

PRESSWORK UNIT NO. 5

THE  
**CRAFTSMAN**  
AUTOMATIC UNIT

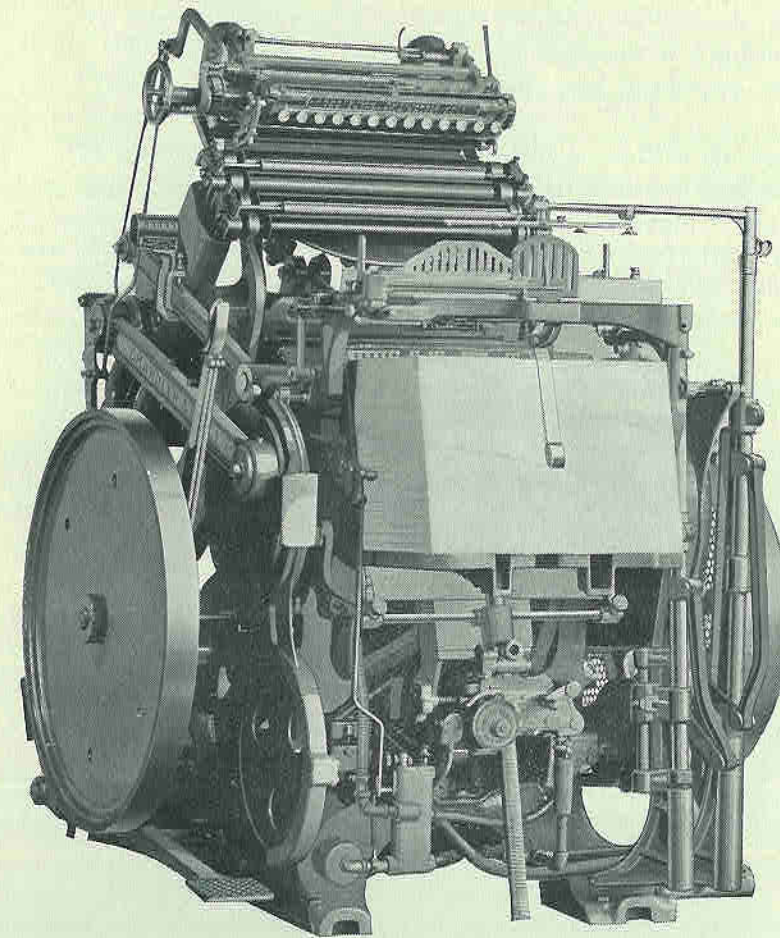
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*The Craftsman Automatic Unit*

## Introduction

This booklet is one of a series of instructional manuals used in the day and evening classes of the Department of Publishing and Printing of the Rochester Athenaeum and Mechanics Institute, Rochester, New York.

The purpose of this booklet is to provide a guide to the necessary steps in setting up a 12x18 Chandler & Price Craftsman Automatic Unit for any job, as well as to furnish technical data on how this job is done. This manual, with the demonstrations and verbal instructions of the teachers of presswork, should enable the student to set up and print any job which can be run on this type of printing press.

No attempt is made in this manual to teach the makeready of a job, as this is taken up in separate manual on "Makeready Practice."

Further detailed instructions, notes, hints on operating and illustrations are available in printed instructions published by the manufacturer of the press.

The Department of Publishing and Printing is indebted to the Chandler & Price Company for kindly advice and the loan of illustrations in the preparation of this work.

