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## Rotating jig for locomotives

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As purchased my 7¼ inch B1 was rather along the line of 'here's the engine, the tender follows later', which meant it wasn't exactly close coupled. The arrangement of the pipework and the coupling made any change working underneath impossible for an old chap like me. Attending the Model Engineering Exhibition at the Alexandra Palace with a colleague solved the problem as a well-built simple turn over fixture was on display. Two scissor-type car jacks each with an adapter head allowing rotation of a spindle which can be attached by some means to the engine/tender and locked at various angles of rotation. Quite how this is done depends on the builder and it should be possible to work out my choice from the photographs. Note that I used all mechanical fixings, no welding, although the latter would speed the construction.

An important feature giving simplicity is the design of the scissor jack, which, when lifting a vehicle, must allow the top plate (jacking plate) which is nominally horizontal to adopt an angle to the horizontal as the vehicle is lifted at a single point. This enables the pivot to take up an angle to the horizontal so that lifting of one end at a time is perfectly safe and is indeed a feature of the jack design. No need for any mechanism linking the jacks.

I chose six locking positions (at 60deg of course) with tommy bar locations between to turn the engine/tender. I have not used the tommy bar locations for the B1 tender or the 5in Hall loco turned on the fixture. The B1 tender adapters fitted in place of the buffers, and at the rear and to existing holes on the drag beam were attached to the pivot spindle at the centre of gravity of the tender so the tender would assume any angle of rotation with minimal force — a tommy bar is quite unnecessary — and stay there.



Obviously, the locking pins would be used whilst working on the tender. The Hall was attached to the jacks by the same crossbars attached to the buffer beam at the buffer mounts and the centre coupling at the cab. These fixings were not on the centre of gravity but without the boiler the chassis was easy to turn over, tommy bar not required.

The two jacks are attached to a wooden frame which is bolted down to my castor-mounted engine testing unit which enables the whole thing to be moved around the workshop. This arrangement has proved entirely satisfactory. A possible improvement would be the elimination of the tommy bar mounts which

would enable additional index locations; 60 deg. locations are a little coarse. I do not have a photograph of the B1 tender on the fixture. The Hall was mounted on the fixture for valve gear maintenance. Not essential, but it did make strip down and re-assembly of the components much easier. I'll soon be saying I don't know how I managed without it.

