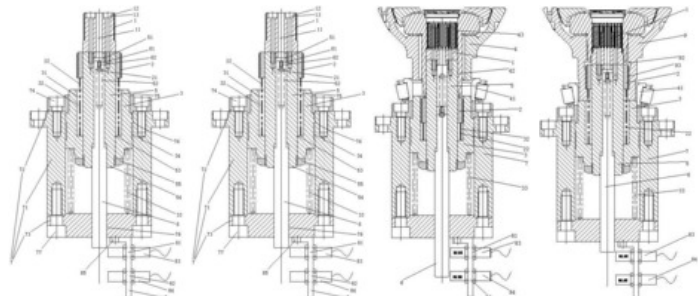
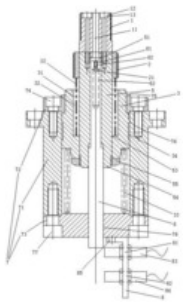


82 results for ((removal or extractor) and tool and bearing and press and shaft and locking and clamp and nut and thread and stepped)/TI/AB/IW/TX AND (B23P)/IPC - Collection: FAMPAT

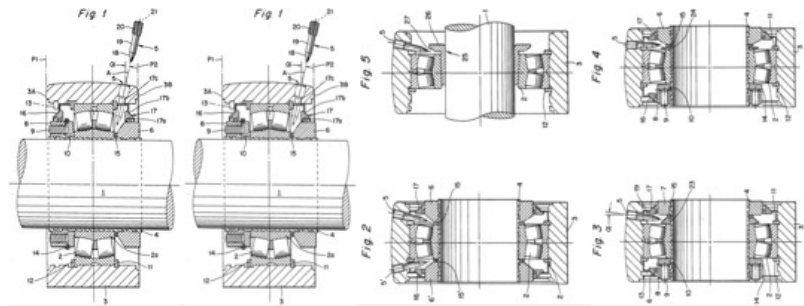
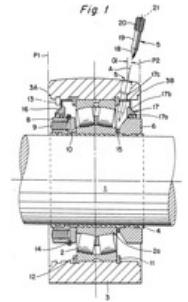
#		Title	Publication number	1st app. date	Applicant/Assignee	1st publ. date	Publ. date
1.		Differential bearing press-mounting base universal for two-wheel drive differential mechanism and four-wheel drive differential mechanism	CN104741895	2014-11-27	HUNAN JISHENG INTERNATIONAL POWER TRANSMISSION SYSTEM*	2015-07-01	2015-07-01

The invention relates to tools for production of car differential mechanisms, in particular to a differential bearing press-mounting base universal for a two-wheel drive differential mechanism and a four-wheel drive differential mechanism. The differential bearing press-mounting base comprises an upper comparison point, a lower comparison point, an upper detection choke plug, a lower detection choke plug, a movable supporting seat and a bearing supporting seat, the lower end of the upper detection choke plug is connected with a connecting rod, the lower end of the connecting rod is connected with the movable supporting seat together, the connecting rod is sleeved with the lower detection choke plug, a detection rod penetrates through the lower end of the connecting rod, an avoiding hole is formed in the connecting rod, the upper end of the detection rod is connected with the lower detection choke plug together through a connecting pin penetrating through the avoiding hole, the lower detection choke plug is supported on the movable supporting seat through a first return spring, and the movable supporting seat is supported on a beating supporting seat through a second return spring. Whether differential splines have poor stopping or not can be detected before bearings are assembled on differential shells, the differential bearing press-mounting base can be suitable for the two-wheel drive differential mechanism and the four-wheel drive differential mechanism, and the problems that poor stopping of the differential mechanisms cannot be detected by a differential assembling tool, and universality is not achieved are solved.

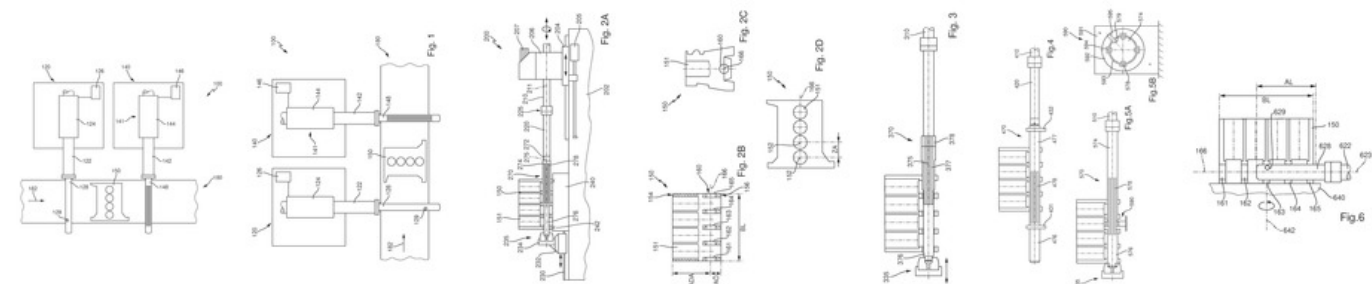
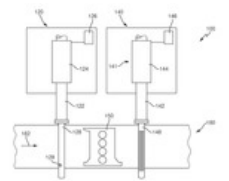


2.		A device for mounting and dismounting bearings	SE9201150	1992-04-10	S K F MEKAN SFK MEKAN SKF MEKANPRODUKTER*	1992-04-10	1992-04-10
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A device for mounting and/or dismounting a bearing (2) on a shaft (1) incorporating a tapered clamping sleeve (4) between bearing and shaft and means (5,6,8,9,10) for mutual axial displacement of bearing (2) and clamping sleeve (4) in at least one axial direction, which means (5,6,8,9,10) incorporate at least one wedge-pointed screw (5), arranged, when being screwed in towards the shaft (1) to cause a mutual displacement in axial direction between clamping sleeve (4) and bearing (2) by means of wedge action, whereby the bearing is situated in a surrounding sleeve-shaped member (3), without axial space worth mentioning beside the bearing at least on one side, the means for displacement of bearing incorporating at least one radial flange (6), axially affixed to the clamping sleeve (4), said wedge-pointed screw (5) being arranged to be screwed in substantially radially through holes in the bearing housing (3), for exerting said axial wedge force between flange (6) and said inner race ring. <IMAGE>