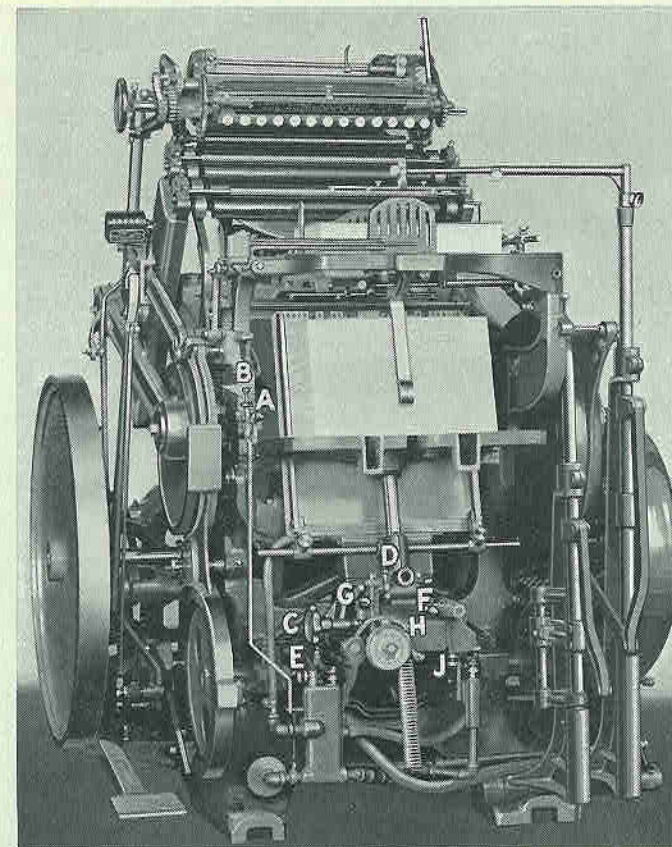
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*Technical Supervisor*

**Craftsman Automatic Unit for 12x18 Chandler & Price  
Platen Press**

The Craftsman Automatic Unit is a built-in automatic feeding and delivery unit obtainable on either 10 in. x 15 in. or 12 in. x 18 in. Chandler & Price platen presses. This manual deals with the larger size but the operation is essentially the same as that of the smaller.

The Automatic Unit will feed and deliver any size of sheet from a  $1\frac{7}{8}$  in. x  $3\frac{3}{8}$  in. card up to a 13 in. x 19 in. sheet and any weight of stock from onion skin to 6-ply cardboard. Its maximum speed is 3000 impressions per hour. It has four form rollers, two of which may be set to trip automatically to operate only on the upstroke. Two vibrators are standard equipment. The press is equipped with a vibrating brayer fountain which furnishes exceptionally good ink distribution.

The following outline gives in brief the necessary steps in setting up and operating the automatic unit. It is designed to enable the student who has been given verbal instructions together with a demonstration of the unit to operate the press without constant supervision by the instructor. It is assumed that the student is thoroughly familiar with platen press procedure. Press-work Units I and II are prerequisite to this instruction.

