CONVERSION OF THE UNIMAT INTO A WOODWORKING LATHE

Conversion Kit. Order No. 1395 (Turning Lathe) :

This conversion kit consists of a pair of long guide columns, a swivable handtool rest and a drive centre.

The conversion is carried out in the following way :

First of all the headstock and tailstock are dismantled. Then the nut and handwheel on the linear spindle are slackened. After removing the 4 internal hexagon screws on the underside of the bed the guide columns with the supportlinear spindle may be pushed against the headstock and then lifted off. The bearing surface of the guide columns on the lathe bed are now cleaned of shavings. In the reverse sequence the long guide columns are screwed on to the machine bed, whereby on to the front column the swivable handtool rest must be slid on. According to the length of the particular workpiece the tailstock must be mounted to the left or right of the machine bed. With this machine workpieces of a diameter of 2 3/4" and up to a length of 13.2" can be processed.

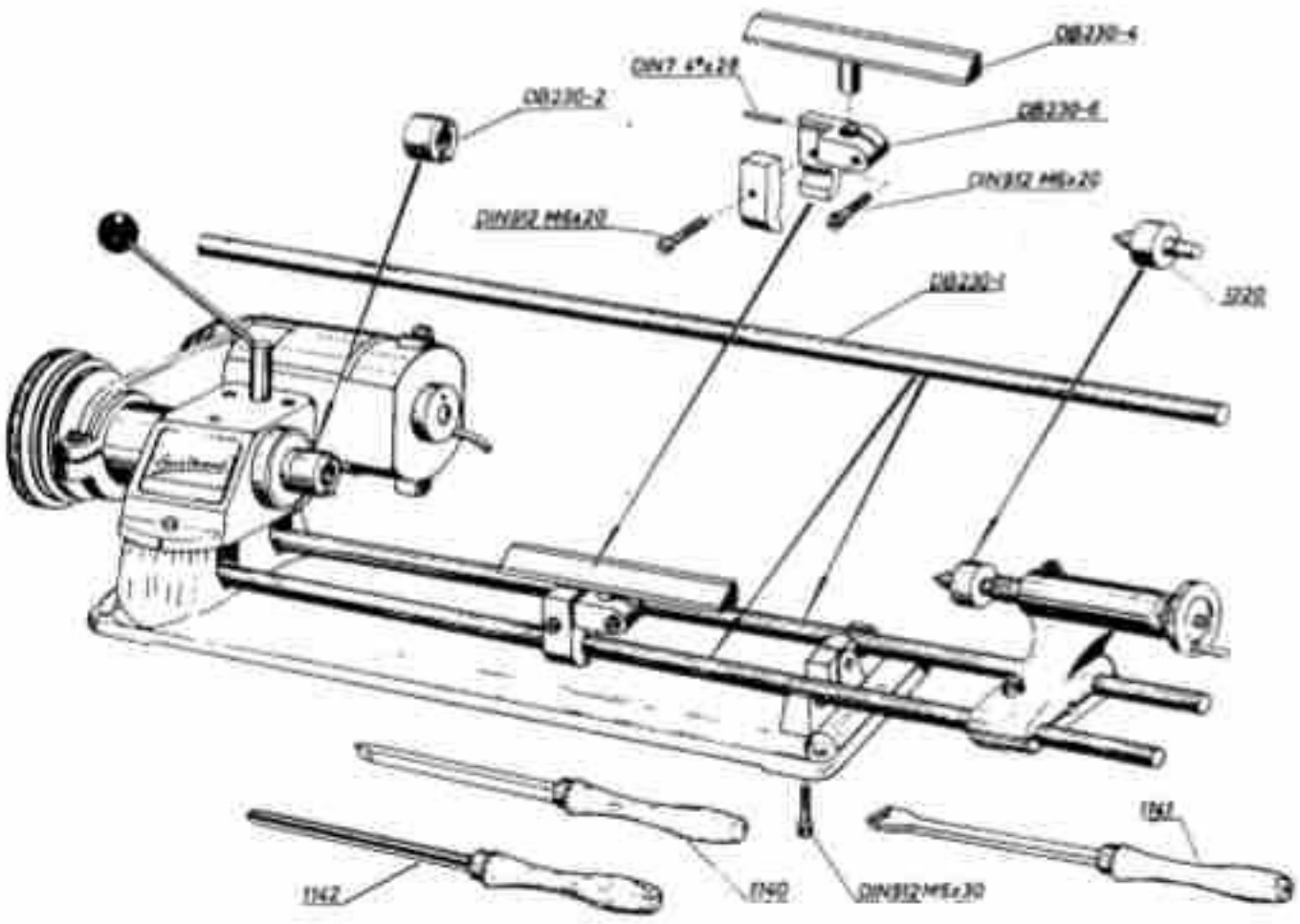

DIAGRAM 39

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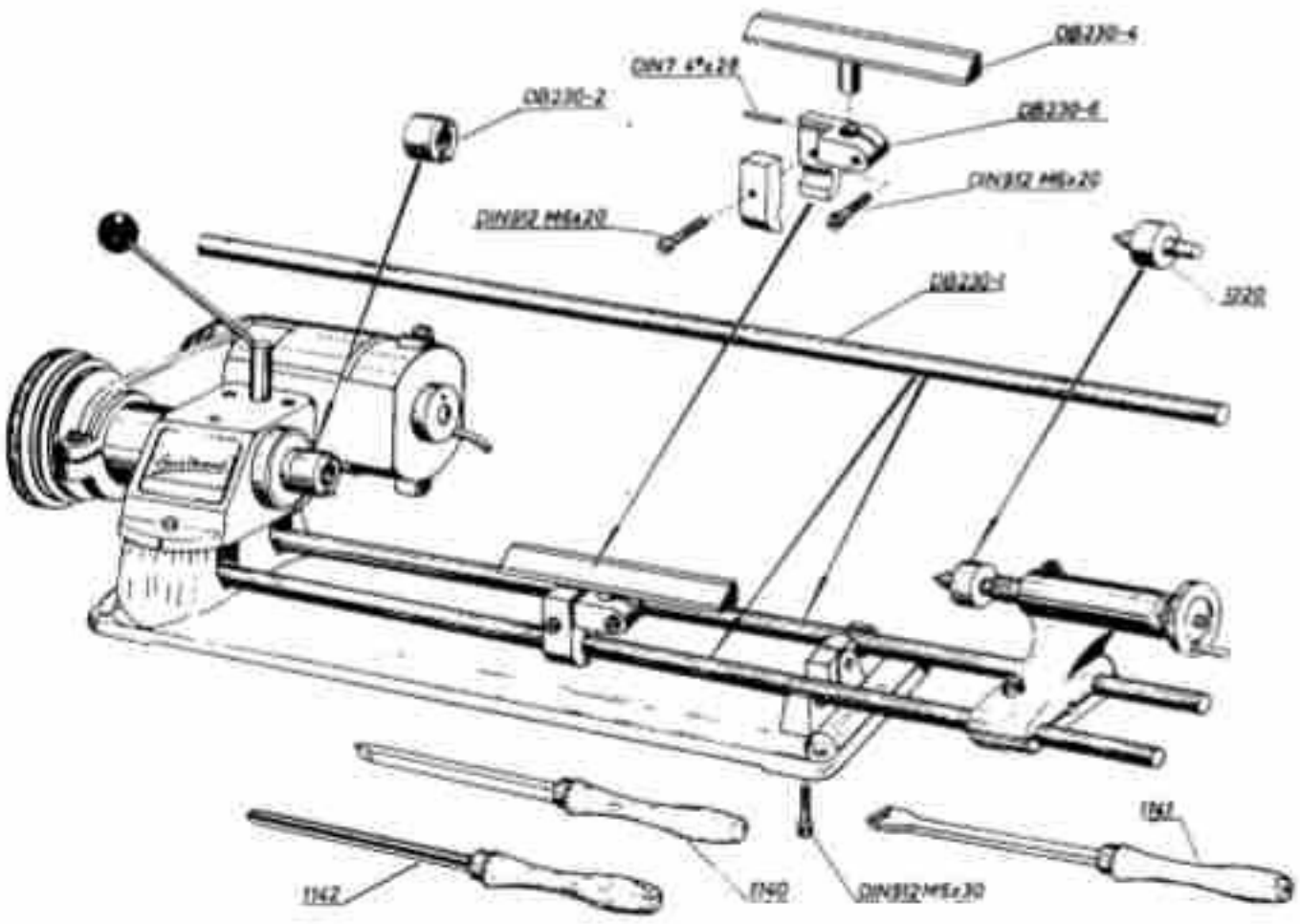

