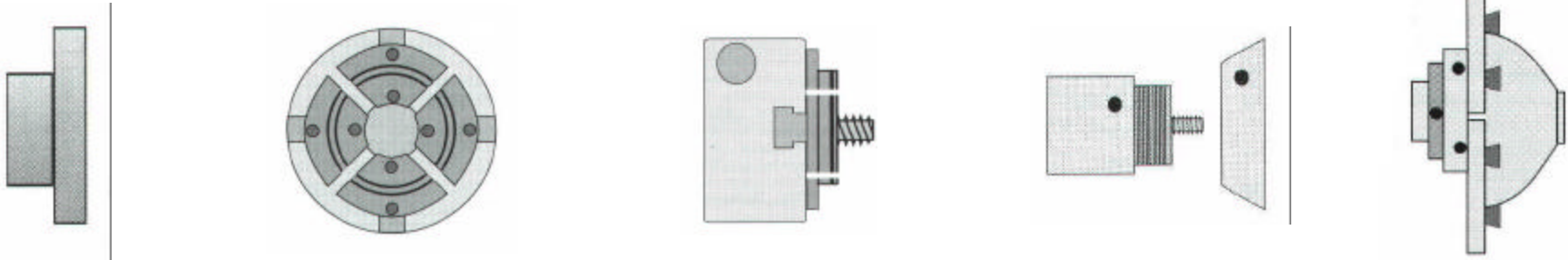


Lathe Chucks & Chucking

Presentation by Bill Haskell

November 12, 2000



Chuck Type	Chuck Use	Advantages	Disadvantages
<i>Face Plate</i>	<ul style="list-style-type: none"> • Most bowl and plate forms • Direct attachment with screws • Attach to waste block with glue • Jam and screw chuck adaptation 	<ul style="list-style-type: none"> • Very versatile – good general purpose attaching method • Relatively inexpensive 	<ul style="list-style-type: none"> • Does not self center
<i>Jam Chuck</i>	<ul style="list-style-type: none"> • Scrap wood or plywood mounted on faceplate • With recess: turn bottoms of plates and non-enclosed bowls • With spigot: turn bottom of enclosed work using tail stock 	<ul style="list-style-type: none"> • Inexpensive • Doesn't require expensive chucks • Mount on existing faceplate • Self centers 	<ul style="list-style-type: none"> • Create or reshape for each use • Reuse limited • For finish turning, not roughing out
<i>4 Jaw Scroll Chuck</i>	Most versatile chuck – will hold large variety of work	<ul style="list-style-type: none"> • Holds small to large work • Multiple gripping methods: <ul style="list-style-type: none"> - Spigot - Recess - Screw - Pin - Small square • Self centers • Ease of mounting and remounting • After market jaw types and sizes 	<ul style="list-style-type: none"> • Expensive (\$200 – \$300)
<i>4 Jaw Independent Chuck</i>	Best for off center work and irregular shaped pieces	<ul style="list-style-type: none"> • Off center work • Irregular shaped work 	<ul style="list-style-type: none"> • Difficult to use if centering is critical