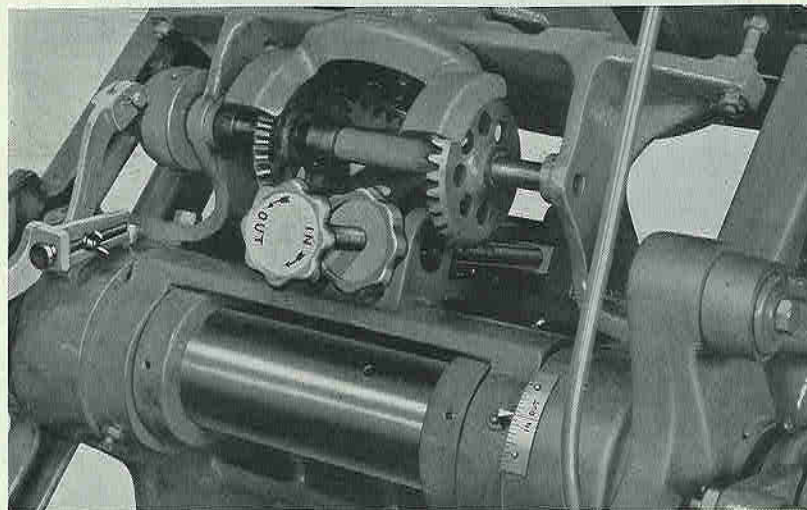


**Figure 1**

- A—Feed control. Lower to start feeding.
- B—Blast regulating screw. Turn down to decrease blast.
- C—Hand wheel. For raising and lowering feed table.
- D—Thumbscrew for regulating height of feed table. To make table rise higher, turn screw in.
- E—Continuous blast screw. Back out to obtain continuous blast.
- F—Crank for moving feed table forward or back.
- G—Clutch. Disengage to lower feed table. (Hold hand to wheel C.)
- H—Ratchet triggers controlling amount of table rise at each cycle of press. For stock thicker than  $1/32$  inch use only the outside trigger.
- J—Clamping screw for locking feed table against forward or backward movement.

## Procedure

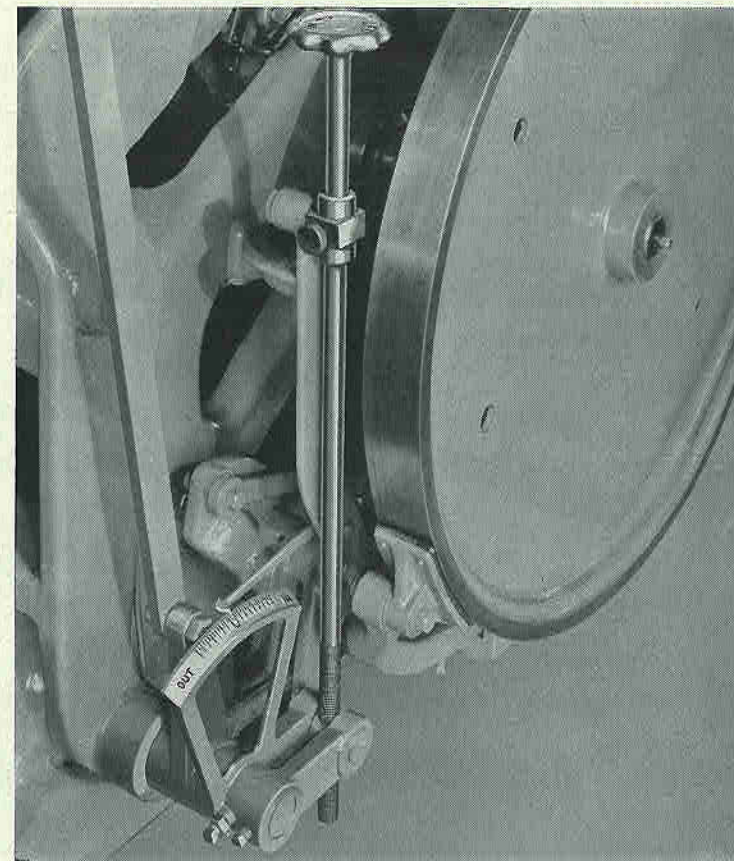
1. **Packing.**
  - a. Place packing and tympan on press as on any platen press, using one or two sheets of pressboard and several sheets of 50-lb S&SC. The S&SC should be clamped under the bale immediately beneath the tympan sheet.
  - b. Packing should be kept the same at all times (about .035 of an inch in thickness). Impression is increased or decreased by the impression control at the rear of the press. (See Figure 2.)
2. **Adjust hand-wheel impression controls, both side and back, to zero.** (See Figures 2 and 3.)
3. **Lock up form.**
  - a. The form is usually locked up as it would be for a hand-fed platen press, that is, slightly below center. However, the position should be checked by referring to the sheet guide lines molded into short sides of chase.



**Figure 2**

Upper hand wheel controlling impression and reversible ink disc mechanism.

Turn "in" to increase impression, "out" to decrease impression. Unlock knurled spring lock collar and move vertical gears sideways so that the other gear will be in mesh and relock collar.



**Figure 3**

Lower hand wheel impression control

Turn "in" to increase impression at bottom of platen, "out" to increase impression at top of platen.

