WS-006 Thread-spool unwinding rack

Separate eight sewing spools and let one spool unwind without tangling neighboring thread.

Controlling dimensions: US inches and feet. Metric equivalents are references. Original editorial design; no physical build, animal trial or load certification is claimed.

Before marking and cutting

US inches; feet where appropriate. Metric values are rounded references. Written inch values control.

3/4 in means measured 0.750 in actual thickness wherever used. Recalculate mating lengths for other sheet thicknesses; do not substitute nominal stock blindly.

Use limits

A tabletop light-article fixture; not a pegboard climbing aid, handle, lever or wall anchor.

No rated load or suitability for an unsupported tool blade is claimed.

Materials and finished cuts

Part	Qty	Size to cut	Material and detail
A Base	1	12 × 6 × 3/4 in 304.8 × 152.4 × 19.05 mm	Sanded birch plywood with sound, void-free receiving edges. Measured actual thickness 3/4 in.
B Hardwood round pegs	8	2 1/2 × 1/4 in 63.5 × 6.35 mm	Smooth solid hard maple dowel, untreated; measured diameter controls socket fit.. Round stock: length × diameter. Embed 1/2 in.

Hardware and consumables

1 × Wood adhesive. Use labeled dry-wood adhesive and its full cure time.

Tools

Rule with fractional inches; Pencil or appropriate material marker; Reliable square; Saw suited to the specified stock; Clamps; Abrasive and dust-removal brush; Drill with the specified bit and depth stop where needed; Driver matching selected fasteners

Primary context and design record

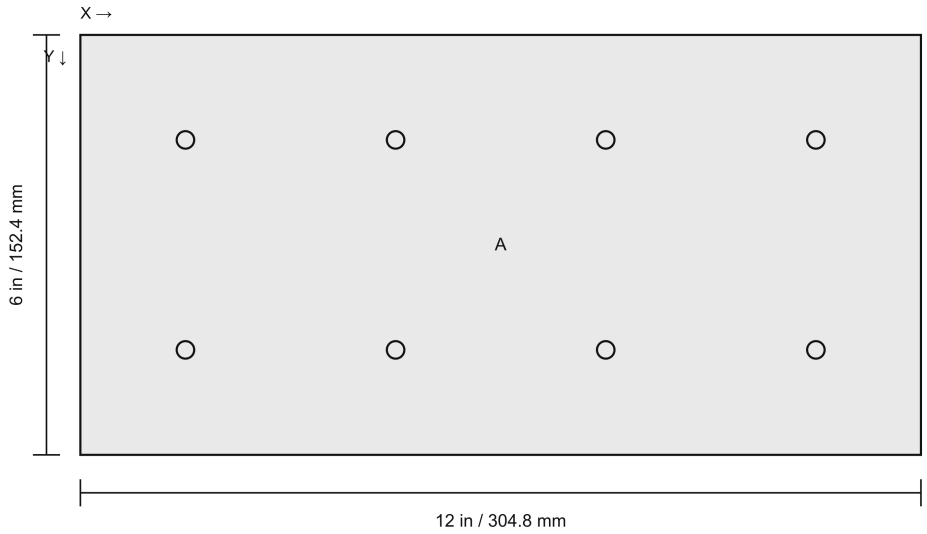
Context references; not design endorsements or certifications.

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Assembly and first checks

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PLAN / reference origin at front-left; not to scale. Inch values control.



Part letters identify the cut-list pieces. Dashed outline = underside part.
Coordinates in the method use the same X/Y reference.
Do not drill from the graphic: transfer the written center coordinates.
Original editorial design; no physical construction trial or certified load rating.

01 Measure the largest intended spool bore and diameter. This example uses bores that clear a measured 1/4 in dowel and spool diameters no larger than 2 1/2 in.

02 Cut A to 12 in / 304.8 mm by 6 in / 152.4 mm, using measured 3/4 in stock. Mark the front-left corner as X0 Y0 and carry that reference through the work.

03 Crosscut 8 pegs B to 2 1/2 in / 63.5 mm each. Dress end grain and round the top edges; preserve at least 2 in usable exposed length.

04 Lay out peg centers on A: X 1 1/2, Y 1 1/2 in; X 4 1/2, Y 1 1/2 in; X 7 1/2, Y 1 1/2 in; X 10 1/2, Y 1 1/2 in; X 1 1/2, Y 4 1/2 in; X 4 1/2, Y 4 1/2 in; X 7 1/2, Y 4 1/2 in; X 10 1/2, Y 4 1/2 in. These are centers, not clear gaps.

05 Test the actual dowel and a 1/4 in nominal bit in an offcut. Select a fit that seats without splitting; do not force an oversized dowel into a nominal hole.

06 Set a positive drilling stop at 1/2 in / 12.7 mm. Drill perpendicular blind sockets, leaving 1/4 in / 6.3 mm of A beneath each socket. Clamp the board and use backing under the work.

Complete the assembly

WS-006 Component dimensions

Orthographic component reference. Quantities shown; not a sheet nesting plan or full-size template.



12 × 6 in

A Base QTY 1

12 in / 304.8 mm × 6 in / 152.4 mm
thickness 3/4 in / 19.0 mm



B Hardwood round pegs QTY 8

Length 2 1/2 in / 63.5 mm
diameter 1/4 in / 6.3 mm
embed 1/2 in / 12.7 mm

Measured actual stock controls. Read the written assembly sequence before cutting or fastening.

07 Clean each socket. Apply a small amount of wood adhesive appropriate to the dry indoor use on the embedded 1/2 in of B; keep adhesive out of the exposed gripping area.

08 Seat every peg to the marked 1/2 in insertion line. Check perpendicularity with a square from two directions and remove squeeze-out before it cures.

09 Place one spool over each upright peg after cure. Leave its 2 in projection unobstructed; do not force a small-bore spool onto a tight peg.

10 Let the adhesive cure for its full labeled time. Do not load or twist the pegs while curing; no screw or nail is driven into a peg end.

11 Take thread from one spool and pull it gently parallel to the tabletop. If it catches a neighbor, move that neighbor to an empty position; do not turn the rack into a powered winding station.

12 Label the front edge with thread types and keep needles in a separate closed needlebook. Remove loose trailing thread before storage.

Acceptance and intermediate checks

Each socket is 1/2 in deep and each peg projects 2 in above A.

Pegs remain upright and cannot be turned out by normal hand use after full adhesive cure.

Center spacing is 3 in in each row and 3 in between rows, leaving at least 1/2 in between stated 2 1/2 in spools.

Base rests flat without projecting points or sharp edges.

Cleaning and maintenance

Remove articles and brush dust from socket joints.

Do not immerse the glued assembly. Dry immediately if damp.

Replace any split peg or loose socket before reuse.