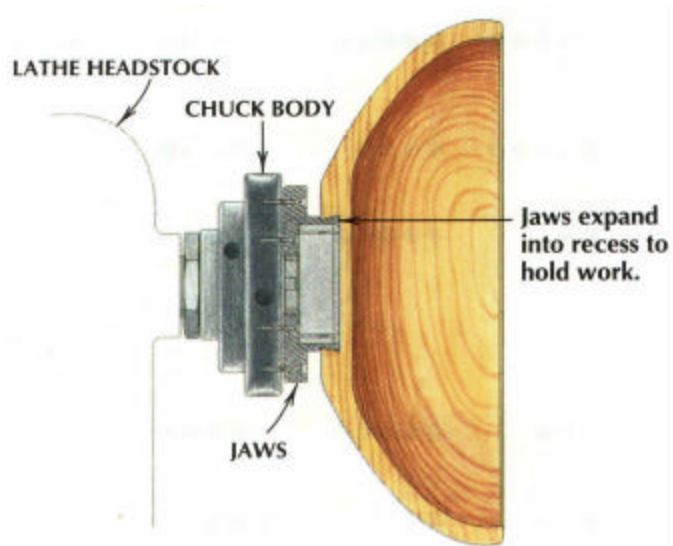
Lathe Chucks & Chucking

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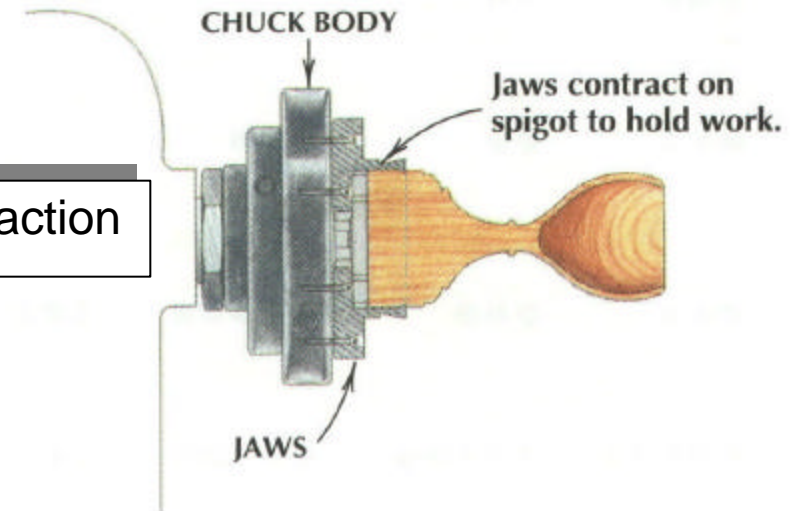
Chuck Type	Chuck Use	Advantages	Disadvantages
<i>Jacobs Chuck (On Morse Taper)</i>	<ul style="list-style-type: none"> Primarily for holding drills in tail stock Can be used in headstock for small diameter spigot 	<ul style="list-style-type: none"> Best way to hold drill for drilling Self Centers 	For Mounting Wood: <ul style="list-style-type: none"> Only for small diameter tenons Indents wood Long tenon required
<i>Collet Chuck</i>	<ul style="list-style-type: none"> Small items like tops, wine bottle stoppers, etc. 	<ul style="list-style-type: none"> Quick attachment Self Centers 	<ul style="list-style-type: none"> Only useable for small spindles Different size collet required for each dowel/tenon size Long tenon required
<i>Screw Chuck</i>	<ul style="list-style-type: none"> Small bowls, goblets, finials, etc. Initial blank roughing and bottom preparation 	<ul style="list-style-type: none"> Easy and fast attachment Useable on 4-jaw chuck Shape bottom to mount on faceplate or 4-Jaw chuck 	<ul style="list-style-type: none"> Not suited for large work (over 6" long and 8" diameter)
<i>Pin Chuck</i>	<ul style="list-style-type: none"> Initial blank roughing and bottom preparation 	<ul style="list-style-type: none"> Good for green logs Quick mounting Shape bottom to mount on faceplate or 4-Jaw chuck 	<ul style="list-style-type: none"> Limited to outside and bottom shaping Pin hole could be problem
<i>Vacuum Chuck</i>	<ul style="list-style-type: none"> Reverse turning natural edge work, off center pieces, and other unusual shapes 	<ul style="list-style-type: none"> Holds work other chucks can not accommodate 	<ul style="list-style-type: none"> Requires Vacuum pump Can be expensive Requires work mounting adjustments to achieve desired placement
<i>Cup Chuck</i>	<ul style="list-style-type: none"> Short spindle shaped work without using tail stock 	<ul style="list-style-type: none"> Production turning of short spindle type work Self centers 	<ul style="list-style-type: none"> Must turn Morse taper tenon Not for large work Not on the market
<i>Spindle Morse Taper</i>	<ul style="list-style-type: none"> Miniatures, goblets, finials, etc. 	<ul style="list-style-type: none"> Holds small work well No chuck required Self Centers 	<ul style="list-style-type: none"> Must turn Morse taper tenon Only for very small work

Four Ways to Grip with a Four Jaw

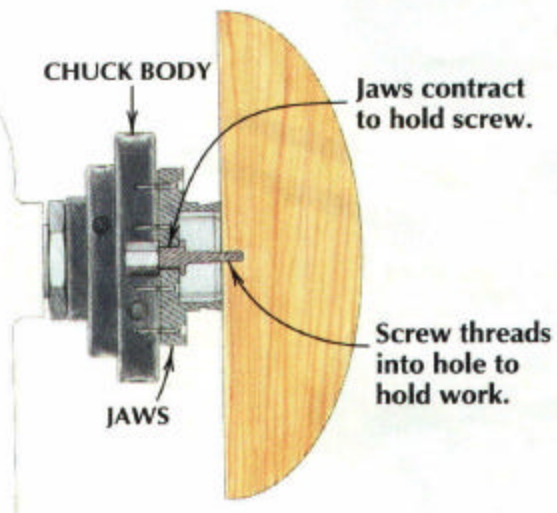
Recess Expansion



Spigot Contraction



Screw Chuck



Pin Chuck