4. **Position Gauges.**

- a. After press has been moderately inked, form is placed in bed.
- b. Follow regular platen press procedure to obtain margins. Place the bottom guides nearer the ends, however, than you would on a hand-fed job (about 1½ inches from the ends of an 8½ in. x 11 in. sheet) and place the side guide about one inch from the lower edge of the sheet.
- c. A third bottom gauge is sometimes used between the other two and about a point below in case the sheet tends to buckle.
- d. Check to see that gripper will not contact form.

5. **Put on vibrators, if necessary, for the better distribution of ink.** (Do not use vibrators on two bottom rollers if the trip trucks are used, as they are not intended to be run this way.)

6. **Set speed control for slow speed.**

7. **Makeready.**

- a. Spot sheets, cut-outs any other necessary makeready is added to packing as on any platen press.
- b. More or less impression is secured by simply turning handwheel at back of ink disc. If extra impression is needed at either bottom or top of form, handwheel at side of press may be used. No extra packing need be added. (See Fig. 2 and 3.)
- c. See "Makeready Practice."

8. **Position stock pile.**

- a. To properly position stock pile, move feed platform toward or away from press with crank under feed platform (F, Fig. 1) until gauge bar just reaches from a lower guide (when platen is open) to face of feed table.
- b. By moving the gauge bar against side guide the side pile stop may be set. This should be about one-quarter inch inside the end gauge. The other side pile stop is then brought lightly against the pile and back stop is set to just contact the pile. (See Fig. 4.)
- c. A special back pile stop should be attached when printing envelopes.

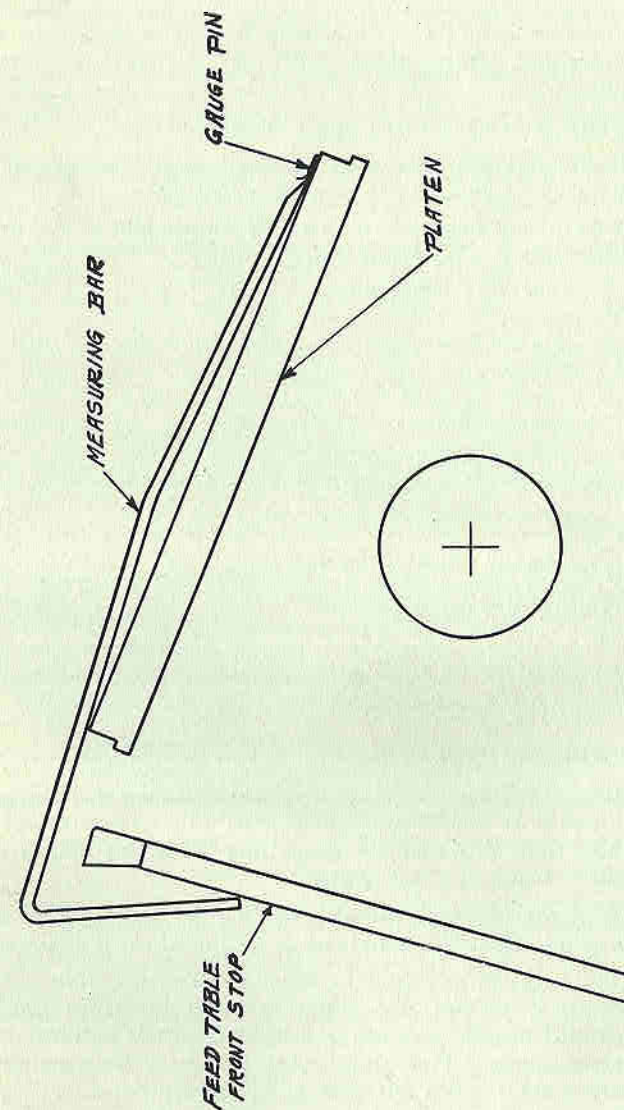


Figure 4  
Illustrating proper use of measuring bar to position stock pile in relation to platen.

