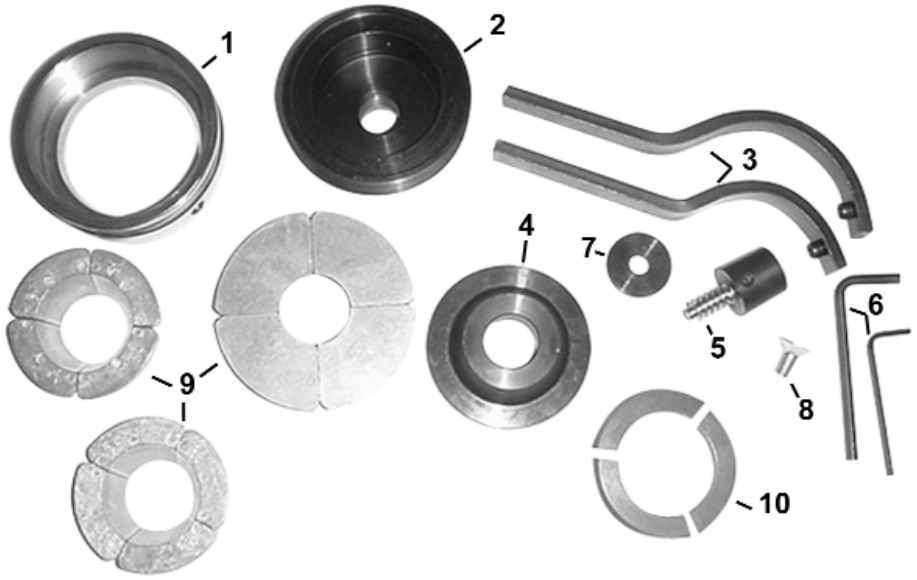
INSTRUCTIONS FOR:

COLLET CHUCK FOR SM42 LATHE

Model No: **SM42/ACC4**

Thank you for purchasing a Sealey product. Manufactured to a high standard this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.

⚠ ***IMPORTANT:*** **PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS AND CAUTIONS. USE THIS PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. PLEASE KEEP INSTRUCTIONS SAFE FOR FUTURE USE.**



Contents

1. Screwed Collar
2. Body
3. 'C' Spanners
4. Centre Boss
5. Screw Chuck
6. Allen Keys
7. Washer
8. Screw
9. Expanding Dovetail Collets
10. 1-3/4" 3-Way Split Ring

1. EXPANDING DOVETAIL COLLETS

1.1. Workpiece Preparation

1.1.1. Round off the timber, or remove the corners as appropriate. The workpiece may then be held by means of:
- i) Face Plate (as supplied with your SM42 lathe), or
- ii) Screw Chuck (see Section 5)

1.1.2. The outside of the bowl may now be turned. Incorporate in the design a suitable dovetailed recess (fig. 1) for the appropriate collet.

Note: The collets will, on average, allow up to 1/4" adjustment and the diameter of the recess is therefore not critical. The depth of recess need not be more than 3/16". The dovetailed undercut can be produced with a skew scraper or the long point of a skew chisel.

1.1.3. After turning the outside, the bowl can be removed from the lathe and mounted on the expanding dovetail collet to turn the inside.

1.2. Application

1.2.1. Use: Body (2), Screwed Collar (1), Centre Boss (4) and the appropriate Expanding Dovetail Collet (9).

1.2.2. Assemble the chuck as illustrated in fig. 1.

1.2.3. Place the recess in the base of the bowl over the collet.

1.2.4. Push the bowl firmly against the collet whilst tightening the collar by hand - this will expand the collet.

1.2.5. Finally, tighten with the 'C' spanners (3) to give a perfectly snug fit. Turn and finish the inside.

1.2.6. To remove, slacken with the 'C' spanners (3) and unscrew by hand, so that the bowl may be supported with one hand. As the collet is unscrewed the elastic band will close the collet sufficiently to withdraw the bowl.