The method involves finishing a prepared crankshaft bearing bore using a finishing tool with a geometrically defined cutting edge (129). An allowance of 0.4 mm is removed using the geometrically defined cutting edge in a final finishing operation immediately preceding honing of the crankshaft bore. The crankshaft bearing bore is honed, where a honing tool (148) is introduced into the bore coaxially in relation to a desired position of a bore axis and moved inside the bore. An allowance of 0.08 mm is removed during the honing process. An independent claim is also included for a processing equipment for performing fine processing of a crankshaft bearing hole in a cylinder crankcase of an internal combustion engine.



4. Apparatus for damping torsional vibrations

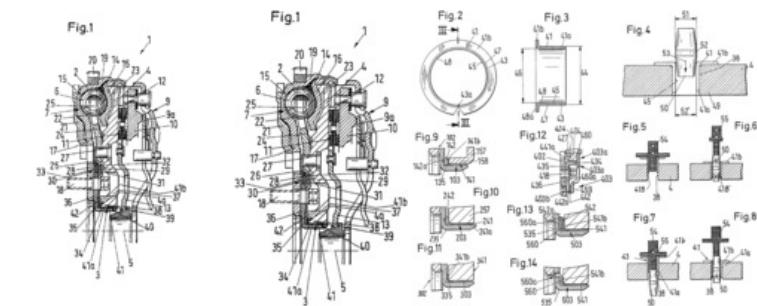
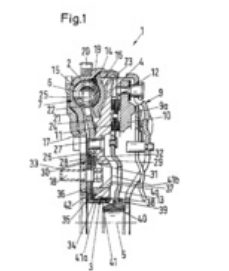
ITMI981829

1998-07-28

LUK LAMELLEN & KUPPLUNGSBAU*
SCHAEFFLER TECHNOLOGIES

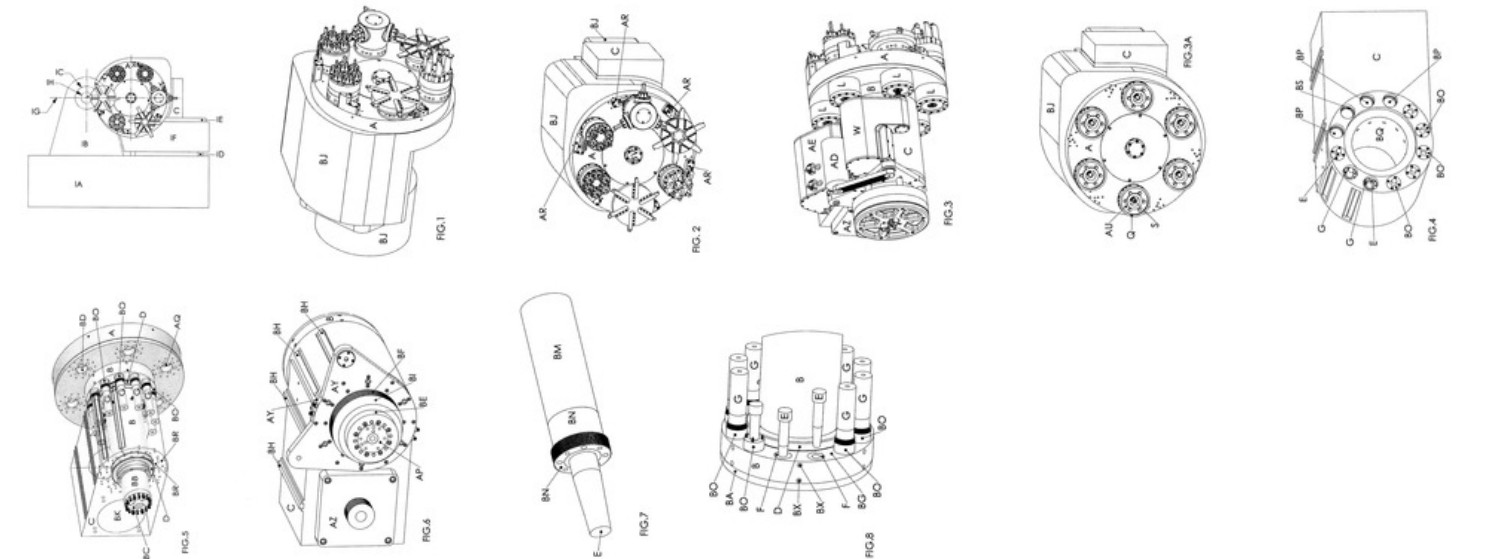
1998-08-03 1998-08-03

Apparatus for damping torsional vibrations in the power train of a motor vehicle has two coaxial flywheels one of which is driven by the engine and the other of which can transmit torque to the input shaft of a transmission by way of a friction clutch. The flywheels are rotatable relative to each other against the resistance of a damper. Certain features of the apparatus reside in the dimensioning and distribution of its parts in the radial and axial directions of the flywheels to reduce the dimensions of the apparatus. The torque transmitting connection between at least one pair of neighboring rotary parts of the apparatus employs a slip clutch which yields when the applied torque exceeds a certain value. An intermittently or continuously active hysteresis device is utilized to operate in parallel with the energy storing springs of the damper.



