placed so as to catch the sheet where there is no printing ... as far to the back of the sheet as possible. After delivery arm fingers have been set, it is also advisable to cut an inverted "V" shape in the tympan under each delivery arm finger. This will assist in raising the printed sheet for easier pick-up by the delivery arm fingers. In setting the delivery fingers keep them approximately the space of a 6 point reglet or about $\frac{1}{16}$ inch off the tympan. Under no circumstances allow them to rub on the tympan as this will cause unnecessary wear on the suction-tips and will have a tendency to drag the sheet out of the press.



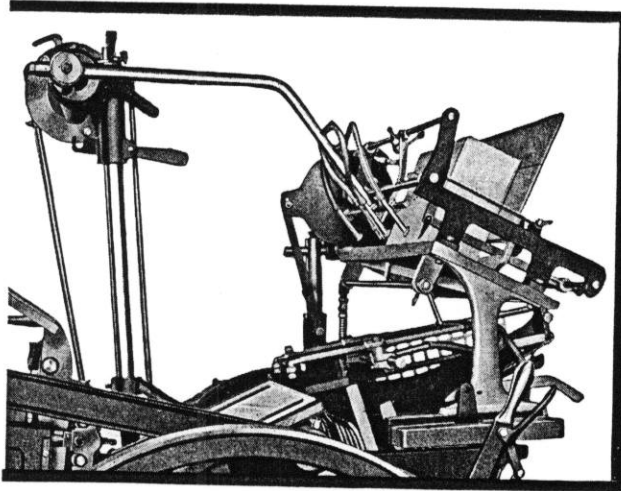
13 - Close Magazine and Lock

This is done by bringing the magazine around to the left and following through until it is locked by the latch at the left hand side of the magazine. Note: On the Kluge Feeder attached to C&P Presses the magazine is brought to the left, following through until the slot is in place with the thumb screw. Now, tighten the thumb screw.

14 - Set the Magazine

To set the magazine, turn the press by hand until the feeding arm suction-tips are as far up and to the back as they will go. They should be in the position shown in the illustration. Remove the sheet from the platen and place it in the magazine. This is the sheet you marked for register in Operation 9. Now, line the sheet in the magazine so that the dummy sucker meets with the mark on the

sheet . . . just as it did on the platen. When this is done, move the left magazine side gauge over to the sheet. Then move the right magazine side gauge over so that it just touches the sheet. This sets

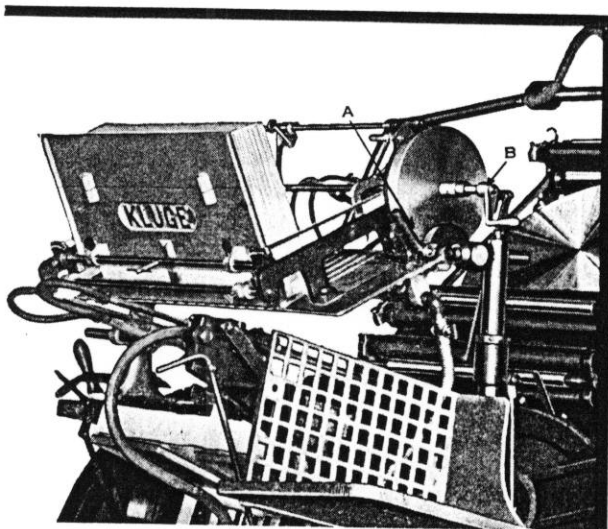


the magazine in proper position for your stock. For further assistance see illustration in Operation 15. The stock may now be placed in the magazine.

To fill the magazine . . . release the elevator pawl release lever "A" so that the elevator advancing plate may be pulled back as far as it will go. In loading the magazine it should not be filled beyond the comber marks cut in the

magazine base plate. If there is not sufficient stock to fill the magazine the elevator advancing plate may be manually advanced by turning the elevator crank "B" clock-wise . . . the elevator pawl release lever "A" should be raised so as to catch in the teeth of the elevator ratchet gear.

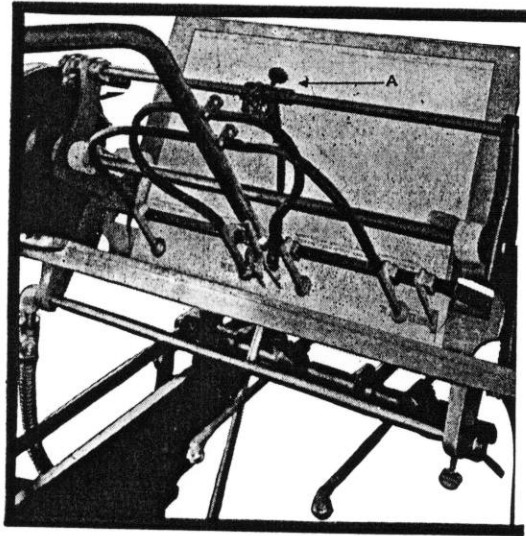
Be sure that the magazine side gauge separator springs are correctly adjusted. These are small pointed springs located on the right and left magazine side gauges. They must be adjusted so that when the sheet passes through them it will be separated away from the rest of the stock and picked up by the feeding arm.



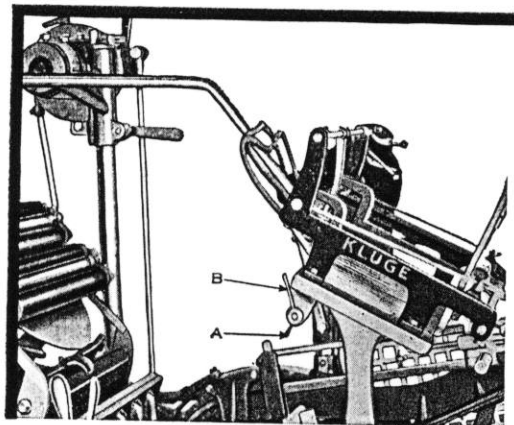
. . . the collars on the magazine to which the lifter tapes are fastened will feed stock up to about the thickness of 8 ply. If heavier stock is run then you should put on auxiliary or "oversize" collars. This applies as well to heavy or bulky envelopes. We manufacture two sizes of oversize collars.

