

Design Yourself A Toilet Mirror

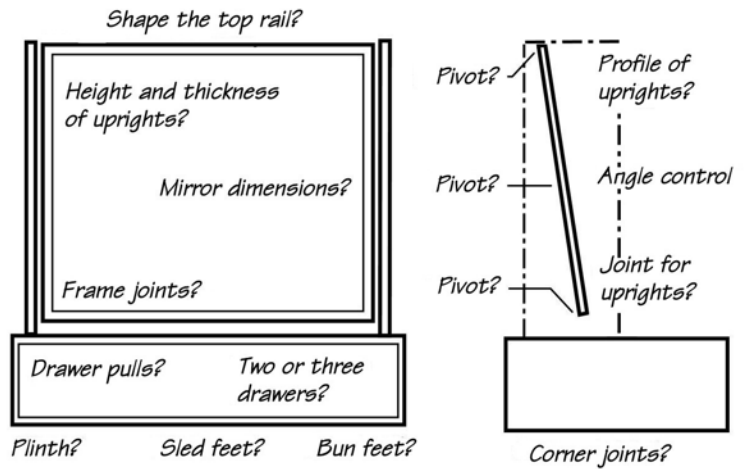


This photo of a mirror stand with three drawers appears in the biography of Sir Gordon Russell, published by the Design Council for Gordon Russell Ltd, 1992 ISBN 0 850 72 306X

This time I'm suggesting a 'design line' for a project that is economical both in wood and workshop space, yet offering strong challenges to your woodworking skills.

Function First

As always, the function of your design needs to be your starting point. Its function is to frame an image needed when applying make-up, fixing ear-rings, rehearsing facial expressions and all those other things that give it the alternative name of 'vanity mirror'. It also needs to hold the associated equipment and quite possibly a medley of un-related odds and ends. I suppose that you could start



Some prompts to help your thinking.

from considering the need for drawer space, but the most obvious starting point will be the mirror. The data you will require include its dimensions (and their proportion) and means of adjustment.

Fix Size and Proportion

You might think that a mirror frame should have some of the qualities of a portrait frame. Would the user find a narrow picture frame more or less flattering than a wider one?

When two people are getting ready to go out, will one want (perhaps becoming tired of waiting?) to look over the seated user's shoulder while making a quick swipe with a comb and adjusting his tie?

Having considered these fundamentals, determine the user-mirror distance. Position your subject(s) at this distance from any suitable mirror, hold a tape measure against the mirror and estimate how much margin you want round the reflections and you have arrived at the vertical and horizontal dimensions of your frame.

Perhaps you will need to tweak the dimensions to arrive

at pleasing proportions, but my advice is not to place too much reliance on what you can read about the Golden Ratio and so on.

Adjustment

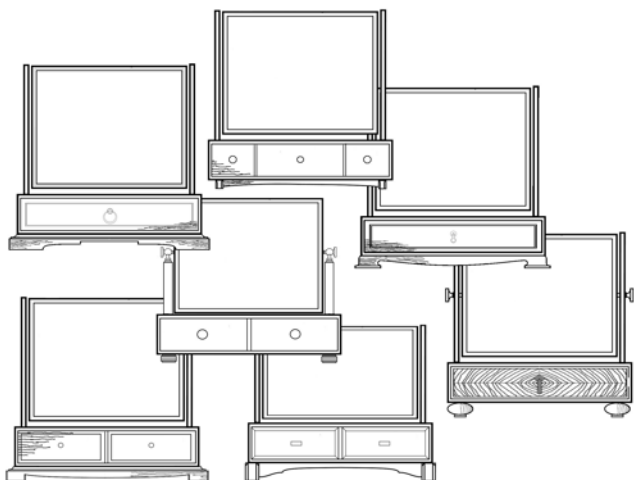
Will the user always use it in a sitting position, or when, perhaps in a hurry, standing up? Is the user likely to want to fine tune the angle? If the user's temperament is such that he/she is willing to use two hands to regulate the pivots, then a centre-hung mirror will be OK.

