

CHAPTER XXVI

SECOND ELEVATOR AND DISTRIBUTOR SHIFTER

Adjusting the Second Elevator

QUESTION: The second elevator does not always seat properly. Can you tell us how to adjust it? — W.T.M., Seagrave, Tex.

HARDING: The Book gives this adjustment: when the second elevator is in transfer position, adjust so that the cam roll is free from the cam.

LOOMIS: I have worked out what I think is a more reliable adjustment. Do this at the distributor box. Tighten the adjusting screw until the second elevator starts down, then back up until it is firmly seated.

There is also another adjustment — not, as far as I have found, mentioned in The Book. If the second elevator does not come up centered on the second elevator guide, back up the machine and have somebody hold the second elevator over rather hard in the direction it should go while you tap it solidly with a 4-ounce hammer on the opposite side. (It can be done on the same side, but I have better luck the other way.) It doesn't take as much tapping as you might think. You can thus "bend" the second elevator arm and make it center exactly on the guide.

Lubricating the Second Elevator

HARDING: Graphite the parts and oil sparingly the hinge pins (two).

LOOMIS: That is the accepted way, but in the country I think hard oil is better because it lasts longer. I apply a thin film of oil to the guide post at transfer, to the guide at the distributor box, and to the top of the bar plate.

Dismantling the Second Elevator

HARDING: Disconnect the long spring, loosen the short set screw that holds the hinge pin — or cotter pin, as may be. Push out the hinge pin and take the elevator to the bench. Remove the two screws from the top of the bar plate, gently pry the bar loose from the plate, and with long nose pliers push out the pin to the right.

Repairing the Second Elevator

LOOMIS: When the bar has nicks in it, they can be dressed out with a small three-cornered file. If the bar has been striking bands left in the transfer, it's time for a new bar.

If the second elevator bar link (a somewhat square framework) has the holes in the legs badly worn, you will need a new one. There are different types of bar link, and they are not interchangeable; get the right one for your machine. If the bar plate is badly worn either where it contacts the transfer guide post or where the spaceband pawl rides up on top of it, replace.

I'm sorry to say that replacing parts of the second elevator is not as simple as it seems. I know a case where a bar plate was replaced and resulted in ultimate damage of \$156 before the machine was back in order — and not through any carelessness of the m-o. These second elevators are more tricky than they look.

Put on the new parts. Be sure the pawl is installed in the new bar as in the old — the slightly hooked part down and at the back, the plunger behind it, the spring in front.

With a new second elevator bar plate, the forward-and-back position of the second elevator must be adjusted, of course, at transfer position, but the touchy work comes at the distributor box. Here the bar must align with the distributor box bar, front to back. This is best tested by feeling with the fore-finger. There should be no rattle of the mats as they go across. After installation of a new bar plate, usually the bar is too far forward. I usually file this on the back edge and on the bevel until it fits. Also it is well to note whether the extension at the top of the distributor box bar fits into the opening in the second elevator bar. Occasionally these are tight, and I usually thin down the top of the second elevator bar to bring smoothness. Tightness will prevent consistent seating.

Be sure the screws in the top of the bar plate do not project. These (BB-138) have to be exactly the right length ($\frac{1}{2}$ ") or there'll be trouble.

Space between the second elevator bar and the distributor box bar should be slight — just enough to prevent friction. The guide usually is doweled, but the bolt holes are large enough to permit readjustment if you drive out the pins.

Second Elevator Starting Spring

LOOMIS: This spring, low and just inside the first elevator cam, breaks often. The Company is trying to develop one that won't break, but you will have to replace it occasionally, and should have an extra one on hand always. It is most easily replaced when the elevator is at transfer.

Second Elevator Jiggles

LOOMIS: This usually results from one or both of two things: broken starting spring or rough or dry second elevator shaft. Try penetrating oil. Sometimes the end of the shaft has been boogered up by a pipe wrench. Swearing doesn't help. Smooth it with emery cloth. Dry cam roll or one with flat spots.

Like many other things, this *can* be mysterious. There is a certain machine in Minneapolis, now about fifteen years old, that was installed brand new by a competent factory man. As soon as he left, the second elevator began to jiggle on the way down. A number of Twin City machinists tried their hand without result. Two more men came from the factory. No dice. Finally the dean of the factory men came out. He looked it over, examined the reports, and ordered a bunch of new parts, including second elevator and shaft. He said he didn't know what was the matter, but that would fix it. It did.

Difficulty in Transfer Caused by Second Elevator Bar Link

QUESTION: Our Model B Intertype is giving trouble on the transfer. The right end of the second elevator bar is pushed toward the back of the machine when a long line goes over, though the left end is lined up. We have installed new parts. — T.C.T., Murphysboro, Ill.

LOOMIS: I rather think you have a bar link (the squarish frame) with one leg bent out of line. This could also be the wrong bar link. Bar links for Intertype and Linotype are not freely interchangeable, and usually require some filing for clearance with the bar plate.

"Breaking" the Bar

It is sometimes necessary to "break" a new second elevator bar by filing the left end to a slight taper with a jeweler's three-cornered file. This should be done judiciously, giving each groove a light touch. On old machines this sometimes is a life-saver.

Putting an Extra Spring on Second Elevator

LOOMIS: This comes on many machines to minimize swinging of the second elevator on the way up, and consequent occasional fouling up on the distributor bar.

On most bar plates there is a hole just to the left of the bar link, in the back edge of the plate. Screw a 4x48 spring hook in there. Now at the top corner of the link, drill and tap a 4x48 (or 8x32) hole and screw in another spring hook; then install a spring just strong enough to hold the second elevator steady on the way up. Keyrod springs have been used for this, and are usually about right, but sometimes a stronger spring is required.

The Distributor Shifter

LOOMIS: This is not complicated but does require certain attention. The slide should be graphited when the machine is oiled. There should be a stop screw at the left to prevent pinched finger, and a stop screw at the right to stop the Distributor Shifter Slide Buffer (G-2845) just short of touching the matrix lift. The best way to adjust this usually is by putting very narrow washers inside the cotter pin. They must be narrow, and the cotter pin must be unobtrusive, or the thing will bind in the box. The buffer spring should be positive but not as strong as the plunger spring — which it often is. It is supposed to give. The buffer itself must ride up close to the distributor box bar but not touch it; it must be centered in the box and not touch either side; and it must be square up and down. The location of the buffer can be attained by judicious bending of the arm on the shifter slide. Oil the screws (one drop) that connect the link to the long lever that actuates the shifter.

LINECASTING OPERATOR-MACHINIST

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