

CARE AND CLEANLINESS

ALL model engineers have their pet ideas and dodges which fulfil personal needs or make life easier away from the bustle and the glitter of mass organisation. In the home workshop, it is enough that something works for it to have its place.

Corks, for example, are as good as anything to protect the points of instruments and tools—awls, dividers and the ends of tweezers which have been ground to help in picking up tiny screws. The holes for the points can be oiled; then there is no danger of rusting. If you need several corks, a chemist will sell a small handful for a few pence.

To protect the sharp edge of a knife or a wood chisel, bind the blade with oiled rag; another way

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is to fold a piece of cardboard into a sharp V and hold it on the blade with a rubber band.

Hand hones and emery slips which are used for sharpening edge tools lose much of their cutting power when the surface is clogged with fragments of metal and congealed oil. Usually, after being cleaned in paraffin, they cut like new again. Scraping the surface with the edge of a piece of steel helps to dislodge embedded metal—or you can scrub the surface with a wire brush.

No one needs stress the importance of keeping abrasive from the working parts of a lathe, though for lapping operations abrasive is necessary. Sometimes, for hollow jobs, you can plug the chuck with rag, taking it off the spindle to push the rag in from the back. The bed of the lathe can be covered with several sheets of newspaper.

If there is considerable lapping to be done on a small narrow-bed lathe, a wood platform, as at A, offers the advantages of protection for the lathe and firm support for a dish with cleaning brush and paraffin. You make the platform from plywood and stripwood held by countersunk screws and nuts. Fit it to the bed with the saddle run to the tailstock end.

In normal use of a lathe, centres can be left in the spindle and the tailstock barrel to prevent swarf entering. A cork is usually more convenient in the spindle, as work can be pushed further back in the chuck. A rubber disc, as at B, is yet another means of keeping swarf from the taper in the spindle, with the further advantage that the end threads of the backplate are protected.

If you get a great deal of cast-iron dust or particles of brass in the jaws of a chuck so that they cannot be opened easily, screw them inwards and clean the teeth from the back with a long, narrow brush. For threads in a backplate, use a toothbrush.

To clean numbers of small parts screws, nuts, valve cotters—quickly and easily, there is nothing to beat a can that has been perforated or fitted with gauze in the end. You can dip it in a dish of paraffin or petrol, lift it, and swill it about, at the same time using a brush in the top. Cut out the end, as at C, using a cold chisel, with the can on a brass support upright in the vice. For watch-size parts, use a gauze tea-strainer. Place something over it.

To clean the smoothest of files, use a strip of brass sharpened to a chisel edge, as at D. Push it across in line with the teeth. You should not grind soft metals, like lead and aluminium, as they clog grinding wheels. If you have a wheel which is impregnated and out of shape, and have no dresser with which to true it, use a piece of grinding wheel, or the end of one of those coarse hones with which scythes are sharpened.

Cleanliness in tapping and thread-cutting is important for the work to proceed without hitch. Diagram E shows some points. Use a core drill (1) to twist-out swarf, or an oil syringe (2) to force it out. Use bent wires (3 and 4) to clean fragments from square thread nuts.

To clean carbon from sparking plug holes, a tool can be made as at F by cutting off the thread of a long-reach plug and brazing it to a shank. Grooves, as on a tap, are filed along the threads.

