

Title (en)
Spring manufacturing machine with an abutting apparatus

Title (de)
Federherstellungsmaschine mit einem Werkzeughalter für das als Anschlag wirkende Formwerkzeug

Title (fr)
Machine de fabrication de ressorts avec porte-outil pour l'outil de formage en butée

Publication
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Application
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Priority
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Abstract (en)
The invention provides an abutting apparatus (2) of a spring manufacturing machine (1), wherein the spring manufacturing machine (1) has a machine platform (10), while the abutting apparatus (2) comprises a first and second axial transmission mechanism (20, 30) and an abutting assembly (40). The first axial transmission mechanism (20) comprises a first actuator (21), a first lead screw (22) and a first sliding seat (23) engaging with the first lead screw (22). The second axial transmission mechanism (30) comprises a second actuator (31) fixed to the first sliding seat (23), a second lead screw (32) driven to be rotated by the second actuator (31) and a second sliding seat (33) engaging with the second lead screw (32) and configured to be linearly moved relatively to the first sliding seat (23). Via the first and second axial transmission mechanisms (20, 30), the abutting assembly (40) fixed to the second sliding seat (33) can perform a 2-D movement in vertical and/or horizontal directions relative to the machine platform (10), such that the degree of freedom to adjust the abutting assembly (40) can be enhanced significantly.

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CPC (source: EP)
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• [XY] US 2008314110 A1 20081225 - TSURITANI KATSUhide [JP], et al
• [Y] DE 19825970 A1 19981217 - ITAYA SEISAKUSHO [JP]
• [Y] DE 893183 C 19531015 - WAFIOS WAGNER MASCHF
• [A] FR 2896439 A1 20070727 - MONNET MICHEL [FR]

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