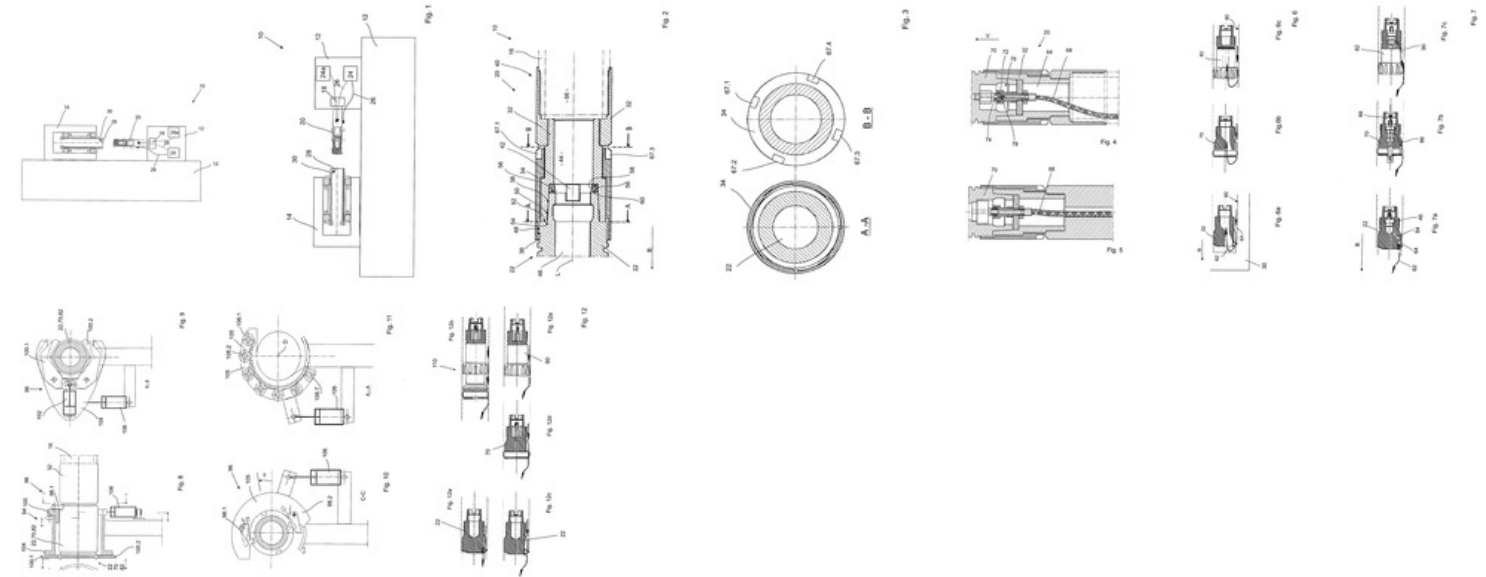
5.	A universal tool mounting system for a machining centre	WO2010019054	2008-08-11	BOYES Barrie John;DAVID AARON BOYES	2010-02-18 2010-02-18
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A universal **tool** mounting system for a machining centre relates to CNC machine tools, comprising a main drum into which mounts a plurality of **tool** holder unit stations, these create a platform to attach, mount and interchange **tool** holder units on each station, where each **tool** holder unit is chosen from a designed selection which can turn, mill, bore, drill and rapidly machine components with multicut tools or alternately each performs a combination of these operations and each holds a plurality of tools. The main drum is indexed to position the **tool** holder unit station with the attached **tool** holder unit to the operative position, then the **tool** holder unit station is indexed to position a selected **tool** to the machining position. The **tool** holder unit stations also provide live tooling functions to any attached live tooling **tool** holder units. **Tool** holder unit stations can also be preindexed.

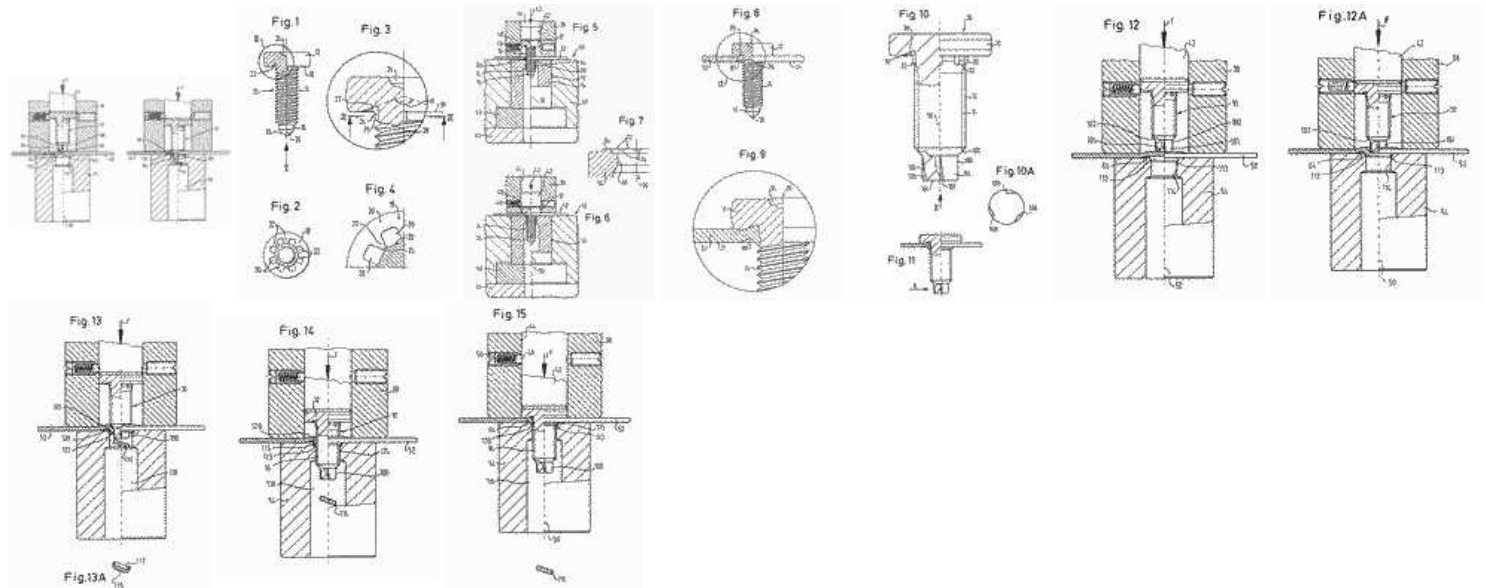
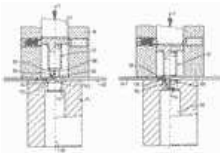