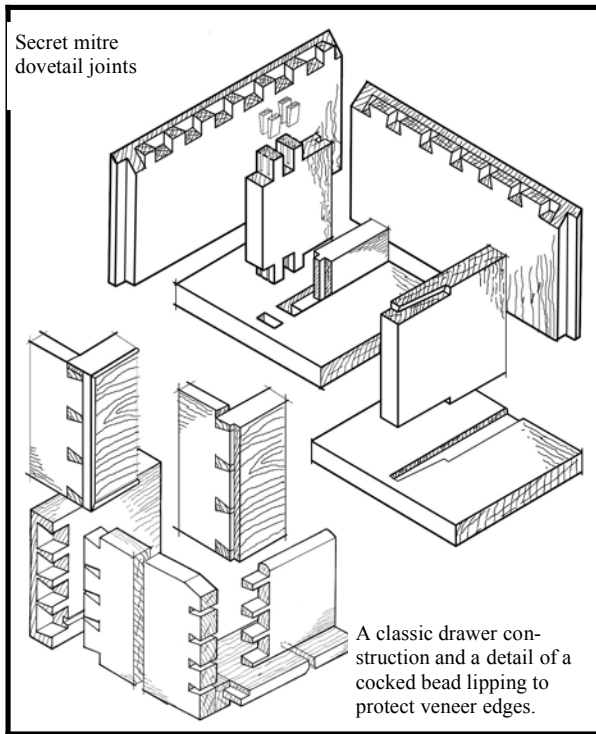
I've illustrated two simple pivots that rely on friction to fix the viewing angle, but if set too tight, the act of adjustment can put a strain on slender standards and their mountings.

Maybe you fancy the challenge of making a wooden mechanical system that uses a pawl and ratchet and readily-obtainable hinges?

Make Tentative Drawings

Once these essentials are decided, you can move forward by taking some squared paper and making a number of drawings to, say, one-quarter full size. Start from a rectangle representing the frame. Add lines representing the standards. If you know what you want to put in the drawers, you will know how





many you will need, and what sizes to make them.

The profiles of the standard will be important so at some stage it will be useful to also make some side views as well.

Don't forget to try some different drawer pull or knob shapes. Like eyes in a face, they draw attention and greatly affect the perception of the design.

You could find yourself using quite a lot of tracing paper when you move on to trying a variety of plinths/feet.

Consider Resources



While you have been drawing, through the back of your mind should have run questions about the techniques they imply. Secret mitre dovetails offer an un-cluttered appearance, yet

will be more demanding on time and skill.

Maybe you need a cast-iron excuse to buy such and such a tool?

For example, I think that to tackle such a design you will need a shoulder plane to form the mirror rebates and any ovolo moulding you might wish to incorporate. Fielded drawer fronts will also require a shoulder plane. I indicate a shoulder plane because you might find that some wooden rebate planes have too coarse a mouth for work on some figured timbers. Router owners will still find a shoulder plane helpful in getting a router-ripple free finish without resorting to the sandpaper that can do so much to destroy those fine arises needed to form attractive highlights.

If you decide to opt for screwed fittings, you will need certain sizes of drills and a very stubby screwdriver to get inside the narrow space.

Joint Details

For people who might be seeking a technical challenge, I've drawn secret mitre dovetails, though others might like to see a set of nicely proportioned and carefully spaced through dovetails. Whatever you decide, a job with a plinth would look better if it has lap joints for the bottom corners, though you could through-dovetail each corner if you fit bun supports or one of their cousins.

Partitions

A very sound possibility is a partition fixed by housed twin tenons, but for people who don't much care for frank jointing, I've drawn a partly-dovetailed housing joint

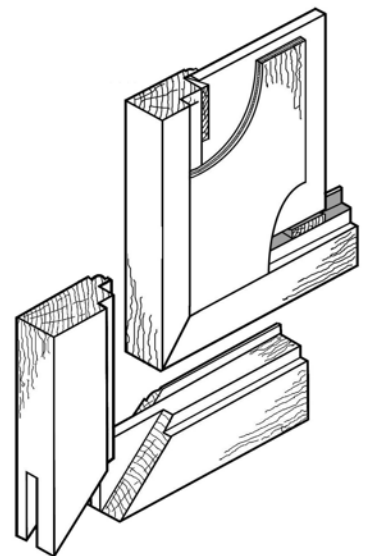
Carcase Edge Details

Eight sectional plan views show how the fronts of the carcasses can be enhanced. Five of these require the dovetails to have mitred corners to return the mouldings shown. Yes, there can be other ways of returning mitres, but lack of space prevents further drawings.

Drawers



A toilet mirror in English Walnut by Ernest Gimson (1864—1919).



A mitred bridle joint offers the easiest way of accommodating the moulding on the show face and the rear face rebates.

Of course, if you intend to mould the drawer opening, you might not wish to overdo things and be content with plain drawer fronts made from well-matched finely-figured solid wood.