DIAGRAM 39

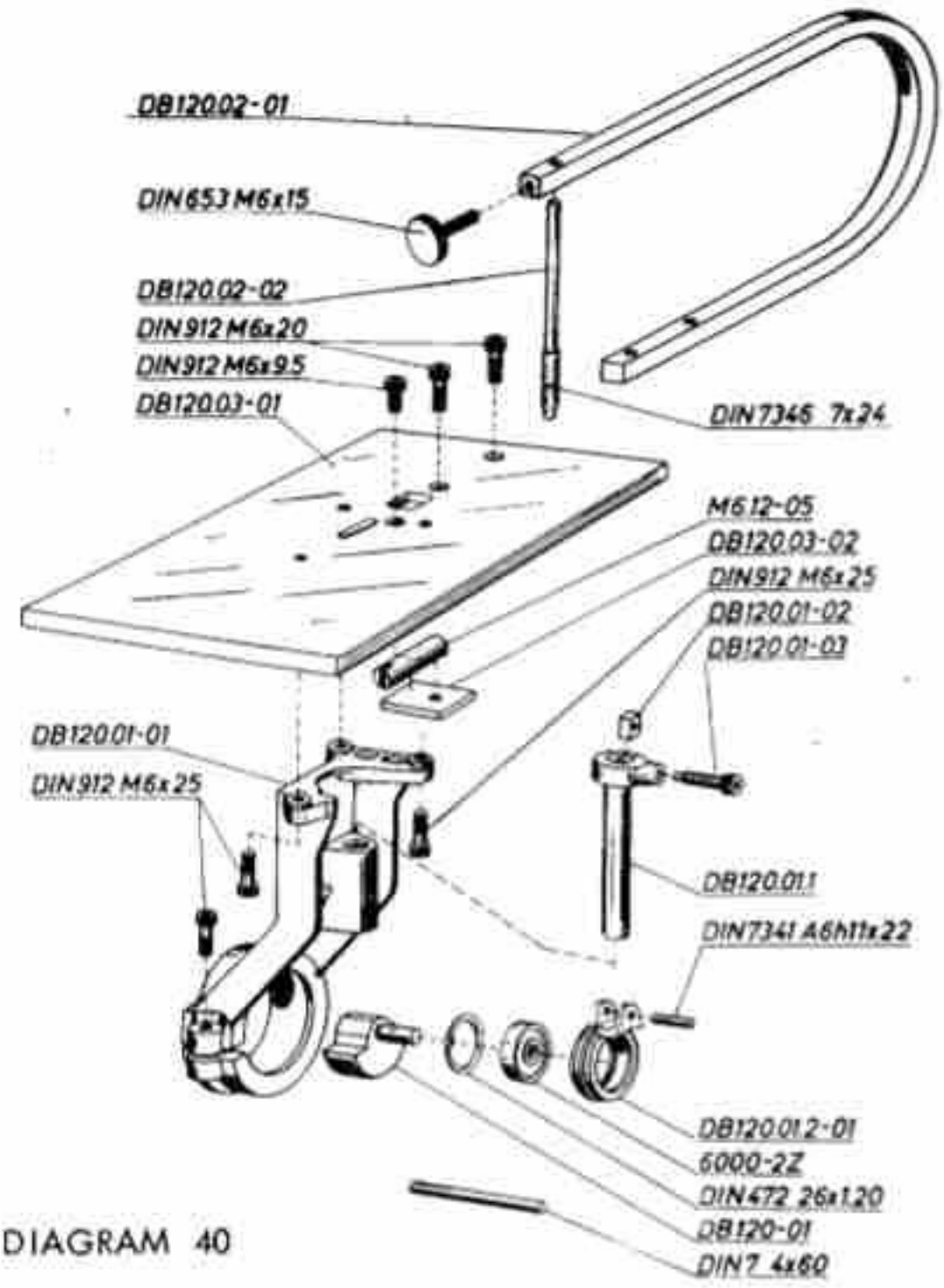

DIAGRAM 40

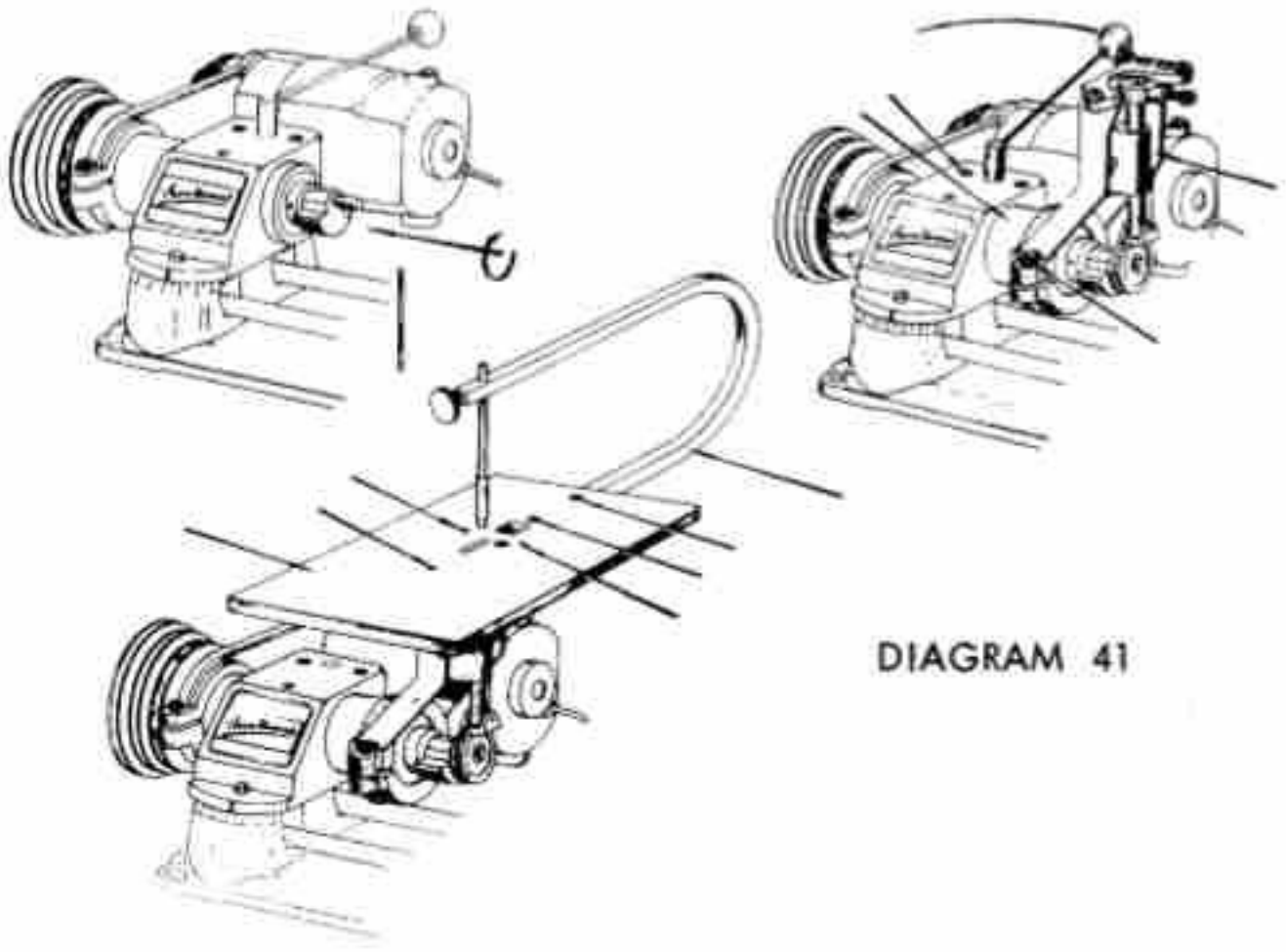

DIAGRAM 41

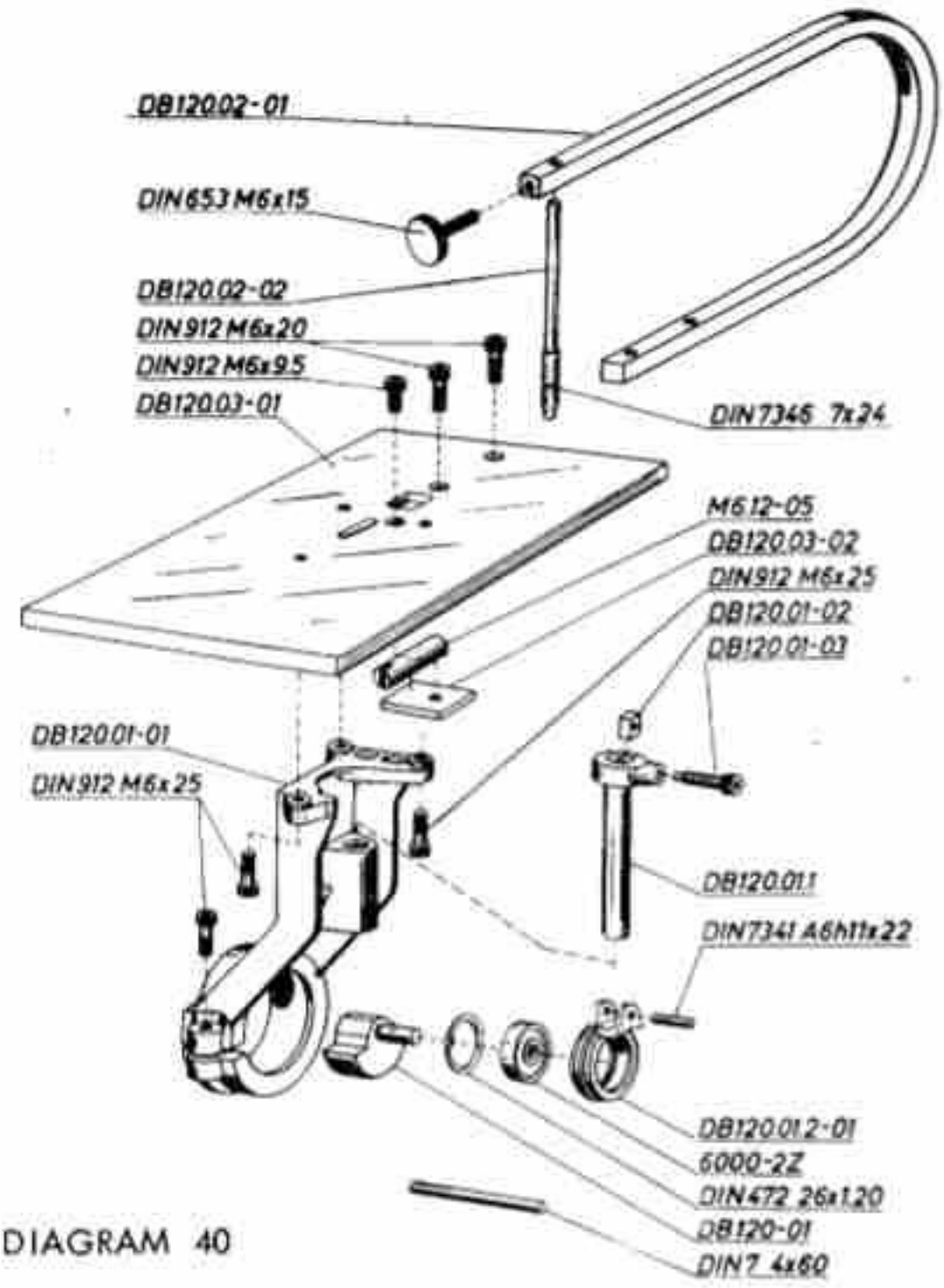

DIAGRAM 40

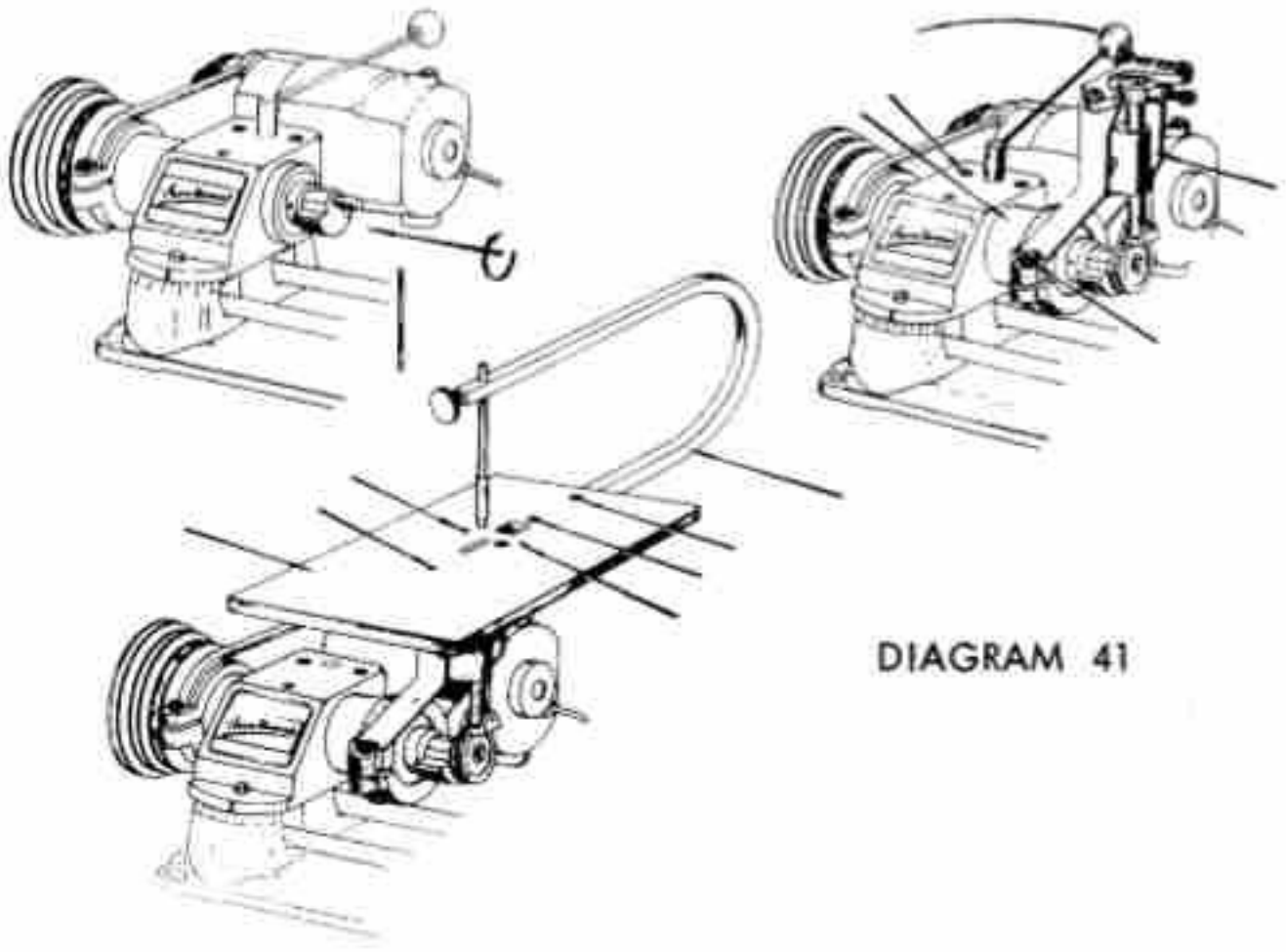

DIAGRAM 41

Fret and Sabre Saw. Order No. 1080:

A further ancillary attachment to the UNIMAT is the fret or sabre saw. With it all fret saw work in wood, metal and plastic can be carried out. Particular care should be taken that the fret saw blades supplied by us with it are not mixed up for the various materials. As despatch has to be effected in the dismantled state for the sake of convenience and ease of packing, the fret saw should be assembled in accordance with the following brief instructions. (See Diagram 40).