6.	Material-removing machine tool, tool set and method for producing a cylinder having a blind and/or stepped bore	DE102013209243	2013-05-17	ECOROLL WERKZEUGTECHNIK* EKORORU ACTIVATOR EN GEZERUSHIYAFUTO WELLS SHOES CLICK TAE NICK	2014-11-20 2014-11-20
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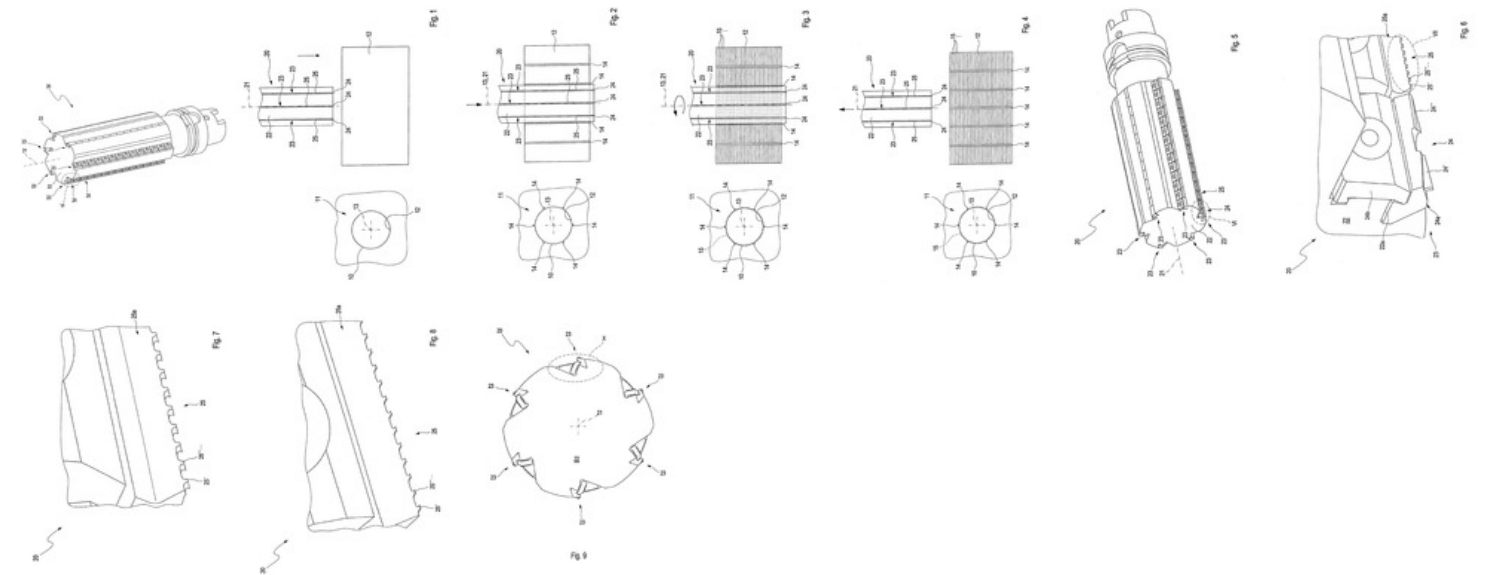
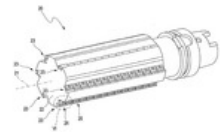
The invention relates to a material-removing machine **tool**, in particular a deep-hole drilling machine or lathe, having a workpiece holder (14) for holding a workpiece (30), a **tool** holder (16), a rotary drive (18), by means of which the **tool** holder (16) can be rotated relative to the workpiece holder (14), an adapter (20), which has a base (20) which is rotationally fixedly connected to the **tool** holder (16) and has a drive side facing the **tool** holder (16) and an output side facing away from the **tool** holder (16), an anti-rotation device (42) for preventing drill head (22) and adapter (20) from rotating relative to each other, and a central, continuous channel (44), through which chips can be transported away counter to a machining direction (B) of the drill head (22), and a drill head (22) which is rotationally fixedly connected to the adapter (20). According to the invention the drill head (22) has a drill head **thread** (48) and a tapered **shaft** (50), and the adapter (20) has a union **nut** (34), which is rotatably fixed to the base (20), and an adapter **thread** (36) to interact with the drill head **thread** (48), and a tapered bore (38) to receive the tapered **shaft** (50).