1.2.7. Whilst the use of an elastic band may appear somewhat crude, it is nevertheless effective, simple and universally available.

❒ **WARNING!** On soft timbers, the collar may require further tightening as the collet beds in.

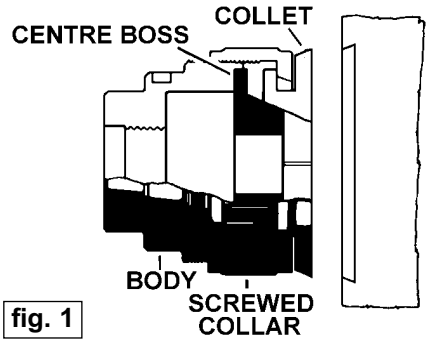


fig. 1

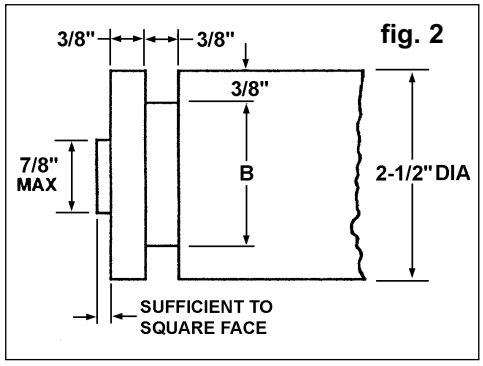


fig. 2

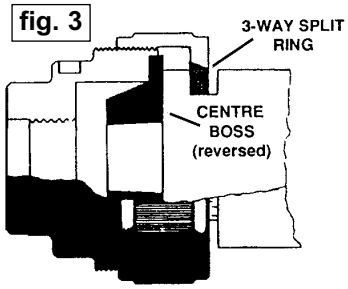


fig. 3

2. 3-WAY SPLIT RING

2.1. Workpiece Preparation

2.1.1. Turn a suitable piece of timber, between centres, to a diameter of 2-1/2” (fig. 2. A).

2.1.2. Square up the left hand end and cut a groove to the dimensions shown in fig 2. Diameter B should always be the same as the internal diameter of the split rings.

2.2. Application

2.2.1. Use: Body (2), Screwed Collar (1), Reversed Centre Boss (4) and 1-3/4” 3-Way Split Ring (10).

2.2.2. Remove timber from between centres and insert the split rings into the groove.

2.2.3. Pass the work through the collar so that the sloping faces of the split rings mate with the internal sloping face of the collar.

2.2.4. Reverse the centre boss and locate in the chuck body.

2.2.5. Offer up the collar with the workpiece and screw down by hand.

2.2.6. Finally tighten using the ‘C’ spanners.

Note: Large diameter work can be held but a spigot must be turned of sufficient length to permit the insertion of the split rings.

3. COLLAR CHUCK

3.1. Workpiece Preparation

3.1.1. Turn a suitable piece of timber, between centres, to a diameter of 2-3/4”. This diameter is not critical but should not be less than 2-3/4”

3.1.2. Square up the left hand end and produce a flange (fig. 4). The remainder of the length should be turned down to slightly under 2-1/2” diameter.