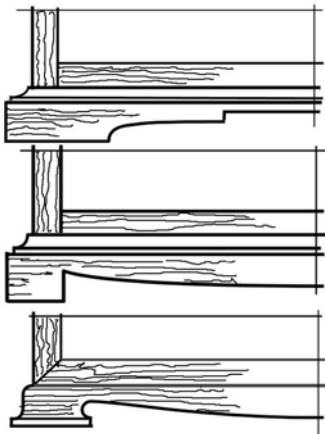
Beware that lovely figure can sometimes imply rather short grain that could create difficulties in cutting the lap joints. Hence if you delight in fancy grain, a veneered front might be your choice.

Unless you decide to use a single placid-grained leaf, you will get a balanced design if you use two leafs in book-matched arrangements. When making a three-drawer unit, it could be a good idea to arrange for the outer drawers to match and use a less interesting but colour and grain matching veneer for the central



The support system dominates CA-Voysey's design.

drawer front. Whatever you decide, avoid patterns that lead the eye off to one side or other of the unit. You will need to protect veneer edges by fitting cocked beads.

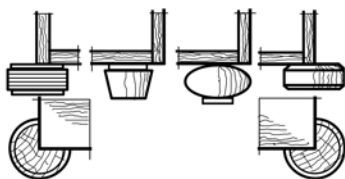


Just three possible plinth designs. When fixing, allow for some movement in a solid-wood carcass.

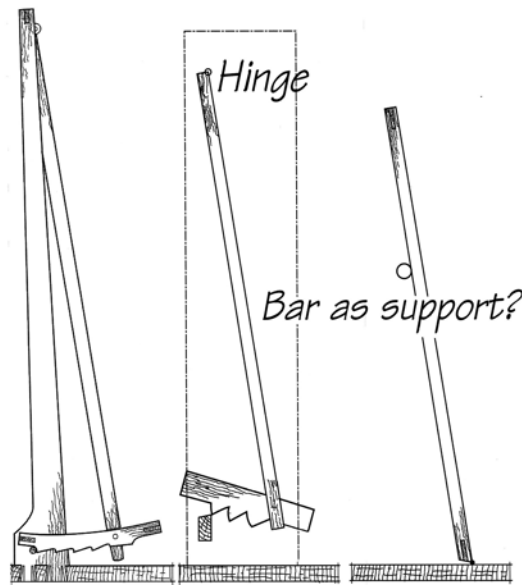
Using contrasting woods for the essential cock beading offers a design opportunity, though boldness in this area implies a balancing boldness perhaps in the treatment of the standards or the mirror frame.

Drawer Construction

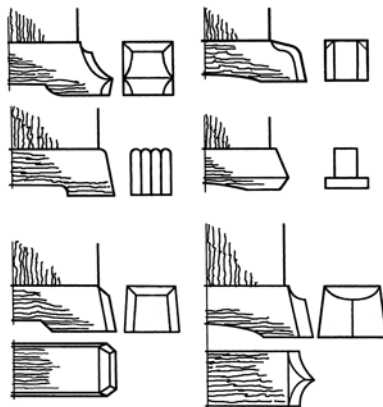
The drawings suggest standard details for a top-quality drawer, including drawer slips that in heavy drawers increase the bearing area and so reduce wear. For such small and light-weight drawers, you could,



A 'bun' foot (second from the right) and some cousins for the GWer with a lathe.



Angle-adjustment systems for two top and one bottom-hinged location..

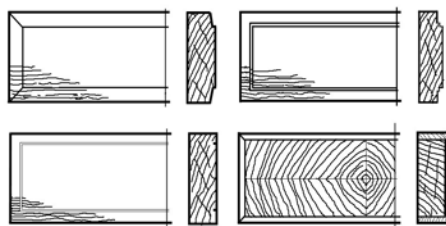


Sled feet offer alternatives to plinths or bun feet. Try experimental designs on scrap.

with a fairly clear conscience compromise by directly grooving the drawer sides and so save some work and time

The Standards

Drilling accurate holes can be a challenge, so for location purposes I've suggested a shallow



Drawer Fronts, (clockwise from top-left - bevel fielded, double-fielded, carrying an inlaid line and veneered and cock-beaded.

housing. For a secure and up-to-date fixing 'Screw Sockets' are obtainable from hardware suppliers. Whatever shaping you give to rear-mounted standards, do ensure that that the mirror hangs well inside the base, otherwise there is a risk of its weight overbalancing the entire unit.