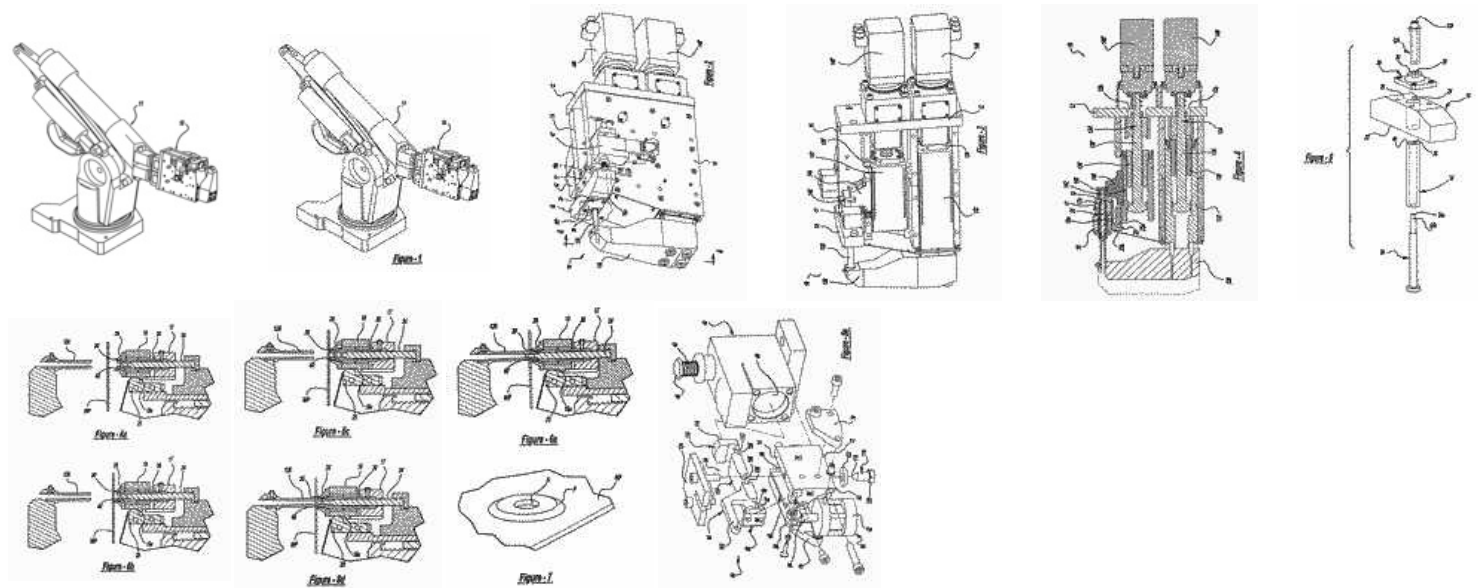
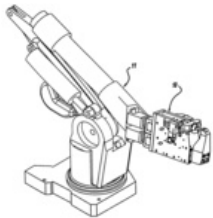
In a method for inserting a bolt element (10) having a head portion (12) and a **shaft** portion (16) into a sheet metal component (52) the bolt element is passed through the sheet metal component by means of a setting head (38), with its end (100) remote from the head portion at the front, and is riveted to the sheet metal component (52) in the region of its head portion (12) by the cooperation of the setting head with a die (54) arranged at the side of the sheet metal component remote from the setting head (38). The sheet metal component (52) is pierced either by a hole punch or by the specially shaped bolt element (10), by the end of the **shaft** portion (16) remote from the head portion (12) under the action of the setting head (38), to form a ring collar which is subsequently deformed radially into contact with a groove in the **shaft** portion. In this arrangement the end (100) of the bolt element (10) which performs the punching work is preferably executed in accordance with the Ka shape of DIN 78.



The invention relates to a method for mechanically roughening a cylindrical surface (12) of an in particular metallic workpiece (11), e.g. the piston **bearing** surface of a cylinder sleeve in a cylinder crankcase, by producing a defined microstructure of mutually crossing grooves (14, 15), and by a groove forming **tool** (20), operating with or without material **removal**, for carrying out the method. A method according to the invention is characterized in that a) in a first operation, the groove forming **tool** (20) is moved axially along the workpiece surface (12) in such a way that at least one axial groove (14) is machined into the workpiece surface (12); b) in a second operation, following the first operation, the groove forming **tool** (20) is rotated about the cylinder axis (13) by a predefined rotational angle in the axial position reached in the first operation, as a result of which at least one circumferential groove (15) crossing the axial groove (14) is machined into the workpiece surface (12); and c) in a third operation following the second operation, the groove forming **tool** (20) is drawn back axially along the workpiece surface (12).



A method and apparatus for forming attachment pads on a panel for attachment of a clinch nut thereto. The panel (WP) is formed between a forming die (126) and a fixed anvil (36) having a pad contacting surface (40), which occupies a predefined net reference position. The apparatus also includes a punch (34), slide block (18) having a protrusion (18a) which is engaged by an L-shaped spacer (25), and a retainer block (17). A face plate (26) simultaneously finds the panel and is mechanically locked into position using a novel force applying device. The face plate (26) maintains the location of the surface metal around the forming die, thereby forming a raised pad at the predefined net reference position. The novel force applying device includes self-contained piston modules positioned in tandem. Each module includes a housing having a void and a piston mounted within the void. The piston includes a driven and drive surfaces, wherein fluid pressure acts against the driven surface to drive the piston in an advanced direction such that the drive surface of the piston abuts another piston for cumulative effect.



10. Functional element for attachment to a sheet metal component, assembly component produced thereby and method for attaching a functional element to a sheet metal component