**9. Set Feed Bar. (See Fig. 5.)**

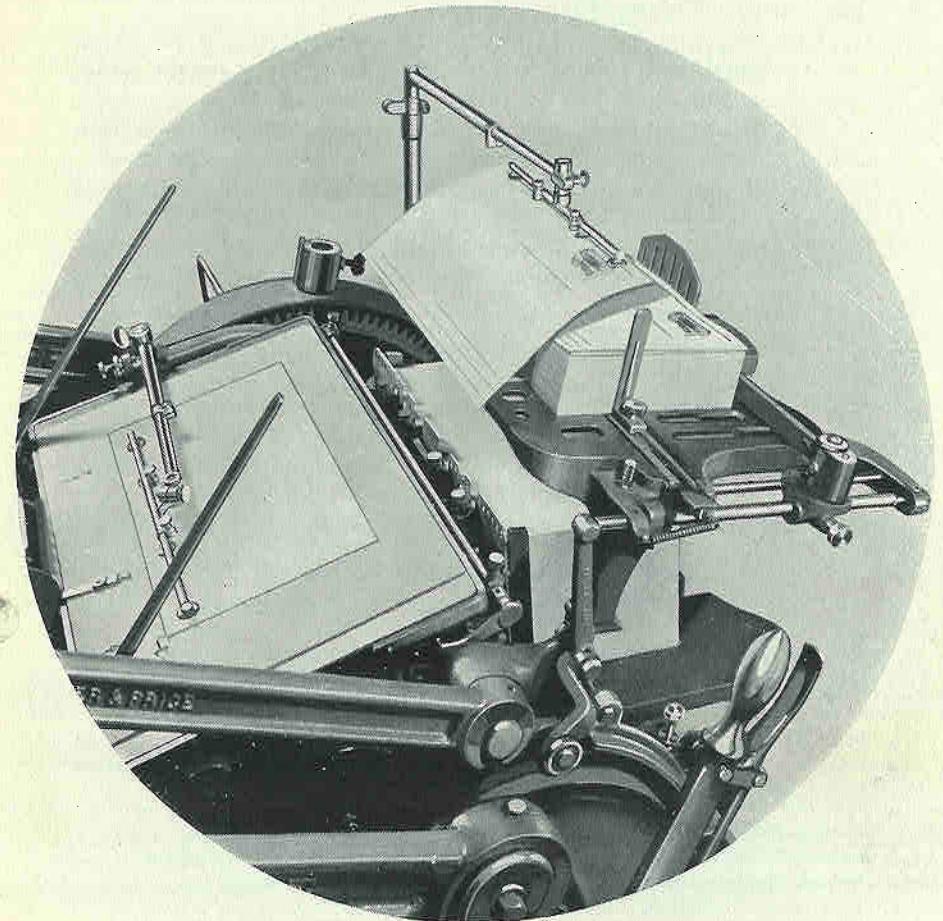
- a. The feed bar is generally set so that the sucker tips are about one-quarter inch from the front edge of sheet on top of stock pile. (If stock pile has been properly set as described above sheet will be properly delivered to guides.)
- b. Place separator wires opposite sucker tips.
- c. Rubber sucker tips may be used on feed bar for stock which is difficult to feed with metal tips.
- d. When feed bar fails to pick up sheets the cause may be incomplete separation due to:
  - (1) Incorrect adjustment of air blasts and separator wires.
  - (2) Sheets welded together on the edges by dull knife of cutter.
  - (3) Sheets in pile not cut to same size.
  - (4) Sheets sticking together because of ink used on previous run.
  - (5) Stock with porous or highly finished surface.
  - (6) Static electricity in the pile on the feed board.
  - (7) Top sheet of pile too far below sucker tips.
  - (8) Top of pile not level.

**10. Set Delivery Arm.**

- a. The delivery arm is set so that the sucker tips rest on the rear (top) edge of sheet when bar is at extreme front position. (See Figure 5.)

