

GRINDING INSTRUCTIONS

FOR

WORTHINGTON

30" FAIRWAY &

BLITZER MOWER UNITS

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WORTHINGTON MOWER COMPANY
STROUDSBURG, PENNSYLVANIA

GRINDING INSTRUCTIONS FOR WORTHINGTON 30" FAIRWAY AND BLITZER MOWER UNITS

The Worthington Mower Company recommends that the reels of all mowers of their manufacture be ground by the Spun-Cylinder method, whereby the reel is rotated as it is being ground, insuring a finished reel that is a PERFECT CYLINDER. It is further recommended that the Bed Knife be ground in PERFECT RELATION TO THE BACKING TRUNNIONS on both the VERTICAL and HORIZONTAL SURFACES. Realizing that these recommendations require special and costly equipment, the following instructions are offered the users of Worthington Mowers to enable them to satisfactorily recondition their units by using standard commercial grinding equipment.

I.—INSPECTION OF UNIT BEFORE GRINDING:

- A. Check horizontal surface of Bed Knife for even adjustment. If wear is not even, advise users on proper adjustment procedure.
- B. Back off Bed Knife adjustment until there is no contact between reel and Bed Knife.
- C. Check Reel for end play, maximum allowable end play $1/32"$. Remove excessive end play BEFORE grinding—use D-361 or D-362 Washers as required.
- D. Check Reel Bearings for side or up and down motion—MAXIMUM ALLOWABLE—NONE. Install new Bearings BEFORE grinding if ANY MOTION EXISTS.
- E. Remove Bed Knife Backing Assembly.
- F. Check fit of Backing Stud and Backing Bushing. Stud should turn freely in Bushing WITH NO SIDE PLAY. Install new Bushings BEFORE grinding if ANY SIDE PLAY EXISTS.
- G. Inspect Bed Knife for wear. If replacement is necessary, clean all rust, scale, and foreign matter of any kind from Backing before installing new Steel.

II.—BED KNIFE GRINDING:

- A. Mount Backing Assembly in the clamps of the Ideal Model 50, or equivalent, Bed Knife Grinder.
- B. Set Clamps so that the vertical grind will be at right angles to the horizontal grind.
- C. Using gauge (PB-74) as illustrated in Figure #1, adjust carriage to an EVEN REGISTER with the gauge at BOTH BACKING JOURNALS. Order Gauge #PB-74 direct from Fate-Root-Heath Company, Plymouth, Ohio (Price: \$2.50).
- D. Grind this vertical face only enough to insure a straight clean surface.
- E. Rotate Clamp Pivots to position shown in Figure #2.

A small Level should be held across the bottom surface and at right angles to the Bed Knife to insure that the carriage is level.

F. Adjust carriage to an even register with the grinding wheel at both ends of Bed Knife.

G. Grind only enough to insure a straight and clean surface with a sharp shearing edge. FINISH GRIND WITH LIGHT CUTS.

H. Check both horizontal and vertical surfaces with a "Straight Edge". BOTH SURFACES SHOULD BE PERFECTLY STRAIGHT.

III.—REEL GRINDING:

Install Backing Assembly LESS ADJUSTING SCREWS, SPRINGS AND HANDLES in mower unit. Check to see that assembly pivots freely on Backing Studs with NO SIDE PLAY. If the "Hook" method grinding is to be used it will be mandatory that the unit be checked as follows:

- A. Using hand pressure swing Backing against Reel.
- B. Check to be sure that an EVEN CONTACT is made between the Reel Blades and Bed Knife OVER ENTIRE LENGTH.
- C. If an EVEN CONTACT is made, install Adjusting Screws, Springs and Handles and proceed with "Hook" Grinding as outlined in your grinder instructions.
- D. If an UNEVEN CONTACT is made, INDICATING a TAPERED REEL, it will be necessary to "Straight Line" grind the Reel to INSURE a PERFECT CYLINDER.

IMPORTANT: THE REEL MUST BE A PERFECT CYLINDER BEFORE FINISH GRINDING BY THE "HOOK" METHOD.

E. "Straight Line" Grinding can be done satisfactorily in a Peerles 600 Grinder with the reel installed in the side frames or removed by following the outline in your grinder instructions.