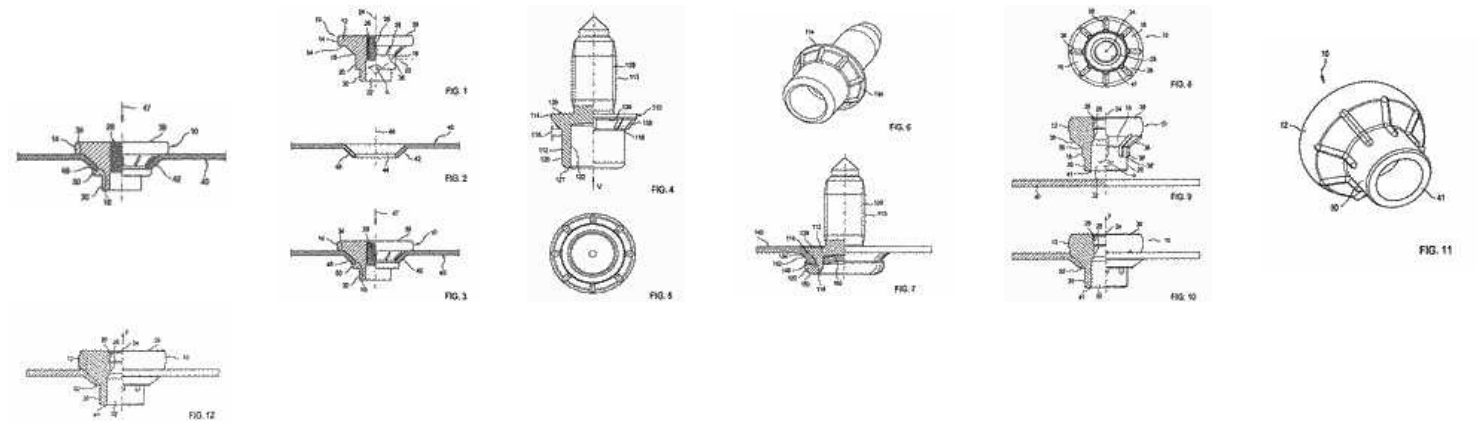
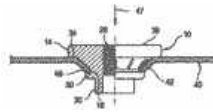
DE10119505