We supply the following parts:

1. Saw holder DB 120.01 with loosely fitted drive eccentric.
2. Saw bow DB 120.02 with saw blade holder, knurled screw and 2 screwed in socket head screws.
3. Saw table DB 120.03.
4. 3 socket head screws.
5. 1 cylindrical pin.
6. Assorted fret saw blades.

a) Screw out the two loosely screwed in socket head screws on the upper side of the saw bow, locate the saw bow underneath the table and fix it securely with the two socket head screws.

b) Locate the saw holder beneath the table and screw it on from underneath with the 3 socket head screws supplied. Care should be exercised that the saw blade holder (adjustably mounted on the saw bow), the brass guide (adjustably mounted on the underside of the table) and the clamping device (on the drawing column) are exactly in alignment.
Necessary corrections can be made by virtue of the play in the socket head screws, which secure the saw bow and saw holder to the table.

c) Tensioning of saw blade.
Thread the saw blade into the saw holder and clamp it securely in the drawing column (in clamping head), note direction of teeth ! With the saw holder adjust for thickness of wood to be cut. (Thread saw blade in from top !)

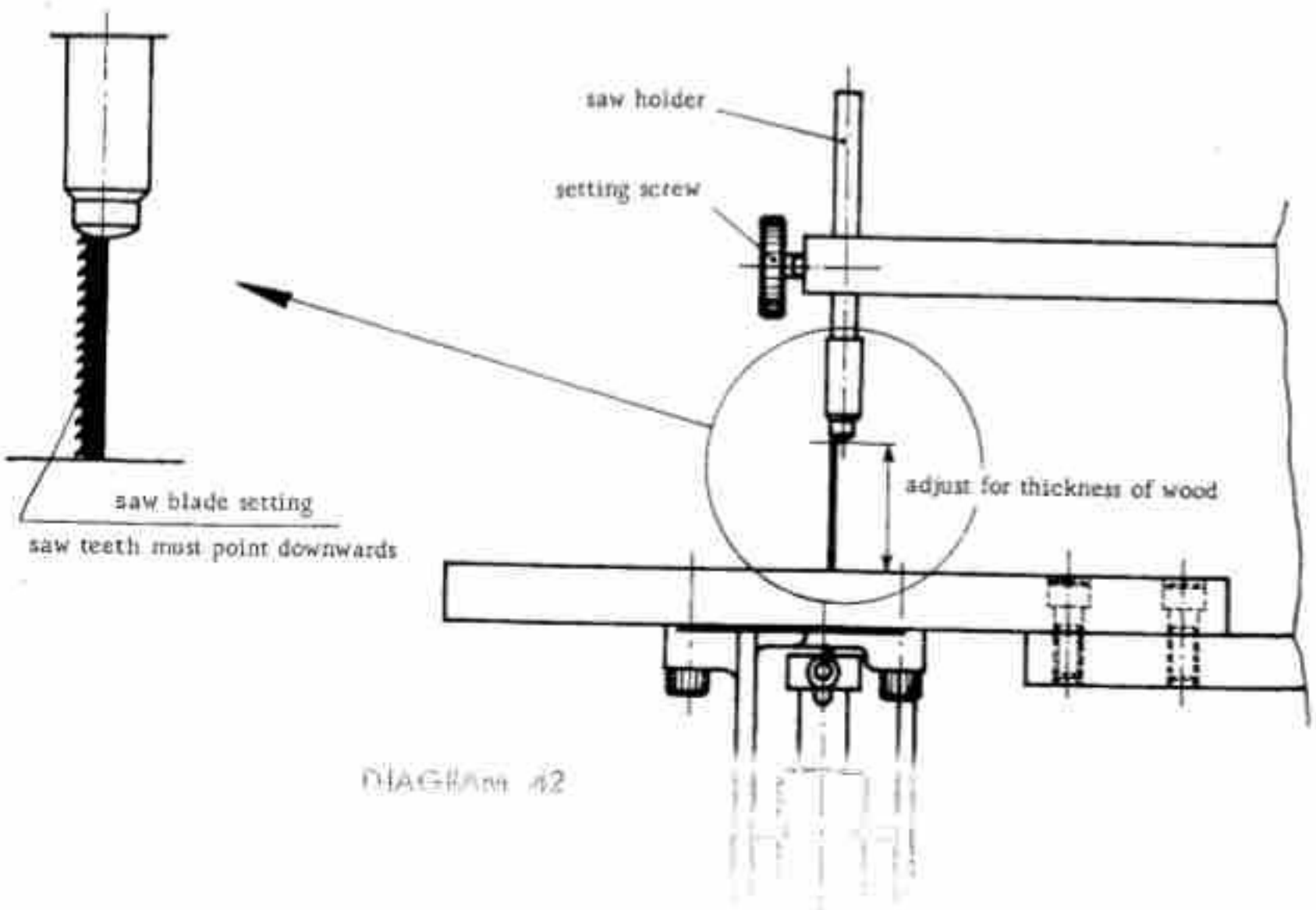

DIAGRAM 42

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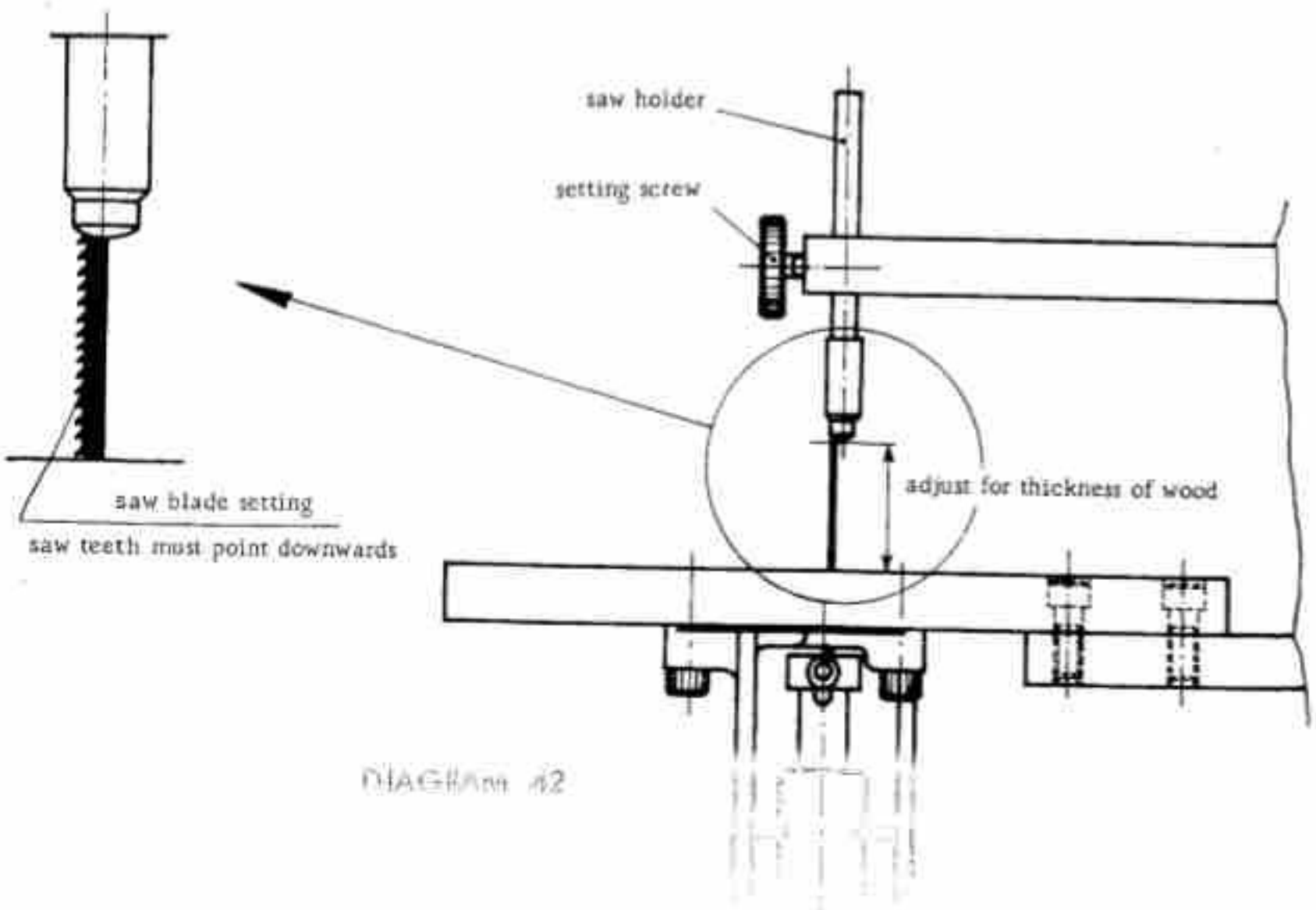


DIAGRAM 42

The assembling of the saw attachment on the UNIMAT should be carried out with the help of Diagram 41.
First of all scew the drive eccentric on to the spindle nose. For securing this firmly use the cylindrical pin supplied by us. The spindle sleeve is then slid up to the shoulder from the front, in the direction of the tailstock and the sleeve again firmly clamped. Next push up the fret saw and at the same time insert the eccentric stud (bolt) into the connecting rod.

The sabre saw:

The erection of the sabre saw is the same as the fret saw, except only for the saw bow, as the sabre saw blade is clamped in only at one end. The advantage of a sabre saw is that one can cut out the widest variety of shapes from any desired sheet size. Any desired sabre saw blades may be used.