15 - Operating Adjustments

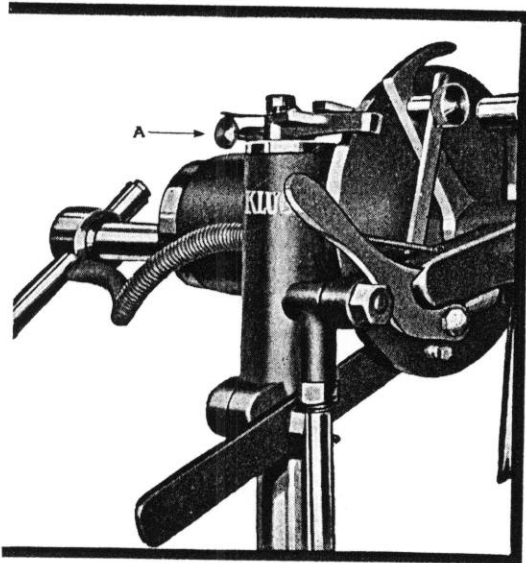
The stock elevator . . . advances automatically as may be required by any weight of stock, the stopping point being regulated by the thumb screw "A" to which the arrow points in the illustration. Turning the thumb screw to the right will lower the stock in the magazine . . . if the stock is set too far away from the feeding arm suction-tips a sheet may occasionally be missed. Turning the thumb screw to the left will raise the stock pile toward the suction-tips on the feeding arm . . . never crowd the stock to the suction tips. The adjustment, when correctly made, should place the sheets approximately $\frac{1}{4}$ inch from the suction tips **WITH THE AIR BLAST OFF** and the final adjustment should be made with the thumb screw.



The blower pipe . . . it is located beneath the magazine and is controlled by a regulating valve. The blower pipe and valve are swivelled and can be adjusted by releasing the thumb nut "A" beneath the upper left hand corner of the magazine and swinging the blower pipe handle "B". At the right front corner of the magazine is the magazine blower regulating valve with which you can turn on sufficient air blast through the blower pipe to separate the stock. The blower should be so adjusted that the front sheets . . . at the marks cut in the magazine base plate . . . are freely floating. Sufficient air blast must be allowed to hit these front sheets so as to separate them and move them to position where they can be picked up one at a time by the feeding arm. Tighten the thumb screw to hold the blower pipe.



16 - Adjust Air Release Valve



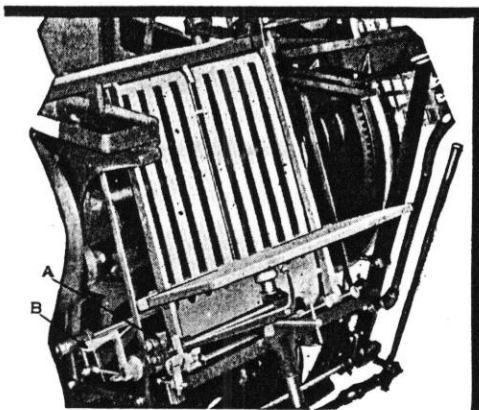
Now that the stock has been placed in the magazine, the press may be started and the air turned on by turning the air control located at the right of the feeder to the LEFT.

Referring to the illustration you will note the next operation is to adjust regulating screw "A" on the Air Release Valve. If the feeding arm is bringing the sheet down too hard against the sheet holder tongue and the bottom guides, adjust the regulating screw "A" by turning it clock-wise (to the right). If the sheet is not coming down far enough, then adjust the

regulating screw "A" by turning it counter clock-wise (to the left). It is necessary to change the setting of the regulating screw "A" to compensate for differences in speed and weight of stock. The adjustment of regulating screw "A" is done while the press is running.

17 - Delivery Table

The delivery table and magazine is located under the feeding magazine. The 10x15 will hold twelve inches of stock and the 12x18 will hold thirteen inches of stock. The delivery table lowers automatically and is self-adjusting for any thickness of stock. The sheets are deposited between the two side guides of the delivery table as accurately as the stock is cut.



While the delivery table is automatically operated it can be hand operated by releasing the regulating ratchet pawl plate "A" and raising or lowering the table by turning crank "B" in the desired direction.

"Selec-Tone" Distribution

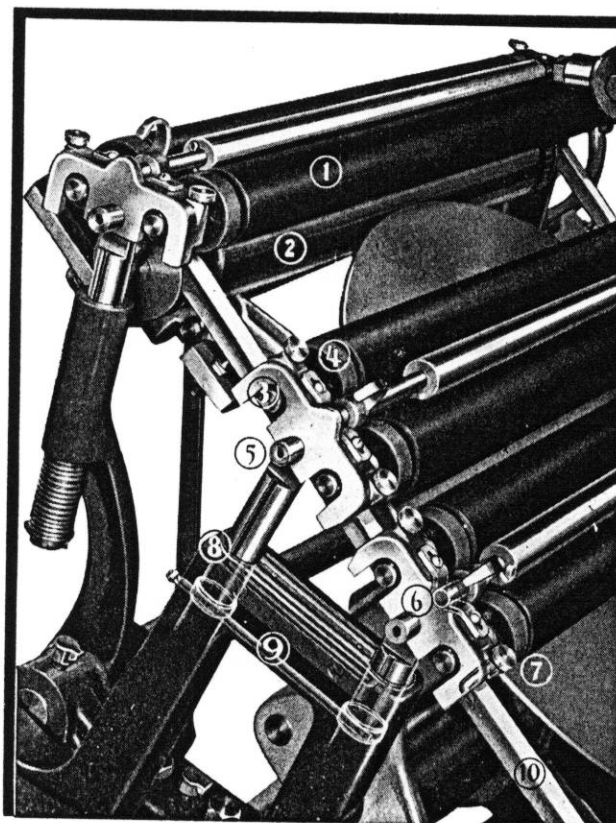
Kluge Ink Distribution is controlled with the "Selec-Tone" system. This includes positive control of the rotation of the disc, permitting the operator to adjust it to a degree to meet his convenience, depending upon the form. With this Kluge construction it is possible to run varying amounts of ink across the face of a form as conditions require, such as light forms on both sides and a solid color in the center, or any other combination. The only way the proper amount of ink can be maintained on the form is to have positive control of the inking mechanism from the fountain to the form. This you have on the Kluge Automatic Press.