3.2. Application

3.2.1. Use: Body (2), Screwed Collar (1) and Reversed Centre Boss (4).

3.2.2. Remove the workpiece from between centres and pass the work through the collar.

3.2.3. Offer the assembly to the chuck body with the centre boss reversed (fig. 5).

3.2.4. Screw down by hand and finally tighten with the aid of the ‘C’ spanners.

fig. 4

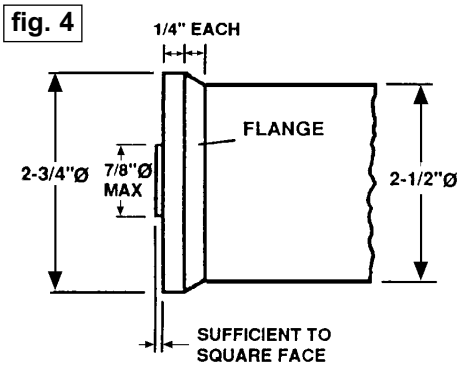


fig. 5

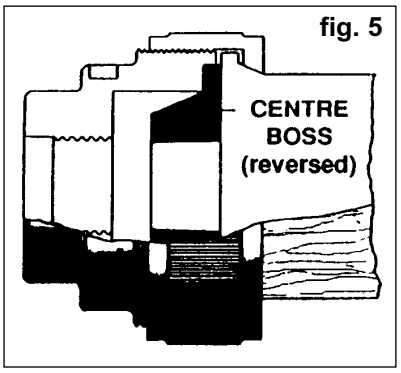
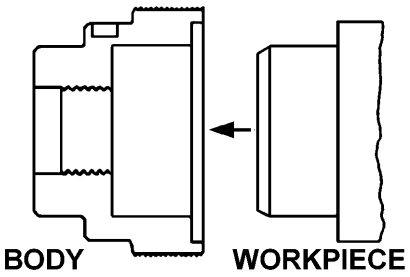


fig. 6



4. CUP CHUCK

4.1. Workpiece Preparation

4.1.1. Turn workpiece to 2-1/8” diameter (or larger diameter with spigot turned to 2-1/8” diameter x 1” long) which can be pushed into the body recess of the chuck (Fig. 6).

4.2. Application

4.2.1. Use: Body (2) only.
Note that the fit must be good and offer a slight interference. If hammering is necessary, it should be carried out at the bench to avoid any possible damage to the spindle bearings on the lathe.

❒ **WARNING!** When using cup chucks, always keep the tool rest as close as possible. If the workpiece moves, the rest will prevent it from moving out.

5. SCREW CHUCK

5.1. Workpiece Preparation

5.1.1. Drill a pilot hole at the centre of the workpiece (fig. 7). **DO NOT** use a pilot drill which is too small or the screw chuck thread may become damaged.

Note: Wherever possible, provide a flat face (fig. 7.A) to get maximum drive from the chuck.

5.2. Application

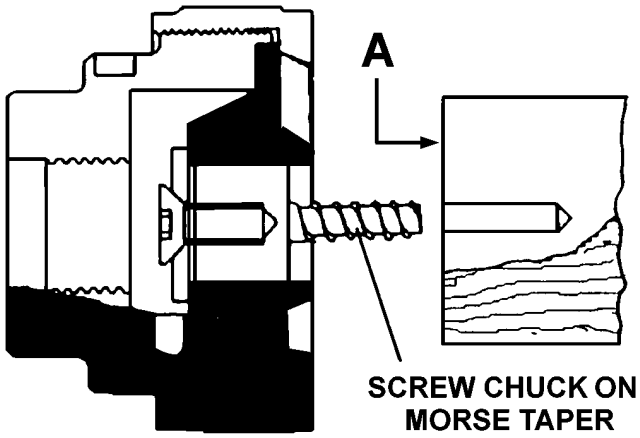
5.2.1. Use: Body (2), Screwed Collar (1), Reversed Centre Boss (4) with Screw Chuck (5) secured by Washer (7) and Screw (8).

5.2.2. Insert the body of the screw into the centre boss. It can only be inserted from the reverse side and is retained with the screw and washer (fig. 7). *If you experience difficulty in removing the chuck from the centre boss, undo the screw slightly and tap the head lightly to release the morse taper.*

5.2.3. If the screw is too long its effective length can be reduced by spacing disc(s) made from hardwood or plywood. The centre hole of the disc should be slightly oversize to accommodate any throw up around the hole in the workpiece.

❒ **WARNING!** To avoid undue strain on the screw, do not exceed a length to diameter ratio 3:1, i.e. a piece of wood 2" diameter must not exceed 6" in length. The length may be increased if the tailstock is used for support.

fig. 7



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IMPORTANT: No liability is accepted for the incorrect use of this product.

WARRANTY: Guarantee is 12 months from purchase date, proof of which will be required for any claim.

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