

Title (en)
A bridge type punch press.

Title (de)
Portalstanze.

Title (fr)
Poinçonneuse à portique.

Publication
EP 0100282 A1 19840208 (EN)

Application
EP 83401523 A 19830725

Priority
• US 40144482 A 19820726
• US 40144682 A 19820726

Abstract (en)
A punch press (20), for punching a workpiece, utilizing an elongated punch support which is formed from removable interconnected punch cartridges (92) and an elongated die support which is formed from removable interconnected die cartridges (94). A punch head (32) is supported from a frame (30) which spans the punching area. A two axis positioning system is provided for positioning the sheet metal workpiece within the punching area beneath the punch head. Punch head (32) through appropriate mechanical interposer (160) engages a punch which in conjunction with an associated die, positioned there beneath, forms a hole in the workpiece. The elongated punch sections (92) and die sections (94) can be moved out of the punch press frame, disengaged and removed or replaced. The first punch section (92) and first die section (94) engage driver sections (192, 194) which are disposed in the frame (30). The driver sections (192, 194) are then moved to bring the tool supporting sections (92, 94) into the press. A second punching head (34) which is separated by the length of one cartridge (92, 94) can be provided for double punching. A disappearing table (95) which is engaged by the last die section (94) brought into the press is utilized for supporting the worksheet. Each cartridge section includes at least two rows of tools. Aligning holes for all tools are on one side of each tool cartridge (92, 94). Before punching the aligning holes are engaged by an index pin to provide high accuracy alignment of the selected punch and die.
The punch press frame spans a punching area, carrying a punch head (32) over a two-axis worksheet positioning mechanism (50). An elongate punch support is formed from removable punch cartridges (92) joined together and placed as a unit to bring a selected punch beneath the punch head. An elongate die support is formed by elongate die cartridges (94) which correspond to the punch cartridges. These are positionable as a unit to position an appropriate die to receive the selected punch. The punch and die sections engage driven sections in the frame, moved to bring the tool supports into the press.

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Citation (search report)
• [AD] US 3449991 A 19690617 - DANIELS DENNIS
• [YD] US 4220062 A 19800902 - BLANZ KARL [DE]
• [YD] US 4168644 A 19790925 - LEIBINGER BERTHOLD, et al
• [A] EP 0028588 A1 19810513 - SALVAGNINI TRANSFERICA SPA [IT]
• [A] FR 1352964 A 19640221
• [A] US 3111100 A 19631119 - VASIL GEORGEFF [US]
• [A] US 2996025 A 19610815 - VASIL GEORGEFF

Cited by
CN104162574A; EP0462686A1; US5669866A; EP0164490A3; CN104550423A; CN107186058A

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