The Kluge Fountain . . . is an integral part of the press, mounted at the rear and below the ink disc where it is easily accessible. Adjusting screws placed at the rear permit an adjustment to be made without danger while the press is in operation and as well enable the operator to have full view of the printed sheet.

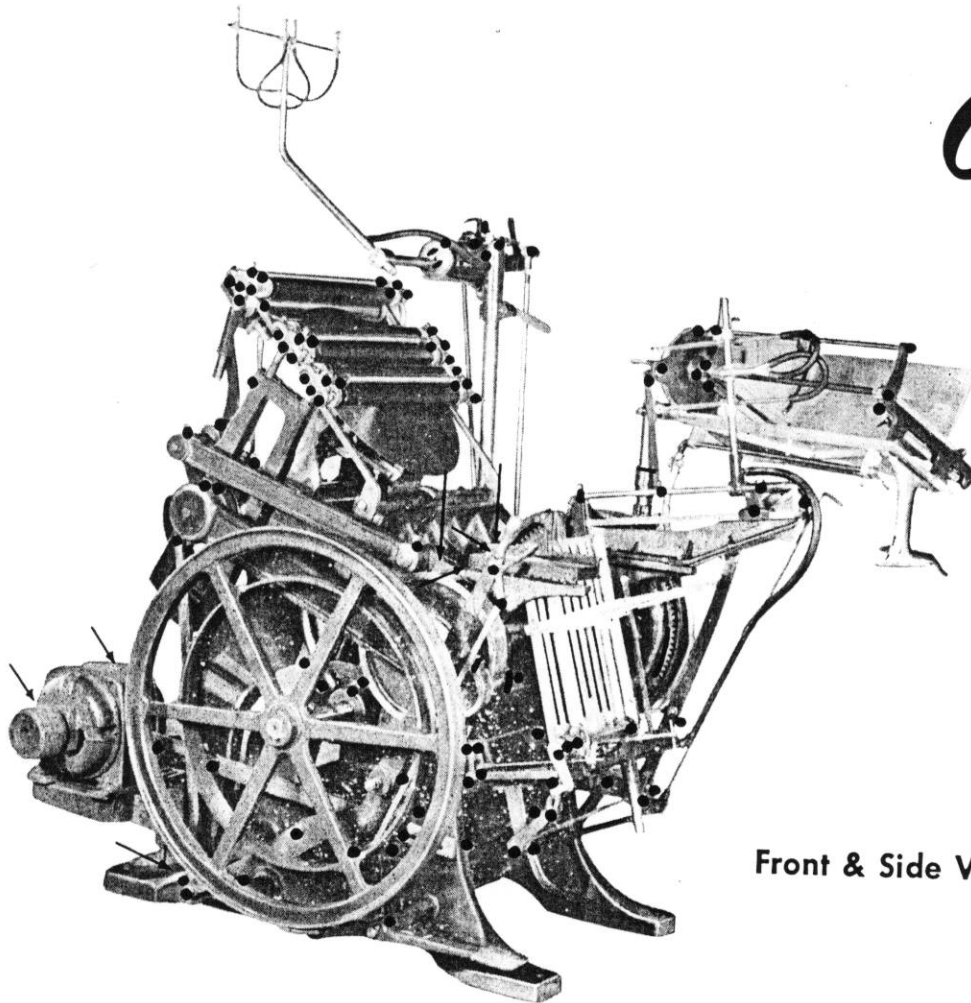
Roller Assembly

1. Distribution rollers with rider.
2. Polished fountain roller.
3. Roller cores mounted on ball-bearings.
4. Micarta roller trucks, sure grip and quiet action.
5. Oil reservoir for saddle pins.
6. Screw adjustment of vibrators, insuring proper contact.
7. Spring roller-retaining pins.
8. Saddle rods keyed to prevent turning.
9. Thorough lubrication of saddle rods by oil chambers and rings of felt.
10. Steel replaceable roller tracks.

(Continued on Page 20)