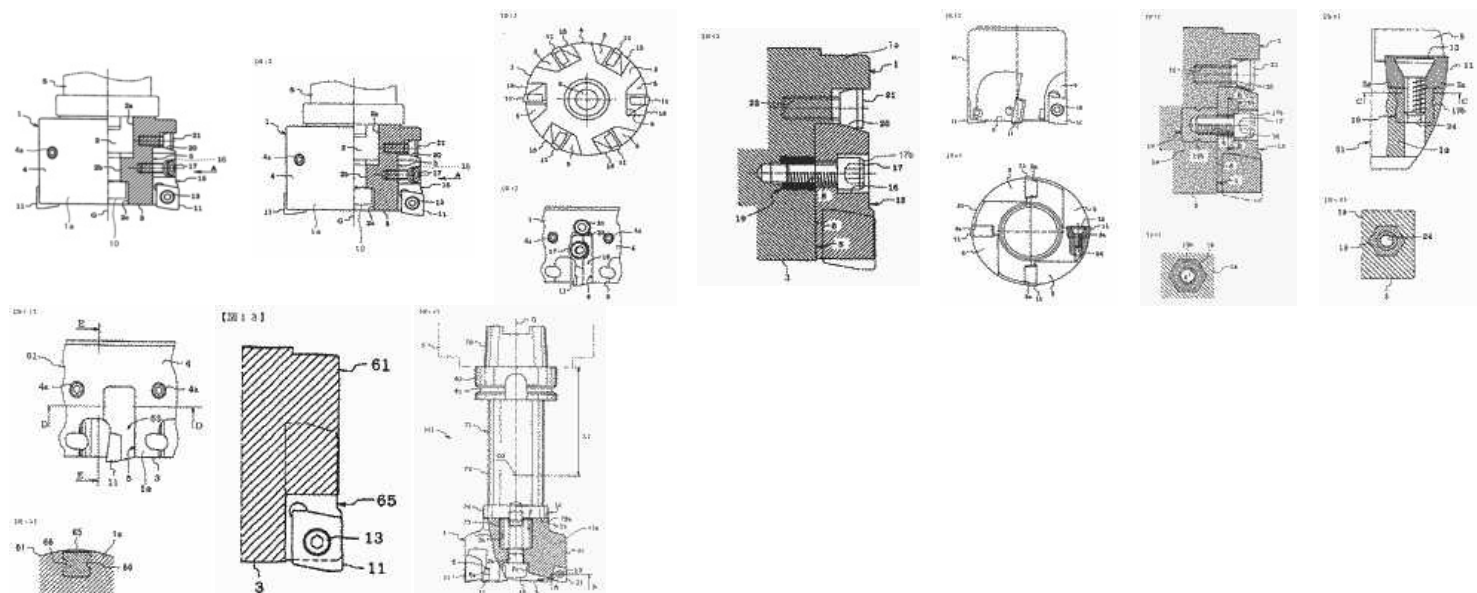
2001-04-20

HVB BANQUE LUXEMBOURG
PENN ENGINEERING*

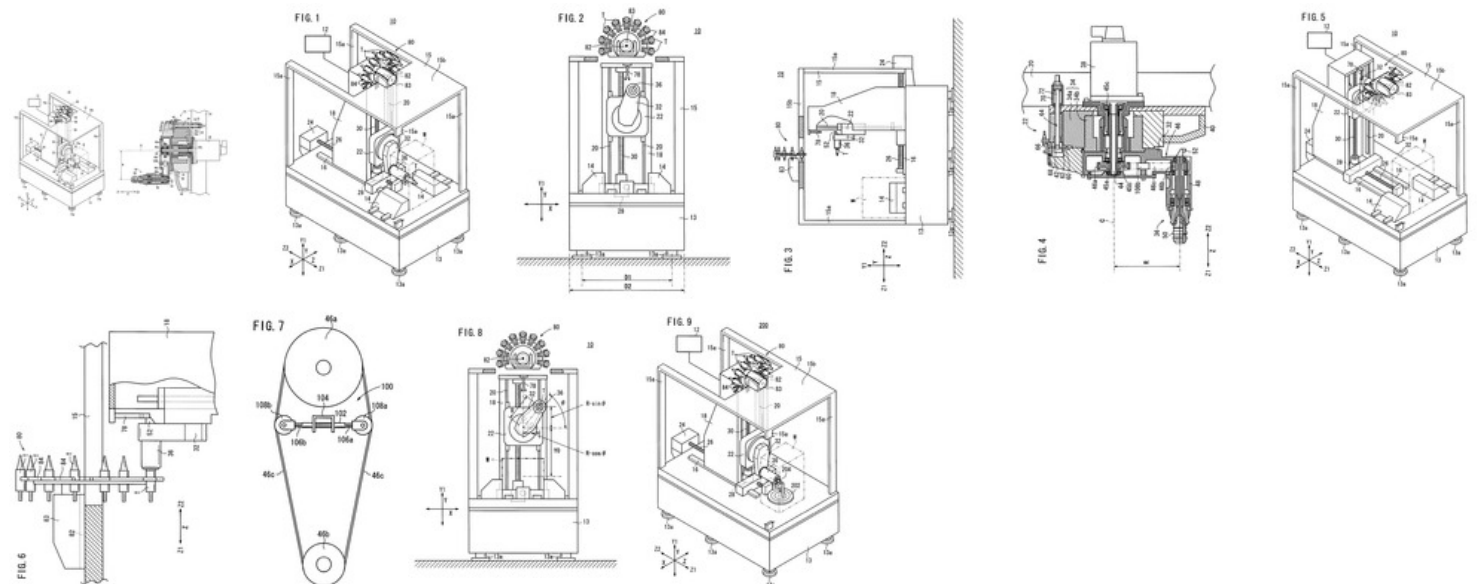
2002-10-24 2002-10-24

The functional element (10) such as nut has a main body part (12) which has an annular flange (14) leading into a cylindrical rivet part (20). The transition between the annular flange and rivet section consists of a conical surface (16) which has a support surface for a matching conical part belonging to a sheet metal part, near a locking part (38). A cylindrical neck part (18) forms a transition between the conical surface and rivet section.

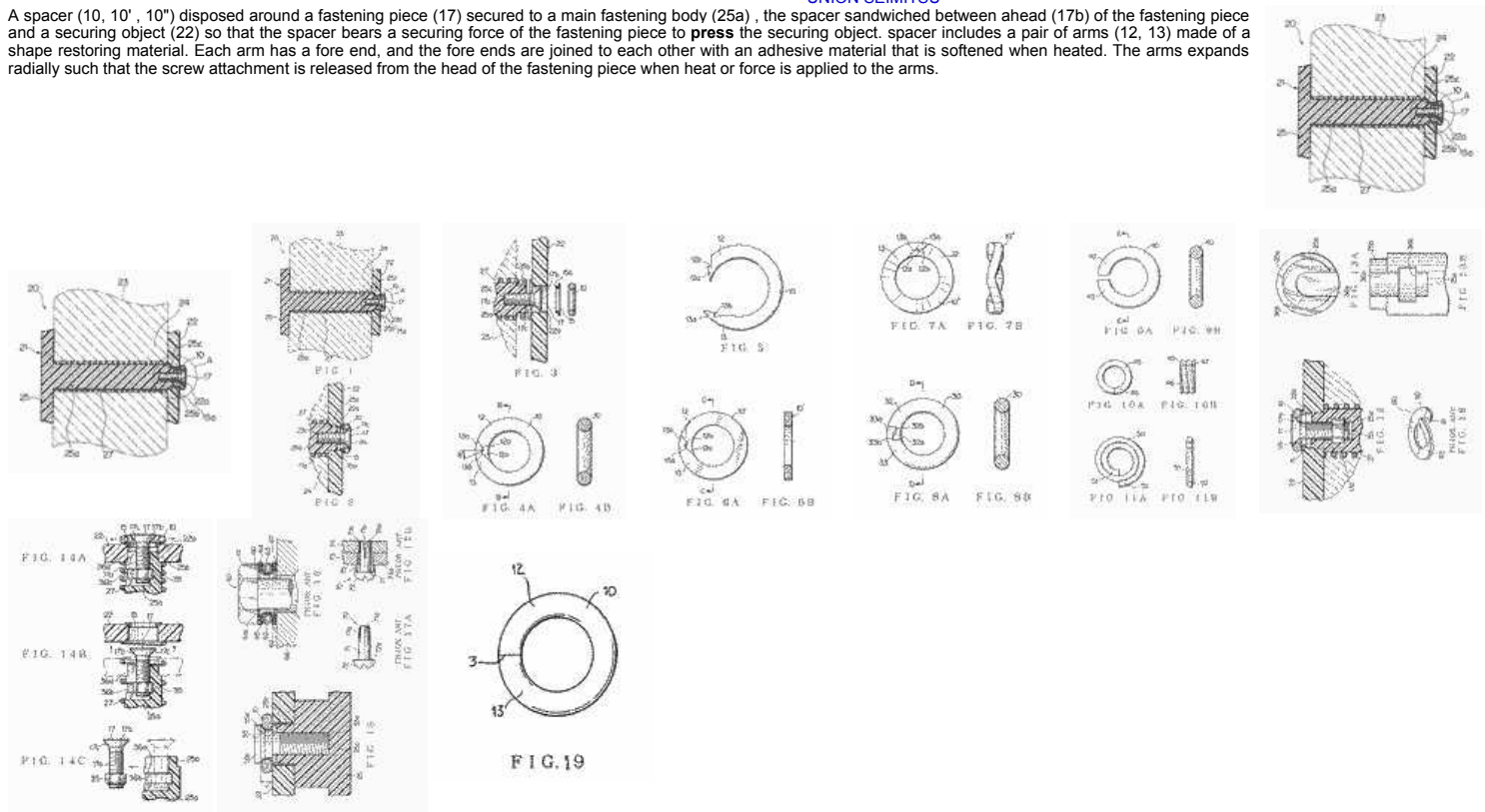




2007-09-13 2007-09-13



A spacer (10, 10', 10'') disposed around a fastening piece (17) secured to a main fastening body (25a), the spacer sandwiched between ahead (17b) of the fastening piece and a securing object (22) so that the spacer bears a securing force of the fastening piece to **press** the securing object. spacer includes a pair of arms (12, 13) made of a shape restoring material. Each arm has a fore end, and the fore ends are joined to each other with an adhesive material that is softened when heated. The arms expands radially such that the screw attachment is released from the head of the fastening piece when heat or force is applied to the arms.



