

RESTORING LEATHER CASTORS

By Michael Barrington

The origin of the castor goes back to certainly the early 16th Century when, 'baby cages' and invalid chairs are known to have been equipped with wheels. They were used in England certainly towards the end of 17th Century and by 1690 there was an established castor-making trade in London. Castors, to begin with, were simple hardwood wheels mounted on horizontal axles but by 1700 vertical spindles mounting jaws in which horizontal axles and wheels were carried were in use. The wheels were of wood, probably boxwood which, by the 1730s, tended to be replaced by leather wheels and then brass wheels.¹

Leather wheels are quieter than both wood and metal and are kinder to wooden flooring. They are generally fitted between brass jaws either in the hidden plate form or the more usually seen vertical spindle cup castor. As frequently happens, the spindles, rust or the holes in which they are mounted, wear and the wheels seize. Consequently the castor wheel will not follow the direction of push of the piece of furniture and it suffers serious wear against the floor. This happens with brass wheels as well as leather ones and if not remedied in time, flats wear on the wheels when they cannot rotate anyway. The wheels have to be replaced, probably as well as their spindles.



The leather castor is made up of a number of hard leather washers. I say 'hard' in that the leather is 'bridle leather' which is taken from areas either side of and close to the animal's spine and is indeed the leather from which most saddlery is made. Leather from the flanks and belly, used more in upholstery, is too soft.

The image left shows a set of six socket castors from a mahogany framed settee in which the top three are in an acceptable state while the lower three have all been seized and consequently flattened.

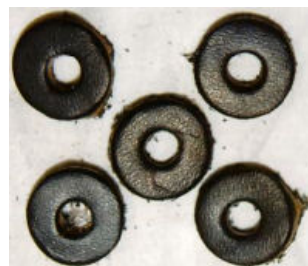
The image on the right shows three spindles, the two left-hand having square bodies.

The photograph below shows the original washers after they have been disassembled.



The photograph below right shows some replacement leather washers which have been stamped concentrically with two sizes of hole punch one 7/8" for the OD and one 1/4" for the axle.

The new spindle (shown below left) is either turned or, and probably better, is of square section and is drilled to accept its axle. At one end a fixed and rounded shoulder is turned. A complimentary end washer with the same profile is turned ready



for closure of the wheel.



Enough leather washers are mounted on the spindle to achieve the correct wheel width. When the required length of washers has been assembled on the spindle, the brass closing end washer of the same profile as the fixed shoulder is either screwed or riveted in place. It is necessary to make a jig to compress the washers in a vice before fitting the brass end-washer. As the washers are assembled on the spindle, they can be glued which will make for a more solid construction. I would favour a PVA adhesive for this, largely because it will stick to the metal rather better than animal glue which would undoubtedly be more correct although reversibility is not really an issue in this case. Longevity of the wheel is however a serious consideration.



The three assembled wheels ready to mount in the forks. These have been skimmed lightly in the lathe with each wheel mounted on a tapered arbour. Skimming brought the wheel diameter down to 3/4". The finished wheels are oval in shape which makes the castor more efficient. Straight cylindrical wheels are similar to running on flat tyres. The skimming tool has to be extremely sharp with good front rake or slope under the cutting edge and skimming should be done at not less than 1000 rpm. The wheels pictured have yet to be oil stained before finally being spun in the lathe and wax-burnished with carnauba ready for mounting on steel axles riveted into the original brass forks, some of which had to

be bushed, silver-soldered and re-drilled because of the excessive wear by former seized axles and also split or fractured fork arms.

You may find that the original castor bobbin can be re-used; in which case you should do so. In the example used here however, the end washers had been flatted along the chords of the worn leather. You do need to have the full metal end washers to make a reliable wheel.

¹ Encyclopedia of Furniture materials, Trades and Techniques—Clive Edwards.