Oiling



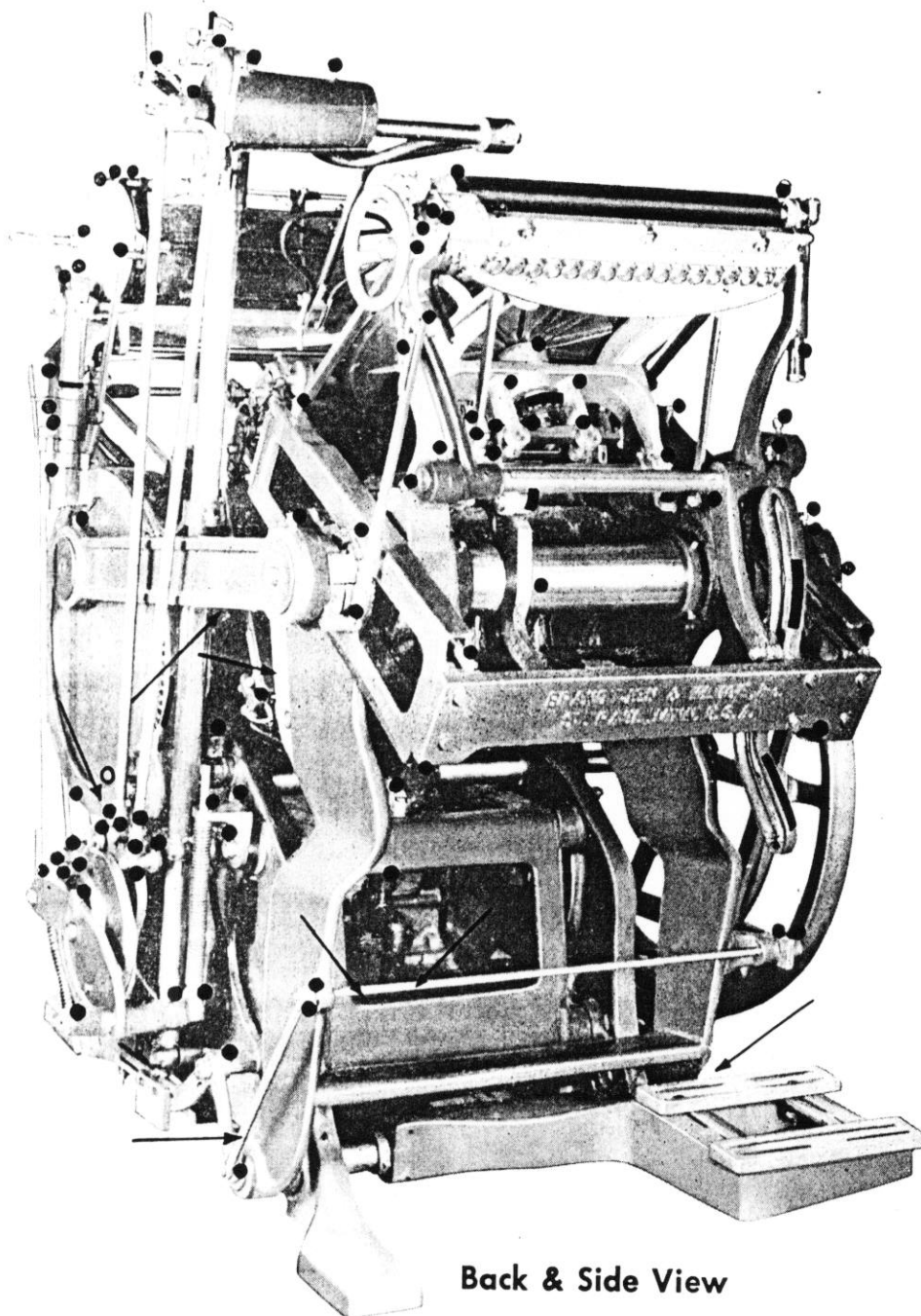
Front & Side View

KEEP YOUR MACHINE CLEAN. Oil on the outside does not necessarily mean that you have sufficient lubricant where it is needed. **OIL ALL MOVING PARTS** thoroughly.

The Kluge Automatic Press should be oiled every day before using and oftener if the press is kept on heavy duty work. The oiling should be done systematically so that no moving part is overlooked. Arrows point to oil holes not visible on the photographs. Attention is called to the four wick packed bearings in back of the platen when the press is in "closed" position; to the motor; to the wick packed holes which lubricate the bed shaft; to the two holes at the base of the pump; to the moving parts of the sheet holder tongue assembly located at the bottom, center, of the platen; and to the inside and outside of the cam on the feeder side.

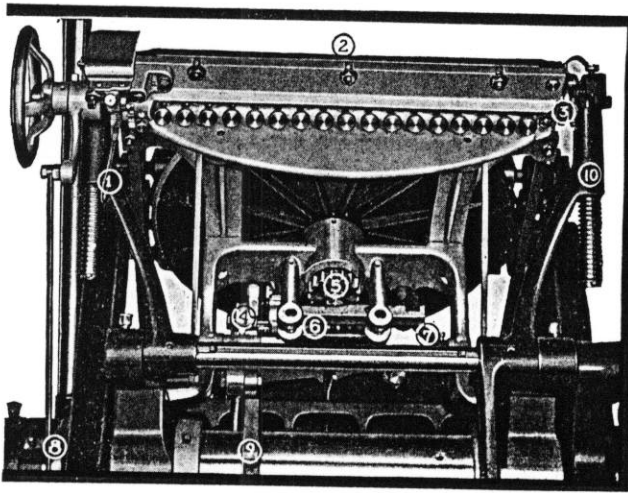
The Kluge Automatic Press is best oiled with the machine in "closed" position. When these oil holes have been thoroughly lubricated, turn the press by hand and complete the oiling operation. While it has been our endeavor to produce an easily read oiling chart for your Kluge Automatic Press, showing the oiling spots in color, it should be remembered that **ALL** moving parts must be oiled regularly.

Chart



Back & Side View

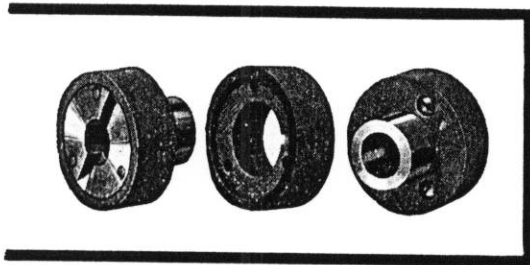
An imported Swedish saw-steel blade is used on the fountain. The 14 adjusting screws on the 10x15 and 17 on the 12x18 are of fine thread and are held in position by lock springs. The adjustment of the fountain through the use of these screws is made from the inside out . . . in other words start adjusting the screws from the center and work to the outside of the fountain. Never jam the blade against the fountain cylinder. There should always be a film of ink on the cylinder.



1. Handle regulating rotation of fountain roller.
2. Removable steel blade.
3. Revolving roller bearer to insure rotation of rollers on fountain.
4. Ratchet adjustment controlling degree of revolution of disc.
5. Adjustment for raising and lowering disc to properly contact rollers.
6. Worm gear drive for controlled rotation of disc.
7. Hand lever to lower disc for cleaning up.
8. Fountain throw-off, synchronized with impression throw-off.
9. Ball-bearing arm controlling disc ratchet.
10. Independent distributing rollers.

From the fountain the two distributing rollers carry the ink to the disc. The four form rollers take the distributed ink from the disc to the form. At no time do the form rollers touch the distributing rollers or fountain, nor do the distributing rollers ever touch the form. With six rollers and two vibrators and one rider the ink is completely milled out before it is taken to the form.