**11. Set Register Fork. (See Fig. 6.)**

- a. Register fork with spring clip attached is fastened to bracket at bottom edge of platen and so positioned laterally that clip will be about one-third the length of the sheet from the end gauge.
- b. A sheet of stock placed against bottom guides should extend about three-eighths of an inch into the spring clip.
- c. The clip, if adjusted to take a sheet of onion skin and move it to the end gauge without buckling the sheet, should handle any other weight of stock without further adjustment. This action may be tested by moving operating arm at the left side of platen by hand.
- d. Register fork bracket may be adjusted to move sheet toward either a right- or left-hand end gauge.



*Figure 5*

Illustrating proper position of feed and delivery sucker tips on the sheets.

**12. Adjust Height of Feed Table.**

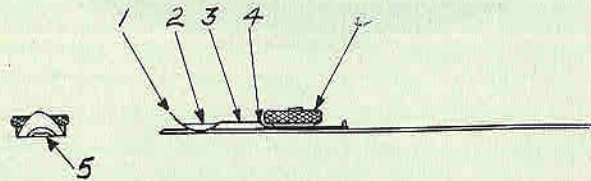
- a. The top sheet of stock to be printed should be about one-fourth inch below feed suckers at their lowest point, so that sheet will be raised to suckers by blast.
- b. Heavy stock may be carried slightly higher than light stock.
- c. Height is adjusted by screw (C, Fig. 2) underneath feed platform.
- d. For thick stock the outside latch on regulator ratchet may be thrown off to make the table rise faster.

**13. Adjust Blast.**

- a. The blast is regulated by screw (B, Fig. 1) at the left of feed table.
- b. For heavier stock, a continuous blast, obtained by turning screw (E, Fig. 1) to left, should be used.
- c. Blast may be cut off in spots by turning blast collar on any of slots at guide edge of stock pile.

**14. Set Delivery Table and Jogger.**

- a. Delivery table is locked in position by latch at left-hand guide edge of table. Table may be moved in or out of position at any time.
- b. Jogger arms are set to edges of sheet and may be set to jog or remain stationary by means of operating lever at left-hand side of table.
- c. Jogger is generally set to jog unless there is danger of offset. Sheets may be removed from table while press is operating by moving rear jogger arm back.



**Figure 6**

Never change shape of spring at 1, 2, or 3.  
To change tension of spring, bend at 4.  
Tongue of spring should be in center of groove of spring as shown at 5.  
Keep knurled nut, 6, tight at all times.

**15. Turn Press by Hand.**

- a. Make sure that all adjustments are properly made, noting particularly that right-hand gripper does not interfere with delivery bar.

**16. Start Press Under Power.**

- a. Start feeder by raising latch (A, Fig. 1) at left of feed table.
- b. Adjust position of feed table if sheets feed too hard against guides or not quite far enough.
- c. Note if register fork moves sheet properly against side guide.

**17. Adjust Blast. (B, Fig. 1.)**

- a. To lift sheets to feed suckers.

**18. Check Register.**

- a. Run ten sheets through twice and enough more to use as fall-ins to check register at intervals throughout run.

**19. Set Fountain.**

- a. Place ductor roll in position.
- b. Release steel ink transfer roller so that it contacts ductor roller and top form roller.
- c. Adjust turn of fountain roller by use of adjusting bracket at left end of fountain. (When in lowest position fountain roller does not turn. As bracket is raised turn of fountain roller is increased.) Direction of disc turn may be changed if desirable. (See Figure 2.)
- d. Adjust fountain keys. Although the fountain may be adjusted so that it will feed more ink in some portions than others it will be found more satisfactory to adjust all keys to the same opening. If this is done, full advantage may be taken of the turn of the disc to get maximum distribution. In exceptional cases the disc may be stopped and a very heavy portion of the form given as much ink as necessary. Keys should be adjusted from the center of the fountain out to each side, to prevent buckling.
- e. A partial washup can be made by backing out the screws in the ends of the blade holder so that the hinged blade holder assembly can be dropped. For a complete wash up for color, disconnect the latch pin on the driving arm and remove the bearings caps so that the roll assembly can be taken out of the fountain.