Plinth, Sled Feet and Buns

The front corners should be keyed mitre joints (or a single secret mitre dovetail if you feel fastidious and would like the challenge). The rear joints will need to be lapped joints.

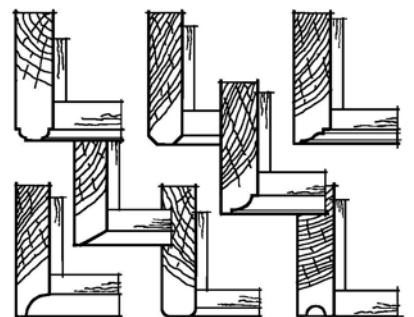
Mirror Frame

I've drawn a no-compromise frame construction that shows mitred bridle joints at each corner as would be necessary if you should wish to enhance the frame with mouldings or inlays.

The design allows the back to be inset flush with the rear faces of the frame. This does imply thickish rails and stiles, so for lightness of appearance, you could reduce the thickness by the



A fuss-free and pleasant design gleaned from the archive of GoAntiques.com.



Plan sections showing some ways of creating highlights on the carcass and divider

depth of the back's rebate and settle for a planted-on thin back.

Frame Enhancements

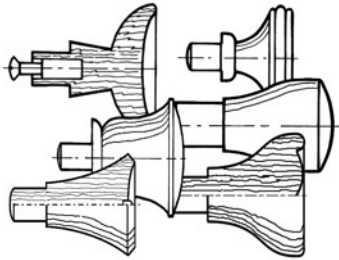
If you restrict yourself to a more-or-less rectangular mirror most of the opportunities for enhancement lie within the shaping of the

standards, the drawer fronts and the feet.

I don't think you can buy a router cutter that will cut lines as thin as those needed for inlaid lines, so you will need a scratch stock to satisfy this choice.

Knobs & Pulls

Since these features have an enormous impact on the visual quality of the design. It will be important to see that their size is in scale with the job. Is this a



A medley of turned knobs that could even be made on a lathe rigged-up from a power drill.

good argument for buying fittings before the design is finalised? You can then cut your unit according to your knobs, as it were.

For the fine woodworker the range of ready-made items can be disappointing. Who, for example wants to have to make-do with pine knobs when designing a hardwood job?

The GWer with some kind of lathe has an advantage. I don't now have access to one, but for the cost of a small revolving centre I've rigged a simple bench-top lathe using a drill in its horizontal cradle. A conveniently-sized length of angle iron stood-in for a tool rest. You can do lightweight turning with an outside-ground cabinet-maker's gouge, but you might have to buy a small turner's chisel and a paring tool.

Finishing

Contamination by makeup materials can severely test most finishes. One possibility would be a two-pot formulation lacquer, but you could play safe and use a beeswax finish that while is easily renewable.

Other things to think about:

- You could use several wedged tenons to locate the standards, although cramping and inserting the wedges could cause some anxiety when gluing-up.
- For a greater challenge, consider an octagonal, circular or even an elliptical mirror frame.

Jargon Busting

Housing—A shallow recess also known as a dado.

Fielded—Where a panel has a flat raised area formed by shallow rebates around its perimeter, it is known as 'fielded'.

Through Jointing—Also known as 'Frank' jointing where the end-grain of dovetails and tenons (for example) is allowed to show.

Shoulder Plane—A fairly narrow plane whose blade extends right across (and slightly beyond) the flanks of the body.

Arris—A sharp edge formed where two flat or curved surfaces meet.

Rebate—A rectangular space cut out of an edge.

Short grain - Areas whose fibres are so short that the workpiece is weakened.

Stile—A vertical member of an upright framework. A stile runs the full length of the framework, so for a frame which lies horizontally, eg a table top, the parts running the full length are called the stiles.

Rail—Normally a horizontal member of an upright framework, but see above..

Resources

Dovetail techniques and design details can be found on my web site at www.amgron.clara.net

Screwed Sockets

Woodfit — Parts (M6) BM 180 or (M8) BM 120.

Tel 01257 266 421

www.woodfit.com

Rear-Mounted Swivel Hinges

www.rockler.com

Turned Brass Swivels

Craft Supplies—Tel 0800 146 417

www.craft-supplies.co.uk

Knobs

Woodfit (see above)

Isaac Lord—Tel 0800 788 5790

www.isaaclord.co.uk

Catch & Drop-in Hinges

(or mirror catches, or mirror pivots)

John Boddy—01423 322370

Also Woodfit (see above)