The vibrators and rider are equipped with individual adjustments to insure proper contact, free of spring tension, against each roller, which is so essential in good printing. All Kluge Automatic Presses are equipped with MICARTA Roller Trucks which insure long roller life and quieter, more positive drive. These trucks can be replaced in the event of wear. The press is equipped with an extra set of undersize Micarta Trucks to compensate for the shrinkage of composition rollers. The correct adjustment of the rollers to



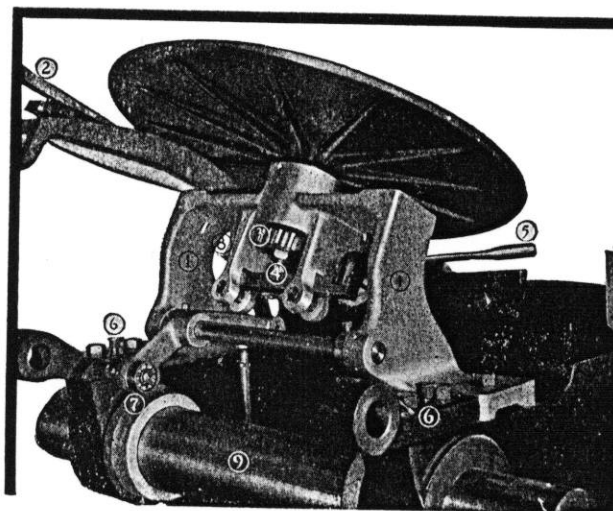
the form is through the trucks which must be the same diameter as the rollers to assure proper rotation of the rollers. Roller tracks are made of steel and are replaceable, although the exclusive use of Micarta Trucks prevent any wear or damage. The replaceable extension roller tracks

connect the bed tracks directly to the fountain roller bearers.

Roller saddles are of aluminum with a saddle pin oscillating in two hardened steel bushings in the roller saddle, the pin being held securely in the rod. Each saddle pin has its own oil reservoir. The roller cores are equipped with ball bearings to insure their turning freely at all times. A spring roller lock maintains the rollers in the saddles. These are a permanent part of the saddle, and by merely turning a thumb nut the roller is either released or locked in position. The saddle rods are keyed to prevent twisting of the saddles.

The Kluge Ink Disc . . . is finished with the center being a trifle higher than the edges and is independently adjustable for proper contact with the composition rollers. It is rotated by a silent worm gear, which controls the degree of rotation. Only by this control of the disc is it possible to place varying amounts of ink on the form exactly where it is desired, and by the use of the worm gear drive it is positive that at no time do the rollers stop the rotation of the disc.

1. Aluminum supporting parts.
2. Solid steel replaceable roller tracks.
3. Worm gear disc drive.
4. Disc contact adjustment screw.
5. Disc lowering device.
6. Back shaft oil reservoir.
7. Double row ball-bearing roller, operates on cam.
8. Ratchet adjustment of disc rotation.
9. Ground carbon-steel non-oscillating back shaft.



Some "Do's & Don'ts"

Roller Tracks . . . be sure that the roller tracks are free of oil and have sufficient friction to turn the rollers without slippage. It is important that the ball bearings at the end of the cores are cleaned regularly. It is a good practice to soak the ball bearings in kerosene over the week-end and when put back on the press they should be thoroughly oiled with a light grade of machine oil.

Rubber Hose . . . when it is necessary to run kerosene through the rubber hose on the press to clean any part of the Kluge, such as the pump, etc., get yourself a piece of ordinary garden hose and use it instead of the hose supplied with the press. Kerosene allowed to stand in the rubber hose will most usually cause the rubber to become spongy.

Top Bail of the Platen . . . always be sure the top bail on the platen is down and in position. If this is not done it may cause damage to the feeding arm or the delivery arm by catching one or the other and not allowing it to get out of the press. If the feeding arm catches the top bail the suckers are apt to break and it might also twist the headshaft. Instructions on how to line up the suckers on the feeding arm are to be found in Operation 9.

Cutting Stock . . . when cutting stock to be run be certain the knife on your paper cutter is sharp in order that a clean edge is insured. Paper cut with a dull knife will have a tendency to cling together and the result will sometimes be two sheets being fed into the press at the same time.

Spongy Tympan . . . avoid spongy tympan by inserting a celluloid packing sheet directly under the tympan paper.

Speed . . . do not attempt to run every job at top speed. Certain jobs will require different speeds, depending upon the stock used, colors of ink used, and register required.

Setting the Press . . . it is recommended that you do NOT bolt your Kluge Automatic Press securely to the floor. Bolts may be used in all four of the corners or only in opposite corners of the press BUT THESE BOLTS ARE NOT TO BE DRAWN UP TIGHT. When the bolts have been set through the holes in the feet of the press and into the floor, take a metal saw and remove the heads of the bolts.

On exceptionally rare occasions it may be necessary to deliver a sheet with little or no white space. This can be done without smudging the ink by simply gluing a small piece of emery paper to each of the suction-tips and puncturing the paper to allow the air to get through.

Stopping the Press . . . do not stop the press by jumping on the foot brake. First, turn off the air by turning the air control located at the right of the feeder to the RIGHT. Then turn off the motor switch to stop the motor. Now step on the foot brake. The motor on your press will last longer if you stop your press in the above manner.

Rollers . . . do not allow the rollers to rest on the fountain or ink disc when the press is idle. The press should be left so that the form rollers are over the empty bed and the distribution rollers are over the DROPPED ink disc. The ink disc can be dropped by moving the lever under the ink disc to the RIGHT.

Wash-up . . . the Kluge Ink Disc can be dropped with a lever, which saves a great deal of time in the washing-up of the press. The rollers can, as a result, be washed independent of the ink disc. When not in use the disc should be also dropped to prevent the distribution rollers from becoming flat.

Helpful *Suggestions*

Presented on these pages are a number of helpful suggestions for the proper care of your Kluge Automatic Press. A careful study of these suggestions should assist you in getting the greatest efficiency out of your Kluge Automatic Equipment.

Adjustable Vibrators . . . the vibrators on the Kluge Automatic Press are adjustable and can be set for any degree of contact with the cast rollers, through the adjusting of two simple bearers on the roller saddle. The vibrators may be adjusted for any specific job, temperature, and the like.

