

CHAPTER X

WISE AUTOMATIC

Tight Lines Don't Stop the Machine

QUESTION: We started getting the toes cut off of mats. Eventually we found the assembler slide was set too wide, permitting tight lines to go in. The mat did not allow the line to go all the way down. Why then didn't the machine stop? I thought it was supposed to. — O.A.M., Modesto, Calif.

H. C. ROCKWELL in the *Graphic Arts Monthly*: Indeed it should. Let's take a good look at the vise automatic.

When the elevator is seated, it pushes down the vise automatic stop rod so the lip on the rod gets just below the lip on the stop dog. As told above in *Adjustments of the First Elevator*, page 107, the screw that operates the stop rod should be set so that the machine will stop with a two-point lead under the other screw, which would hold the elevator two points high (but will *not* stop on one point). When the elevator does not go all the way down, the mold disk comes forward and a mold strikes the dog and drives it through the vise. Its lip contacts the lip on the rod and pushes that toward the front of the machine. The bottom end of the rod throws out the clutch.

The spring breaks often in the dog. See that there is plenty of pressure to pull the dog back as soon as the mold disk retreats. Otherwise it will stay forward over the lip of the rod, and the next tight line will cast anyway.

Sometimes the slot in the top of the dog gets filled with metal and renders it inoperative. The lip may become worn and rounded on either dog or rod. They should be replaced.

LOOMIS: In replacing the dog, first screw the long screw down until the cross-pin in the end of the dog banks against the screw. Then, pressing on the dog, retract the screw until the dog barely slips under. Now the spring will be against the screw, and you will feel it. Hold the dog in and turn the screw on down firmly. This puts the screw between the spring and the pin, where it should be.

The clutch must be properly set, with clutch face and leathers clean so they turn loose freely.

On old machines the vise automatic may act too late, allowing the mold

disk to come forward and shear the toes of the mats before stopping. Note that the mold disk should stop so there is from 1/16" to 1/4" space between the mold and the vise jaws. From long usage the stop rod gets bowed outward, which requires the disk to travel farther before the machine is stopped. With care the stop rod can be straightened or even bowed a little the other way, by supporting its ends on stereotype castings and hammering in the middle.

HARDING: Occasionally the horizontal stop lever is bent. It can usually be straightened. It can also be bent with the point to the rear of the machine, to stop the machine sooner. Some machinists put an adjusting screw through the end to get the same result. This is a safer way.

The same effect can be achieved by welding material on the front end of the connecting bar — the long rod that runs to the vertical lever at the back of the machine; the horizontal lever works against the front end of this and sometimes wears it badly.

What Stops the Machine at Casting When There Is No Tight Line?

- A mat in the vise, under the jaw.
- A screw worked out of the duplex rail cap.
- Metal piled up under the first elevator lever.
- Obstruction by the knife wiper.

Why Does the Machine Stop at Transfer Point?

LOOMIS: This vise automatic was designed for two-mold machines. On four-mold machines there is a raised place inside the right edge of the first elevator, which operates an L-shaped lever that pulls the stop rod down when the machine ejects. The mold disk moves forward then, of course, and since the dog is operated by a mold, it would stop without the extra lever. It often happens that an m-o takes off the first elevator, then replaces it with the L-shaped lever out of position. This will cause a stop at transfer or ejection point. See that the lower arm of the L-shaped lever is on top of the pin protruding from the stop rod.

HARDING: This happens also on two-mold disks. In such a case, you will find the disk one fourth or three fourths out of time.

HARDING: When the small roller, D-531, that operates the L-shaped lever, is worn flat; on an Intertype, when the Vise Automatic Stop Rod Extension, U-759, is loose, or when the justification cam roll or cam is worn.

Full Lines Will Stop The Machine Although They Are Not Tight

QUESTION: My first elevator seems to be held up at the very bottom of its stroke — on full lines only. I get a vise automatic stop, but when I try the line

it goes easily into the vise jaws. Loose lines do not give this trouble. It seems the only solution is to set lines six points short. — W.F.A., Palmyra, N. J.

LOOMIS: This is caused by wear on the first justification cam and roll. The justification block stands too high, and when a line comes down, the bands are pushed up a little and spread the line. Get an oversize cam roll from Lino Parts. If you do not correct this, you will eventually ruin your mats.

Crushed Toes But Not From Tight Lines

HARDING: You can get sheared toes that look like tightline casualties if the back jaw is sprung too wide or if the thin rail of the back jaw is worn too much. A good test is to put a pi mat (we use pi mats so much because usually they are not worn) just inside the spring pawls. By lifting the bottom of the mat out and up, on a worn jaw, you can easily move the mat into the bold-face position. With a good jaw, you should *not* be able to do this without some binding on the duplex rail.

The Stop Rod Doesn't Rise High Enough

HARRY G. POTTLE in *Who's Who in the Composing Room*: Occasionally on very old machines the top of the stop rod doesn't come above the boss in the vise cap. Dress off the shoulder underneath enough so it will come through, where it can be engaged by the screw.

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