

# A Bench Shear for the Small Shop

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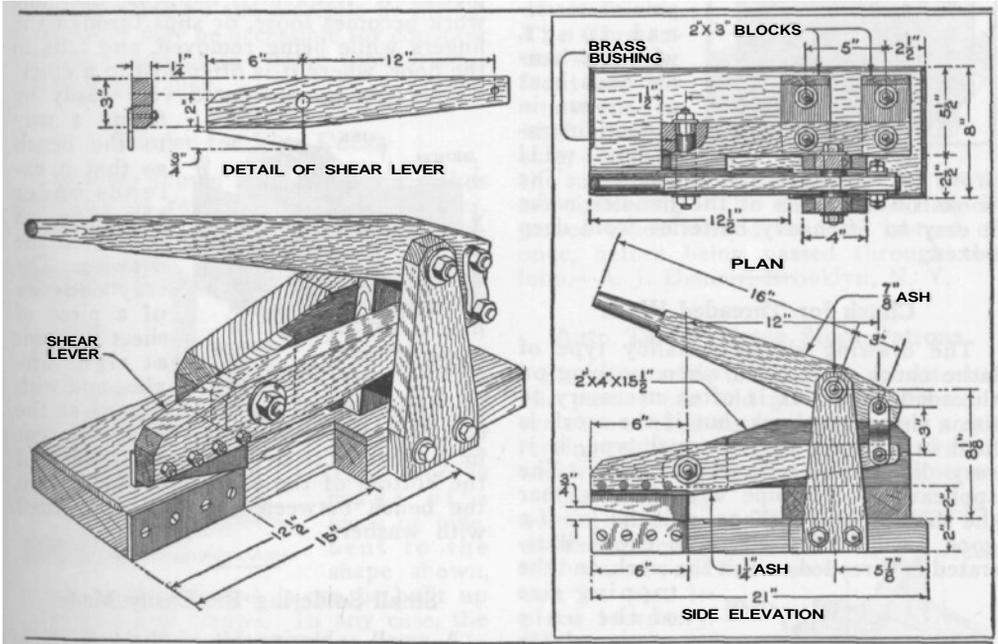
**T**HE bench shear described in this article can be made very easily, and will cut much heavier metal than can be cut with a pair of hand shears. It is designed to give a leverage of 30 to 1 on short cuts, and 10 to 1 at the end of a full stroke. As the blade is 6 in. long, and there is a clearance of 6 in. behind it, it is possible to cut metal that is 24 in. wide, by cutting from both sides.

The base is made of 2-in. stock, to the dimensions shown in the drawing. Two blocks, 2 by 3 in., are bolted to it, and the holes drilled for the bolts are counter-

ing for the stud, which is a tight fit in the shear lever.

The hand lever and its supports are made of .875-in. ash. The lever works on a 1/2-in. bolt, and is also fitted with a bushing. One of the supports is fastened to the 2-in. ash block, while the other is screwed to the base. The links connecting the levers are made of 1/4-in. iron or steel. Both the hand lever and the shear lever are fitted with bushings for the link bolts, which are made of .375-in. steel.

The shear blades are made of .375-in. tool steel, hardened, and the edges ground.



A Bench Shear That will Prove to Be a Very Serviceable Addition to the Equipment of Any Tin Shop: Due to Its Leverage, Much Thicker Metal can be Cut with It than with Any Ordinary Pair of Hand Shears. It is Made of Hardwood, with the Exception of the Links, Bolts, and Blades

bored on the underside of the base so that the heads of the bolts will be flush with the surface. Bolted on top of these blocks is a piece of ash, 2 by 4 by 15 1/2 in., and a short piece of 3/4-in. hardwood is attached to one end of this block with flat-head wood screws. This 3/4-in. piece is faced on the outside with a .125-in. steel plate, in which the screw holes are countersunk, so that the screw heads will be flush. The shear lever is attached by means of a 3/4-in. steel stud passing through these pieces, and it is also faced with a .125-in. steel plate where the surface comes in contact with the plate on the 3/4-in. block. A brass bushing is pressed into the blocks to serve as a bear-

The upper blade is 2 in. wide at the front, and 2.875 in. at the back; it is held to the shear lever by means of bolts, while the lower blade is fastened to the base by flat-head screws, countersunk flush.