Vibrator rollers should be kept oiled for longer life. Vibrators should be set evenly . . . in such a manner as to just "kiss" the cast rollers evenly all the way across. The adjustment for the vibrators is to be found on the roller assembly and is operated by releasing the two screws and setting the metal sliding fasteners to the desired position.

* *Throw-off* . . . proper lubrication is important to any machine which is precision built . . . if the throw-off fails to operate, then carefully check the entire throw-off system to determine whether all bearings and moving parts are properly lubricated. If any of the bearings or moving parts are sticking the throw-off will not operate.

Your Kluge Press was carefully tested at the factory before it was shipped to you, however, if the feeder fails to throw-off properly, all that may be needed to correct the condition is to check the throw-off counter weights which are located at the bottom, right side of the press, below the feeding arm post. If the press fails to throw-off, move the weights out toward the end of the rocker arm . . . if the throw-off fails to come in, move the weights in toward the center of the rocker arm. **LOOK EVERYWHERE ELSE, how-**

* For 10x15 presses with serial numbers up to MB102330
and 12x18 presses up to serial number NB126442.

ever, BEFORE MOVING THESE WEIGHTS . . . air leaks, proper lubrication, and so forth.

The throw-off is operated by suction and when the feeding arm picks up the sheet a suction is created in the feeding arm post which raises a piston at the bottom of the post. If no suction is created it is evident that there is an air leak and, as a consequence, the press will not print. For this reason it is advisable to check the air system regularly for possible air leaks.

As your press is used over a period of time the throw-off may not operate efficiently because oil has been allowed to accumulate with the dirt and congeal in the plunger. If this is so, then remove the hose which connects the feeding arm post with the feeding arm and shoot kerosene into the feeding arm post. This kerosene will run down the post and into the plunger and as a result clean the plunger. It must be remembered that kerosene is the agent to be used for this cleaning operation.

Delivery . . . occasionally it happens that dirt has been allowed to accumulate on the oil on the delivery arm track . . . sometimes too heavy an oil has been used to lubricate this part of the press and in cold weather it has congealed. When the above is the case the delivery arm may vibrate. Cleaning the delivery arm track and lubricating it with a light machine oil will usually correct the condition. It may be that the delivery arm spring has become broken and if this is the case then the spring should be replaced.

If the delivery arm is not depositing sheets in the correct manner on the delivery table it usually is caused by either improper setting of the delivery arm valve, improper suction, or incorrect setting of the suction-tips.

If it is caused by improper setting of the delivery arm valve it can be corrected as follows . . . first, locate the valve. It is to be found to the right of the delivery table, directly under the cam gear guard. When the delivery arm comes out of the press the delivery valve lifter raises a steel ball in the delivery valve. When the ball is lifted it destroys suction in the delivery arm and will cause the sheet to drop. The delivery valve lifter should be adjusted

so that the suction will cut off and the delivery arm will correctly drop the sheet into the delivery table. The delivery valve lifter can be adjusted by turning the set screw up or down until the required adjustment is had. In adjusting this be sure that the delivery valve lifter does not hit the delivery valve cap. The valve can be broken if this occurs.

If the sheet fails to properly drop on the delivery table it can be caused through the use of wrong, or worn, suction tips. The suction tips furnished with the delivery arm fingers on your Kluge Automatic Press consist of straight side rubber and bell shaped rubber tips. A little practice with these tips will enable the operator to correctly handle any stock that he may be running.

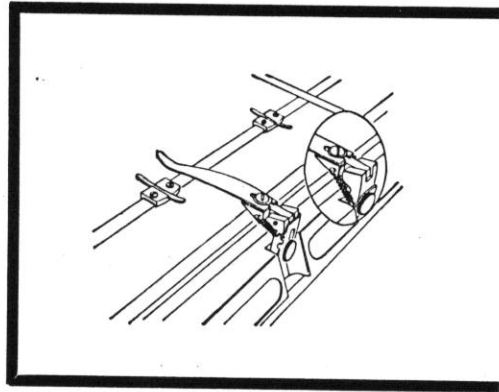
The Air System . . . if the feeding arm or the delivery arm is blowing air instead of sucking air . . . the delivery arm may not be depositing the sheets in the correct manner on the delivery table . . . or if the suction is otherwise not operating properly, then it is an indication that the pump is not operating properly.

This condition, above, may sometimes be caused by a dirty pump . . . that usually can be corrected by flushing out the pump. Disconnect the metal hose at the base of the pump. Place a piece of cardboard or some rags in front of the pump at the point where the metal hose was disconnected. This will tend to absorb the dirt and kerosene as the pump is being flushed out. Now disconnect the two black hoses at the farthest end from the pump . . . or it is recommended to take them off completely and use in their place two pieces of garden hose. This will save the hose furnished with the press and keep them from softening as the kerosene is run through the pump and the hose. Now start the press. Pour a little kerosene in each of the two hoses. Put your finger over first one of the hoses and then the other.

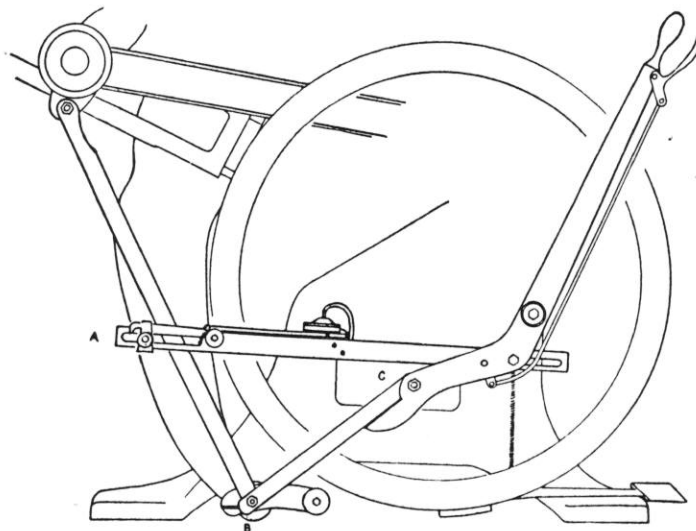
The action of the pump while the press is running will normally force out the dirt when the above method is followed. If this does not take care of the condition then it is possible that the pump will have to be dismantled for cleaning

