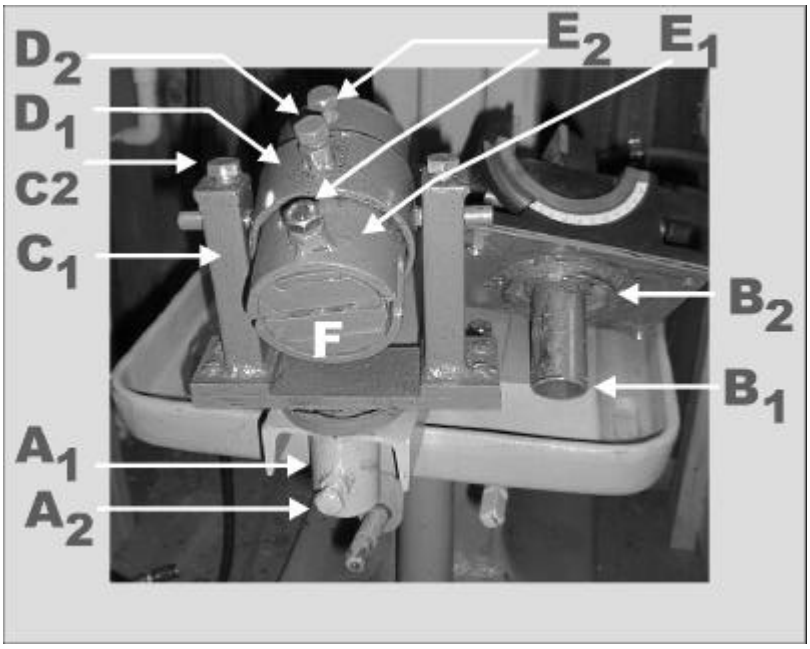
Knife-Makers Vise

Steve Bloom, IronFlower Forge, Nov.2002



Filing is such sweet sorrow - especially if you can't get the blade at just the right angle! My solution is pictured to the right. Mounted on an old drill press base (giving me control of elevation) is a section of heavy pipe (A_1) with a lock bolt (A_2). Inserted into that pipe is a section of slightly smaller pipe (B_1) welded to a plate. Also welded to the plate and surrounding the smaller pipe is a thin section of large pipe (B_2). The thin section elevates the plate so that the weld seam doesn't bind in the socket and acts as a rotation surface. The combination of the socket, insert and plate gives a 360 degree rotation parallel to the ground. By making multiple plates and inserts, a variety of vises can be used in the same mount. On the knife-makers plate, there are two uprights (C_1) with lock screws (C_2). The uprights were made of square steel tubing with a plate welded on the top. The plates had a ½" x 13 nut welded on the inner surface. Pivoting in the uprights is a hoop (D_1) made of 4" diameter pipe with a lock screw (D_2) and a pair of ½" diameter round stock pieces that serve as pivot points. The combination of the hoop and uprights provides complete rotation perpendicular to the ground. Inside the hoop is a barrel (E_1) made of a section of pipe slightly smaller in diameter than the hoop. The barrel has two lock screws (E_2), a slot cut across one end, and two blocks of hardwood (F). The combination of the barrel and the hoop provides complete rotation in the last possible plane of orientation. A knife can be inserted into the barrel between the blocks and clamped either in line with the barrel or at right angles to it. The two lock screws allow clamping on tapered tangs or blades. The vise, a good light, and a magnifier makes filing a whole lot nicer.