

A Large Inspection Mirror, Version 1.3

By R. G. Sparber

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Marv Klotz, of homemadetools.net, came up with an excellent idea for a large inspection mirror (<https://www.homemadetools.net/forum/big-picture-inspection-mirror-80767#post163609>). Here is my version.



I glued² a 1/2-inch ball bearing to the back of a mirror near the corner. Then I glued a countersunk neodymium magnet to a scrap of angle that was first brazed to a rod.

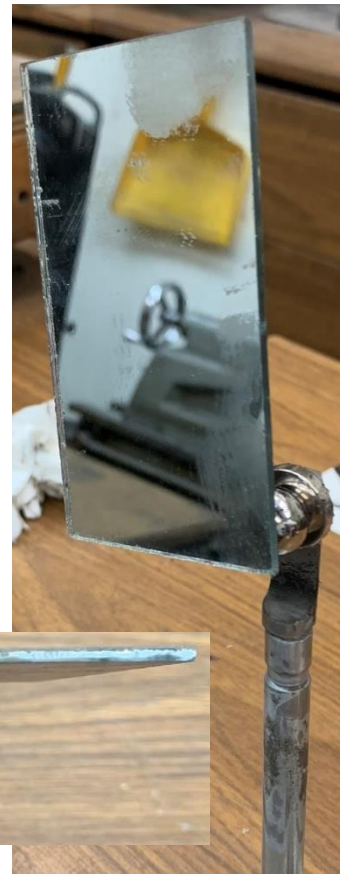


The countersink in the magnet makes a nest for the ball. As long as both the ball and magnet are free of oil, it holds well. I can angle the mirror as needed relative to the rod.

The only risk is that if I bump the mirror hard enough, the magnet will separate from the ball. My hope is that the force would push the mirror out of the way and not drop it.

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² I first used builders adhesive and it held between the magnet and the steel support. But it did not hold the ball bearing to the back of the mirror. I switched to epoxy and it shows promise.

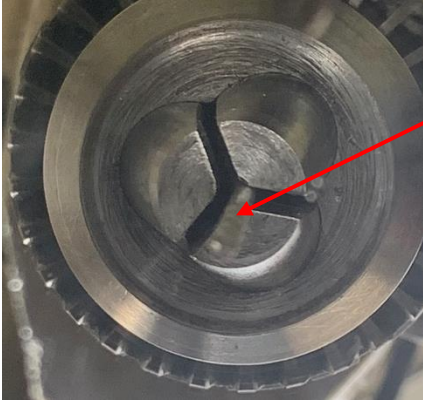


After the original posting, I received a suggested improvement:

Gregg Kricorissian:

Regarding your concern for the health of the mirror, why not first glue the mirror to a sheet of high density foam sheet that is a bit larger than the glass? The excess sheet would act like a perimeter bumper and guard against shattering the mirror if it hits something?

Alternatively, you could use Lexan sheet that is mirrored on one side. I have such a Lexan mirror in my shop: mirrored on one side, and magnetic on the other ... it is stuck to my tool box and not too far away when I need it.



Installing small drill bits into a large chuck mounted in my drill press can be a problem. The jaws close tightly yet the drill bit is not centered. This becomes obvious when spinning up.



The inspection mirror, steadied by the magnet attracted to the vise, makes it easy to see the jaws while inserting the drill bit.

Acknowledgments

Thanks to Marv Klotz, a reliable source of great ideas. Thanks to Don Foreman for the silver braze to secure the piece of angle to the end of the rod. It is an amazing material. Thanks to Gregg Kricorissian for his suggestion.

I welcome your comments and questions.

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