Adjustable Sheet Holder Tongue

On 10x15 presses starting with serial number MA102153 and 12x18 presses starting with serial number NA125561-C, the instructions that follow govern the new Adjustable Sheet Holder Tongue: With the grippers "up" and with a sheet of the stock, to be run, hand fed to the proper position on the platen, select a sheet holder tongue which, when fastened to the sheet holder tongue assembly, found at the bottom center of the platen, will be ON the sheet approximately $\frac{1}{4}$ inch. Now pull the grippers better than half-way down . . . the tongue should be OFF the sheet. If the tongue is not OFF the sheet then select a shorter tongue to insure its being OFF the sheet before the side guide touches the sheet to move it to register. NOTE: The tongue must ride the tympan all the way . . . if it raises as the grippers are almost touching the platen, then adjust to the proper position by increasing or decreasing the tension on the spring. The illustration shows the thumb screw with which to set the tension on the spring. It should be remembered that the sheet holder tongue is used only to hold the sheet from bouncing as it comes in with the feeding arm. The tongue should never be so tight against the tympan that it will keep the sheet from going under it.



Throw-off



For 10x15 presses starting with serial number MB102330 and 12x18 presses starting with serial number NB126442, the following will govern.

The principle of the new throw-off is that if the feeding arm fails to take a sheet, the press will "throw-off" to avoid printing on the tympan. If the feeding arm fails to take a sheet from the magazine, the suction tips (not having a sheet of paper across them) will not create a vacuum. If there is no vacuum, there is no suction exerted on the diaphragm of the throw-off mechanism.

When the suction tips are sealed, the vacuum created will cause the diaphragm to be drawn up. When the diaphragm is drawn up, the press continues to operate in a normal printing position. If the diaphragm drops because of a lack of suction, it causes a lock to drop over a pin which—on that revolution of the press—will exert pressure on the mechanism and cause the press to throw-off.

WHAT TO LOOK FOR IF THE PRESS FAILS TO PRINT . . .

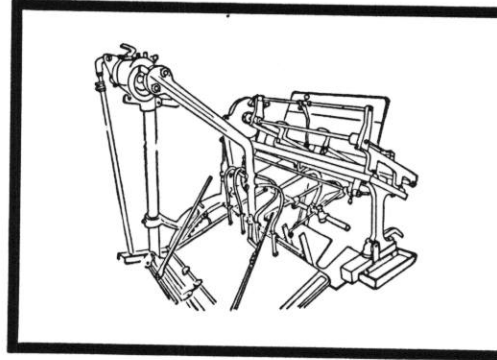
Check the hoses for any possible leaks. If the suckers turned on are not on the sheet, an atmospheric pressure will be permitted to enter into the feeding arm and thereby destroy the vacuum which will cause the throw-off to drop. This, of course, will prevent the press from printing.

If press fails to throw-off on first sheet and prints on tympan, see that all connections and bearings are free and not binding. If they are free, it may be necessary to increase the tension on Throw-Off Spring T7015 attached to Throw-Off Shaft T7016.

If press throws off continually, check all air lines and hose connections and throw-off valve and diaphragm for leaks. Decreasing the tension on Throw-Off Spring T7015 may also help correct this condition.

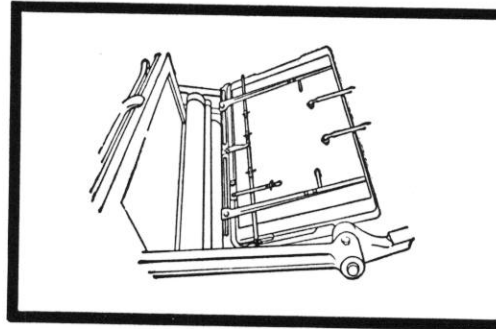
Newly Designed Feeding Arm

For 10x15 presses starting with serial number MA102153 and 12x18 presses starting with serial number NA-125561-C, the following applies: The newly designed Feeding Arm is made of aluminum and there is but one adjustment for raising or lowering the feeding arm to compensate for varying weights of stock. This adjustment is made by simply releasing the two bolts at the point where the feeding arm is connected to the shaft which extends from the feeding arm head. When the arm has been set to the proper position, tighten the two bolts. The feeding arm will be properly lined up to the top and bottom of the platen at all times. It is to be remembered that the feeding arm should be set as close to the platen as possible.

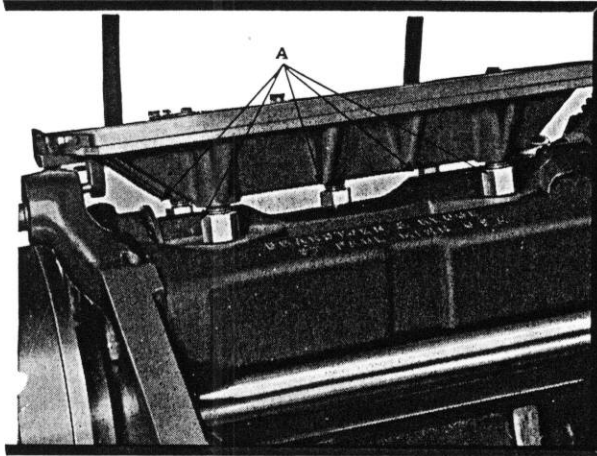


Built-in Bottom Gauges

The new Kluge Built-in Bottom Gauges are a part of the Kluge Automatic Presses . . . 10x15 presses starting with serial number MA102153 and 12x18 presses starting with serial number NA125561-C. These gauges are fastened to a metal band which reaches from one side of the platen to the other. The gauges are adjustable and may be set to any position, on the band, which is desired. The adjustment of these gauges is made by releasing the screw on the gauge so that the gauge may be moved to the proper position. When the gauge has been properly set, tighten the screw. Kluge Built-in Bottom Gauges may be raised or lowered on the platen to provide for the proper setting of the sheet in relation to the form in the chase.