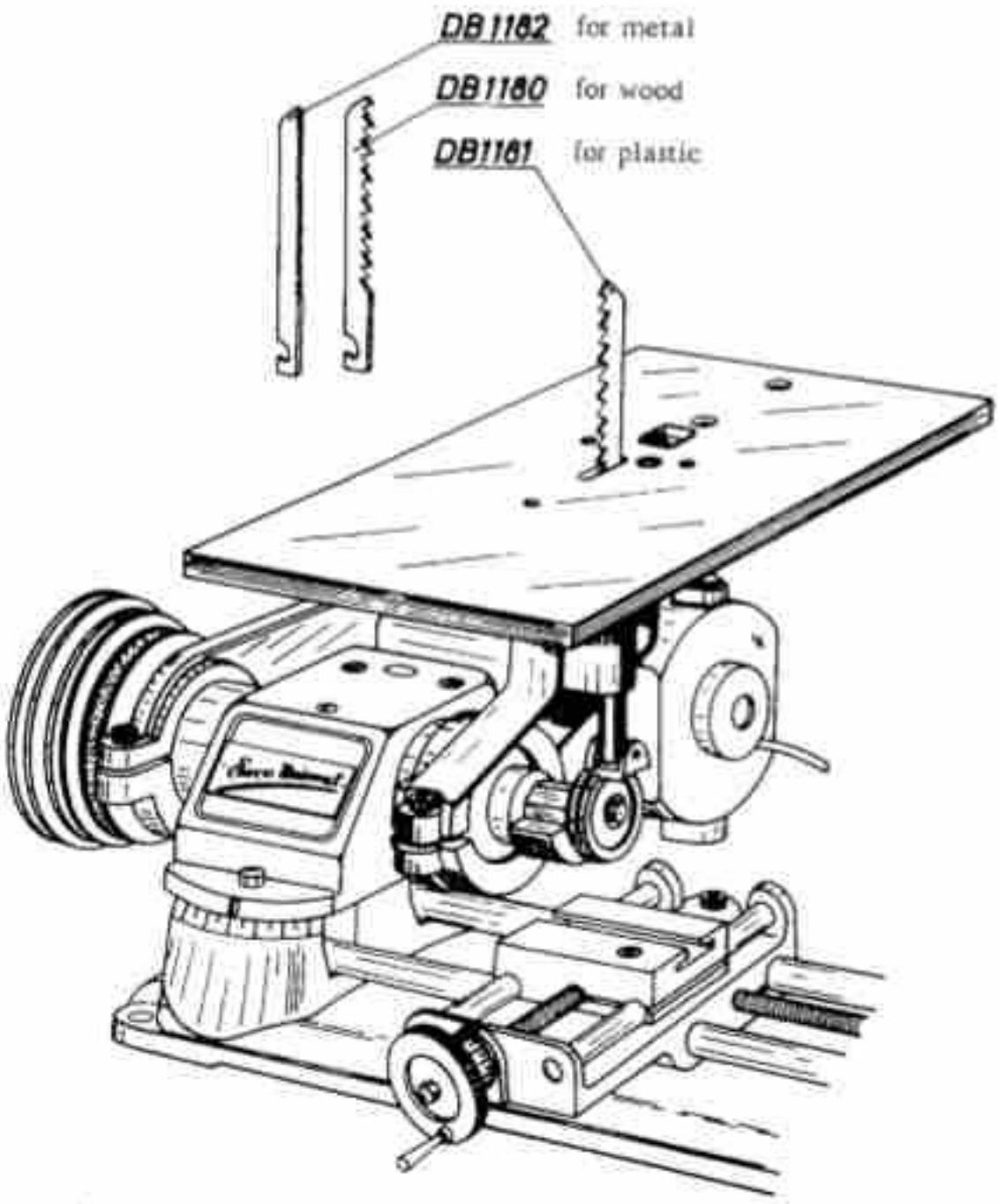


DIAGRAM 43

Circular Saw attachment. Order No. 1240 :

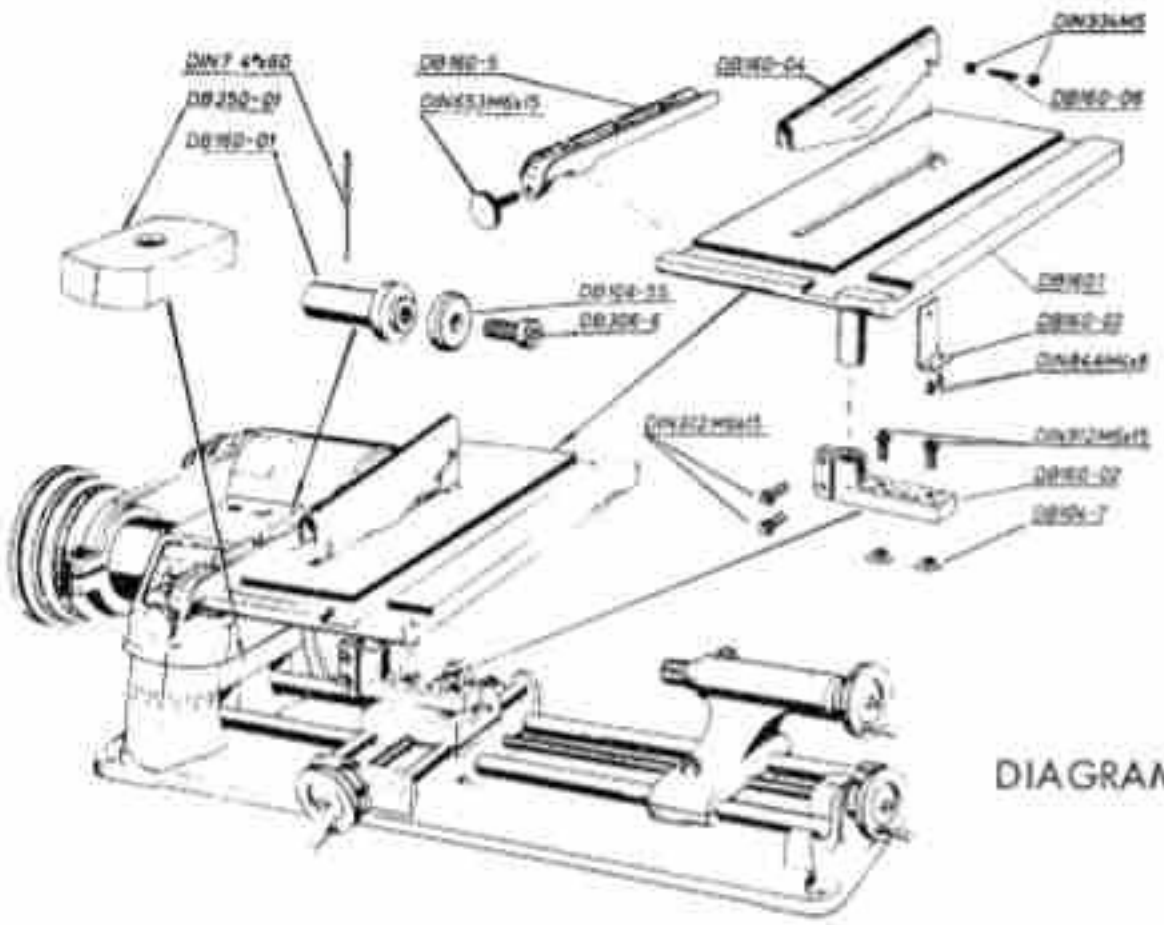


DIAGRAM 44

The circular saw attachment offers multiple application possibilities in all cutting and finishing work. According to the type of saw blade used, metal, wood or plastic can be worked. For circular sawing supplementary to the circular saw attachment the intermediate piece Order No. 1240 has to be used.