## 20. Troubles and Suggested Methods of Correction

- a. Improper line-up of the fountain brayer roller with the top form roller.
- (1) Loosen the screws holding the fountain brackets to the disc bracket. The hole in the fountain on the right side, facing the front of the press, is elongated to permit shifting the fountain assembly until the brayer roller lines up with the top form roller.
- b. Improper line-up of composition fountain roller with the fountain brayer roller.
- (1) Loosen the nut on the right end of the composition roller arm shaft and turn the knurled eccentric until the correct line-up is obtained.
- c. Vibrators not turning.
- (1) Oil instead of grease is being used in the saddle roller bearings causing lack of traction of roller trucks on the bed and extension tracks. Use grease.
  - (2) Keep the tracks and the trucks clean.
  - (3) Contact of the vibrator should be adjusted by means of the knurled screw of the vibrator box.
  - (4) The friction clutch on the end of the vibrator should be adjusted by turning the knurled nut at the end of the vibrator.
- d. Inability to strip sheet from the form.
- (1) Use strings on the grippers.
  - (2) Add slight amount of reducer to the ink.
  - (3) Use trip trucks or vibrators and less ink.
- e. Press fails to throw off.
- (1) Plugged air line.
  - (2) Dirt in the air line screens.
  - (3) Valve plunger stuck in the pulled out position.
  - (4) Valve plunger spring needs adjusting—too little tension.
- f. Press continues to throw off.
- (1) Dirt in pump valve chamber.
  - (2) Sucker tips and plugs pulled out too far.
  - (3) Valve plunger stuck in throw-off sliding bar.
  - (4) Valve plunger springs need adjusting—too much tension.
  - (5) Too much stripper wire being used causing sheet to be pulled away from sucker tips.

- g. Sheet is not being delivered.
- (1) Suckers placed too far down on sheet.
  - (2) Suckers tipped too much in relation to the platen.
  - (3) Leaky sucker tip joints, both feed and delivery.
  - (4) Sheet sticking to tympan. Cut vees in tympan near top edge of the sheet being printed to aid in lifting the sheet.
  - (5) Dirt in pump valves.
  - (6) Loose emery cloth or lumps on the suckers.
  - (7) Delivery cut-out valve stuck.
  - (8) Dirt in the screen.
- h. Delivery cut-out valve not working.
- (1) Paint, dirt, or rust interfering with free movement of plunger.
  - (2) Leak in the feed lines.
  - (3) Leak in the feed sucker tips.
  - (4) Improper positioning of stripper wires causing sheet to be pulled from feed sucker.
- i. Register trouble.
- (1) Feed table front stop not parallel to edge of platen.
  - (2) Sheet going over the lower guides.
  - (3) Improper placing of register fork.
  - (4) Sheet being fed too close to side guide.
  - (5) Feed table back stop not properly placed.
- j. Failure of the feeder.
- (1) Center plug not in feed head when center sucker is removed.
  - (2) Dirt in the air line screens.
  - (3) Leaky sucker tip joints.
  - (4) Improperly placed stripper wires.
  - (5) Sucker tips not properly placed in relation to the front edge of the sheet.
  - (6) Feeder valve extension out of the hole.
  - (7) Dirt in the pump valve.
  - (8) Sucker head plugs not in far enough.
- k. Slurring of part of rule form may be caused and corrected as follows:
- (1) Spring or bulge in the form—lock firmly after being carefully planed.
  - (2) Wrinkled or baggy tympan—use hard packing and pull top sheet tight.
  - (3) Curly or wrapped stock—use strings, corks, etc., between grippers to hold sheet firmly to tympan.
  - (4) Old and hard form rollers—use new rollers.

- (5) Greasy roller tracks allowing rollers to slide—wipe off tracks and roller trucks.
- (6) Air pockets in box rule form—drill small hole through rule just above furniture to let out air.