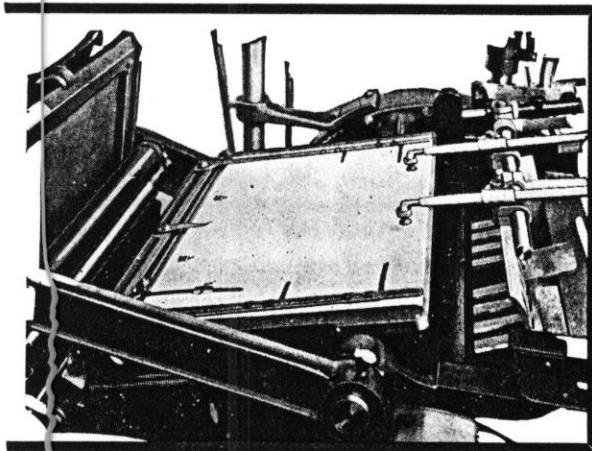
Platen Adjustment



There are five screws "A" which insure parallelism between the platen and the bed. It is recommended that you do not adjust these unless to compensate for different weight stocks. This, however, is an operating adjustment and will have to be cared for by the operator if and when the necessity for adjustment arises. The operator should not attempt to

make-ready by tampering with the platen screws. It is a rare case, indeed, when these screws require adjustment.

Patented Grippers



Exclusive on the Kluge are the patented depressible grippers. These grippers hold the sheet in position on the platen from the instant it is registered until the delivery grasps it. They then open rapidly to the fullest extent during the feeding operation. Where there is not sufficient gripper margin, such as on ruled forms and "bleed" pages, it sometimes is necessary

that gripper fingers be used to hold the sheet flat on the platen.

Service

There is a Brandtjen & Kluge Branch Office located in your territory. Your order for repair parts and service may be sent to the branch office nearest your city or it can be sent to us here at Saint Paul.

Kluge parts are made precisely for the Kluge Automatic Press and the Kluge Feeder. Each part is an individual unit of the machine for which it was intended . . . therefore, it fits, wears, and is as durable and dependable as the original part itself.

Refer to your parts catalog whenever it is necessary to order a part for your Kluge and order by number. Always specify the size and serial number of your feeder or press. Prompt and efficient service will be given to your requests.

Branches

For your convenience we are listing the locations of our Branch Offices.

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Index

	PAGE
Adjustable Vibrators.....	24
Adjustable Sheet Holder Tongue.....	9, 27
Adjustment of the Feeding Arm.....	11, 29
Air Release Valve.....	11, 16
Air System.....	26
Auxiliary Collars.....	14
Blade, Fountain.....	20
Blower Pipe.....	15
Bottom Gauges, Built-in.....	29
Branches.....	31
Chart, Oiling.....	18, 19
Cleaning the Pump.....	26
Close the Magazine.....	13
Collars, Auxiliary.....	14
Cutting Stock.....	22
Delivery.....	25
Delivery Arm, Lower the.....	12
Delivery Arm, Raise the.....	5
Delivery Arm Fingers, Set the.....	13
Delivery Table.....	16
Disc, Ink.....	21
Distributing Rollers.....	17, 20
Distribution, "Selec-Tone".....	17
Do's and Don'ts.....	22, 23
Dummy Suckers.....	10
Elevator, Stock.....	15
Feeding Arm, New Design.....	29
Feeding Arm, Adjustment of.....	11, 29
Feeding Arm, Lining up the.....	11, 29
Feeding Arm, Lower the.....	9
Feeding Arm, Raise the.....	6
Feeding Arm Head, Lock the.....	6

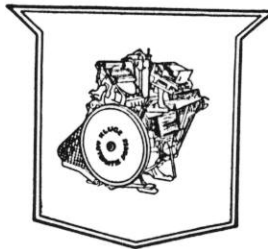
Index — (CONTINUED)

	PAGE
Fill the Magazine.....	14
Foreword.....	3
Form Rollers.....	20
Fountain.....	17
Fountain Blade.....	20
Grippers, Patented.....	30
Guide, Left Side.....	8
Guide, Right Side.....	8
Helpful Suggestions.....	24, 25, 26
How to Operate.....	4
Ink Disc.....	21
Inverted "V" Slots.....	10
Left Side Guide.....	8
Lining up the Feeding Arm.....	11, 29
Lock the Feeding Arm Head.....	6
Lock the Magazine.....	13
Lower the Delivery Arm.....	12
Lower the Feeding Arm.....	9
Magazine, Close and Lock.....	13
Magazine, Fill the.....	14
Magazine, Open the.....	5
Magazine, Set the.....	13
Magazine, Side Gauge Separator Springs.....	14
Make-Ready.....	7
Mark the Sheet for Position.....	12
Micarta Trucks.....	20, 21
Oiling Chart.....	18, 19
Open the Magazine.....	5
Operating Adjustments.....	15
Pipe, Blower.....	15
Platen, Adjustment of.....	30

Index — (CONTINUED)

	PAGE
Pump, Cleaning of.....	26
Raise the Delivery Arm	5
Raise the Feeding Arm.....	6
Right Side Guide	8
Rollers	23
Roller Assembly.....	17
Rubber Hose	22
Saddles, Roller	21
"Selec-Tone" Distribution	17
Service.....	31
Set the Air Release Valve.....	11, 16
Set the Delivery Arm Fingers	13
Set the Magazine	13
Set the Side Guide	8
Set the Sheet Holder Tongue.....	9, 27
Side Guide, Left or Right	8
Speed.....	23
Spongy Tympan.....	22
Stock, Cutting of	22
Stock Elevator.....	15
Stopping the Press	23
Suckers, Dummy	10
Suction Tips	10
Suggestions.....	24, 25, 26
Table, Delivery	16
Throw-Off	24, 28
Top Bail on the Platen.....	22
Tracks, Roller.....	22
"V", The Inverted	10
Vibrators	24
Wash-up	23

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