Fitting of the Saw Blade :

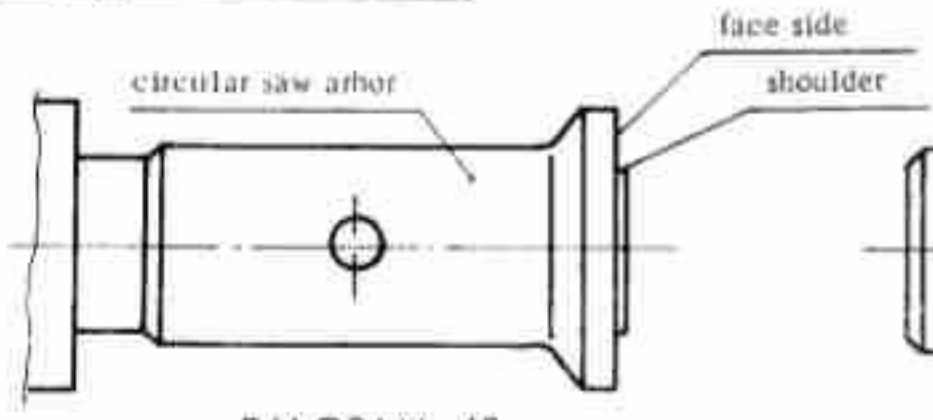


DIAGRAM 45

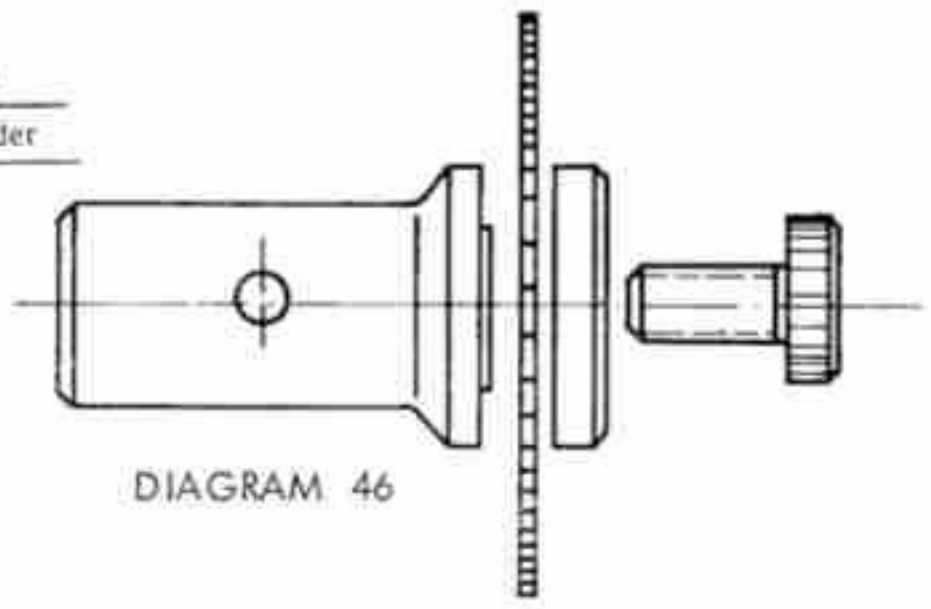


DIAGRAM 46

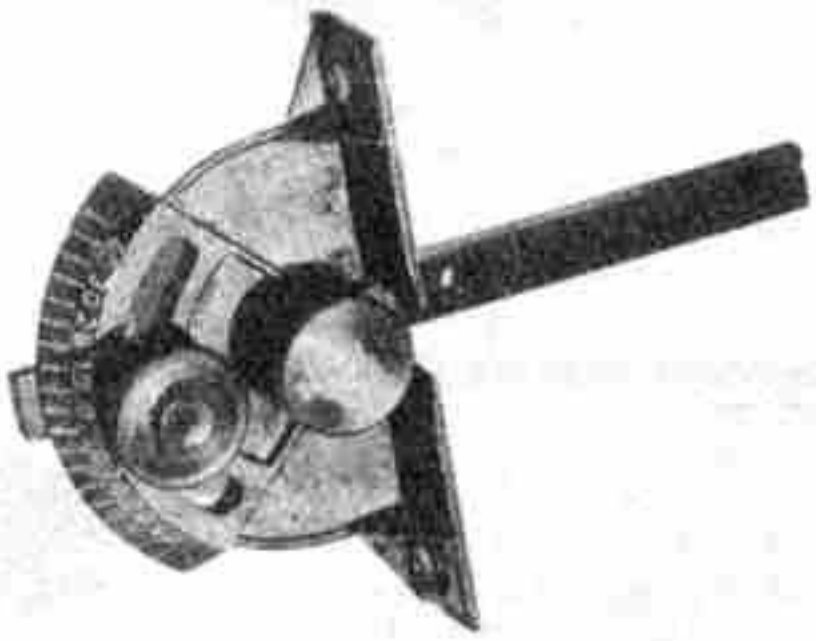
Carefully clean thread and contact surface of the lathe spindle, then securely fix circular saw arbor with the aid of the tensioning pin supplied. To ensure good concentric running, the circular saw blade must be fitted to its arbor. Set the headstock at normal for cylindrical turning. Speed 800 r.p.m. The circular saw blade must slide on easily, but without any play. Turn down fine shavings from the approx. 0.02" wide shoulder of the circular saw arbor (using point tool), until the saw blade with its 0.63" centre hole can be pushed on. Next turn off about 0.008" from the face of the circular saw arbor. Care must be taken that the transfer from the face surface to the outside turned shoulder is sharp edged. The circular saw blade must be fitted so that the teeth point in the direction of rotation.

Assembling the table:

Loosen the table on its holder, slide holder with T-nuts into groove of upper part of support and tighten up. Insert table with studs and clamp tightly so that saw blade comes to rest freely. Then fix both supports with the clamping screws. Take care that the riving knife is set exactly in alignment with the circular saw blade. Fit on the parallel stop and clamp securely to the desired width. When cutting, the workpiece which is moved forward by hand, is simultaneously pressed on to the table and against the stop. With 60 mm-blade nose of bracket DB 160-2 should look downwards, and with 90 mm-blade upwards.
Cutting is done at such a speed that the motor revolutions do not drop unduly. Exact, straight cuts can be achieved with the circular saw. By using the intermediate piece and the 3.543" (90 mm) blade a maximum cutting depth of 0.985" will be obtained.
For producing right-angled transverse cuts (square ended cuts) on short workpieces one employs the

Mitre gauge. Order No. 1241:

DIAGRAM 47



To achieve a right-angled cut on a workpiece, the mitre gauge should be used. In this work procedure the workpiece is fastened to the mitre gauge. See Diagrams 48/49. The mitre gauge can be swivelled on both sides through 45 degrees and is provided with a degree scale.