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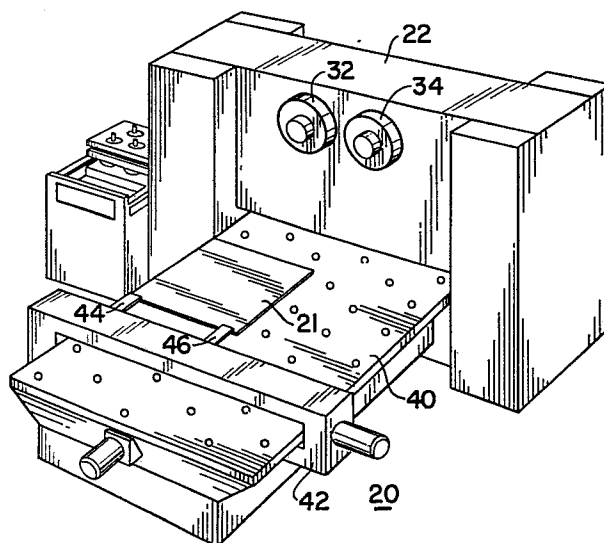
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54 **Universal sheet metal holder.**

57 A punch press (20) having a worktable (40) for supporting a worksheet (21), a two axis positioning mechanism for positioning the worksheet under a punching head (34) and universal grippers (44, 46) supported on the worksheet positioning mechanism which can grip either the end or sides of a worksheet (21). The two axis positioning mechanism is formed from a carriage (42) which is movable along the worktable (40) and a cross slide (41) which is mounted from and movable across the carriage (42) to provide the two axis sheet positioning. The grippers (44, 46) are mounted from a T-slot (130) formed in the cross slide (41) and can be moved to different positions to accommodate various sheet sizes. Aligning pins (140, 142, 143, 144) which can be used for aligning worksheets are provided. Aligning pins (140, 142, 143, 144) during operation are retracted beneath the worktable (40).





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. <sup>3</sup> )
D,A	US-A-4 127 198 (MORINI)		B 21 D 43/11
D,A	--- US-A-3 835 743 (TAYLOR et al.)		
D,A	--- US-A-3 603 187 (BREDOW)		
A	--- US-A-3 758 099 (SCOTT) * Claim 1; figure 1, position 10 *	1,3	
A	--- GB-A-1 204 032 (BUDD)		
A	--- GB-A-2 067 450 (AMADA) * Figure 2; claim 1 * -----		
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 27-12-1983	Examiner SCHLAITZ J
<b>CATEGORY OF CITED DOCUMENTS</b>			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	