F. "Straight Line" Grinding may also be done by setting the Bed Knife parallel to the Reel Shaft. This can be done by setting the Bed Knife Steel so that equal measurements are obtained between the Fly Knife Reel Shaft and each end of the cutting edge of the Bed Knife. This measurement can be made by use of telescope gauge, price \$2.75, supplied by the Fate-Root-Heath Company, Plymouth, Ohio. The "Hook Grind" method may now be followed.

CAUTION: MAKE NO CHANGE IN BED KNIFE SETTING UNTIL REEL IS GROUND TO A PERFECT CYLINDER.

IV.—Upon completion of the grinding of each unit, check to be sure that each Reel Blade will cut paper along the full length of the Bed Knife.

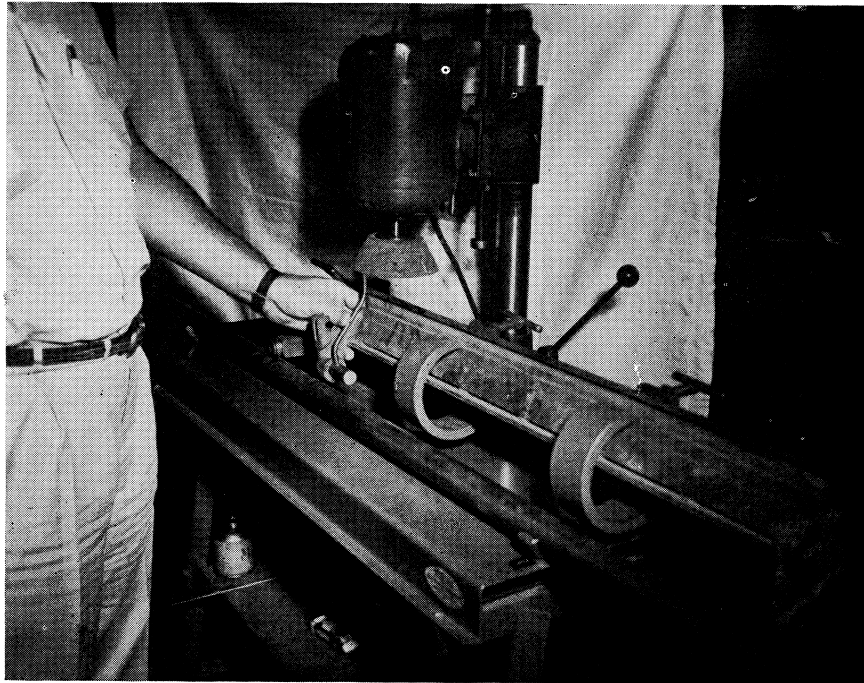


FIGURE NO. 1

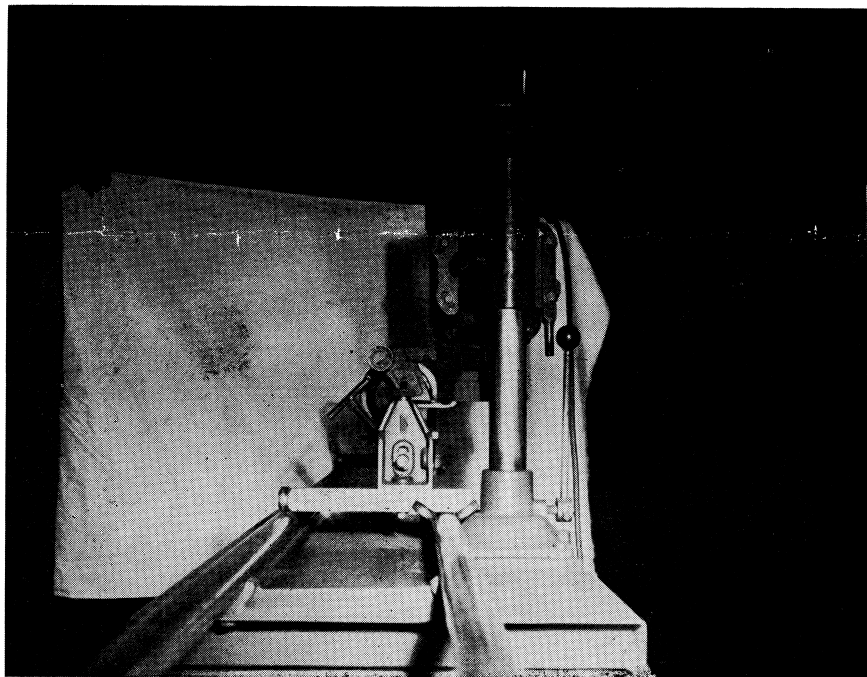


FIGURE NO. 2

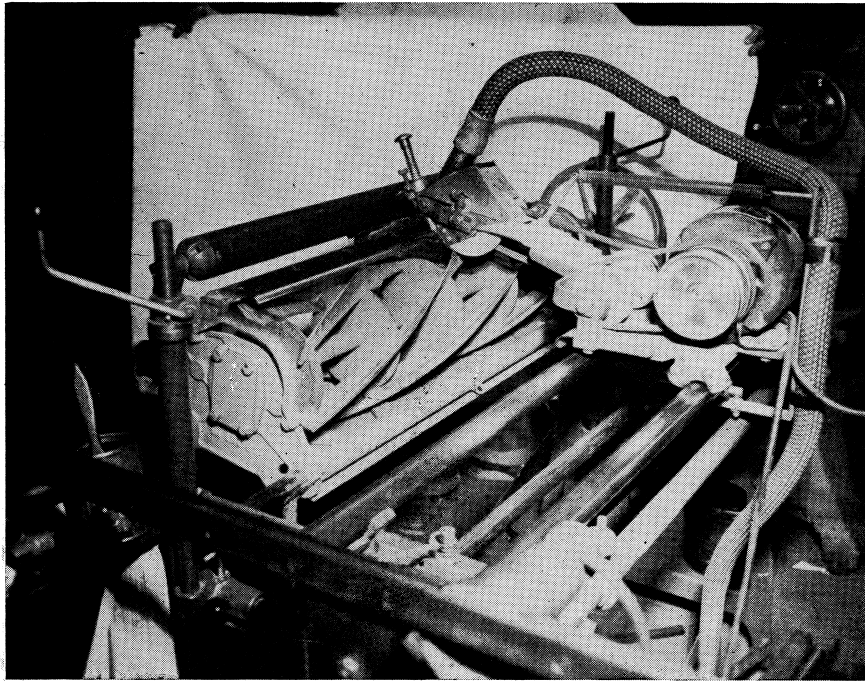


FIGURE NO. 3

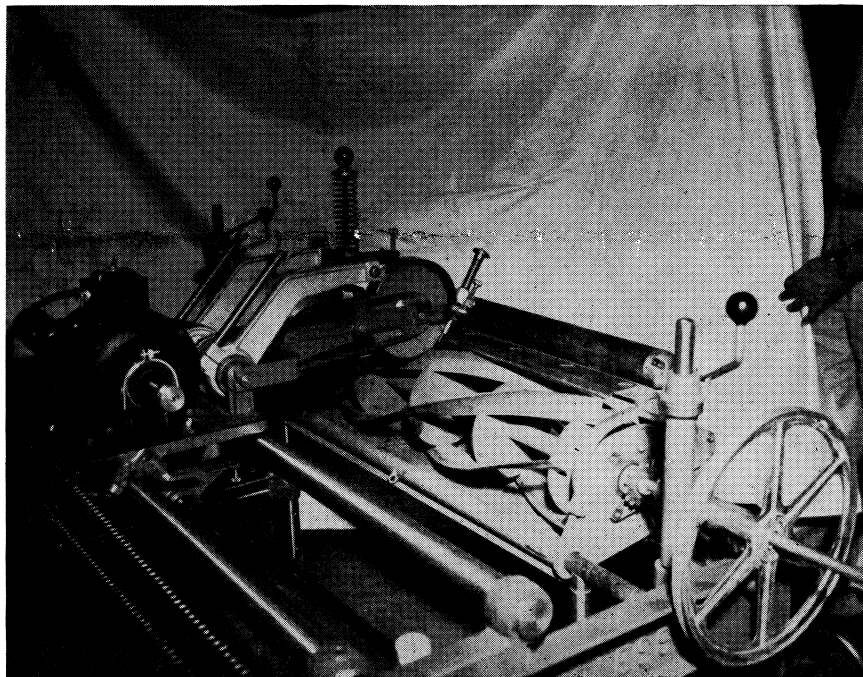


FIGURE NO. 4