14. Method of assembling exterior parts of a motorcar onto a motorcar body

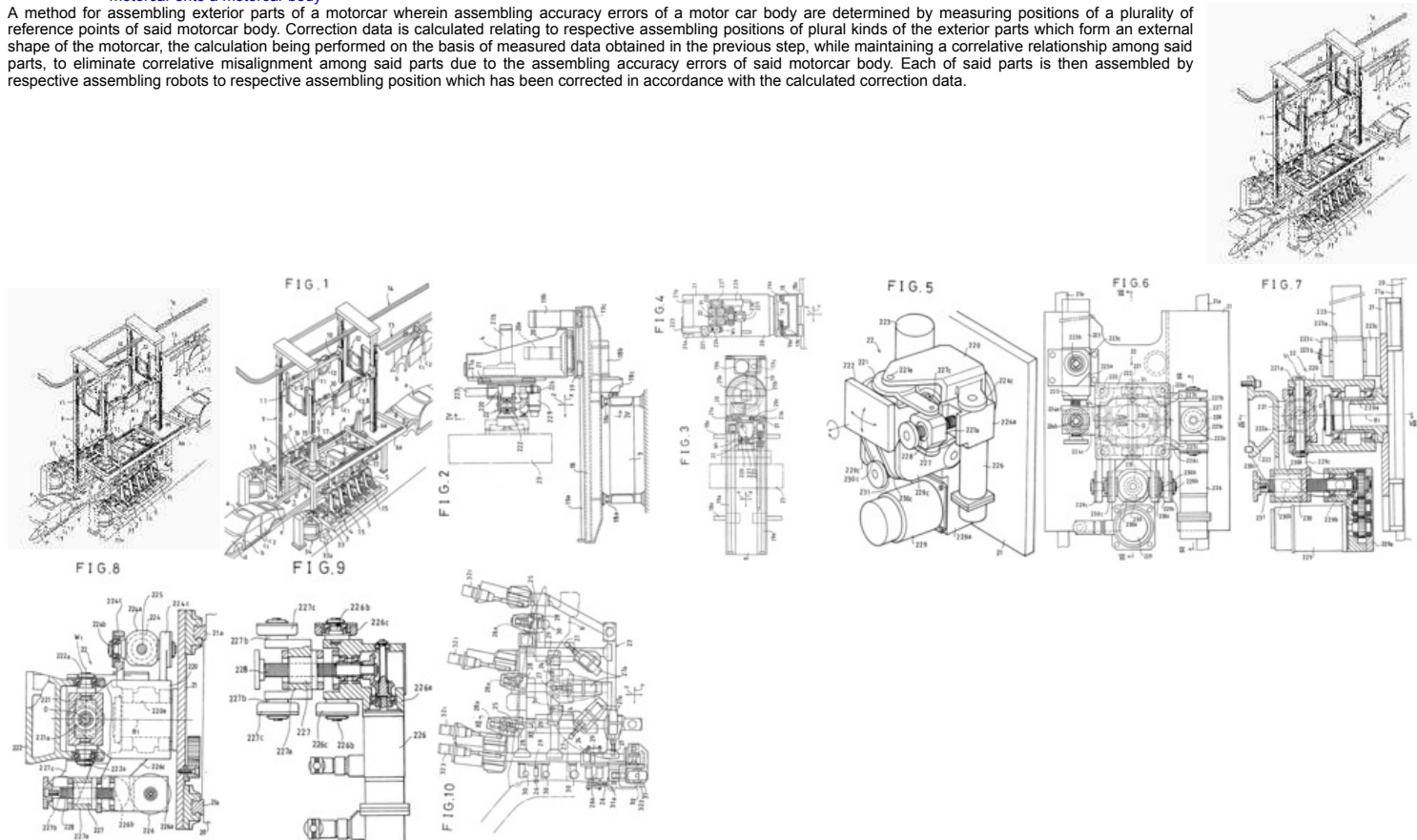
GB9027300

1990-02-22

HONDA MOTOR*

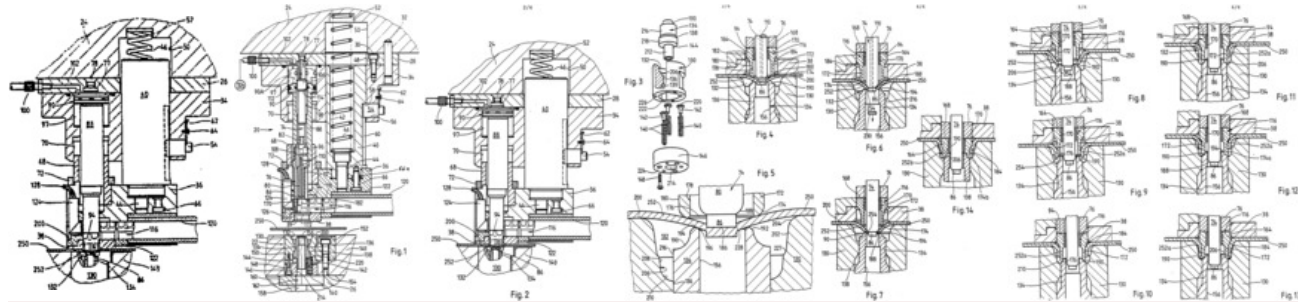
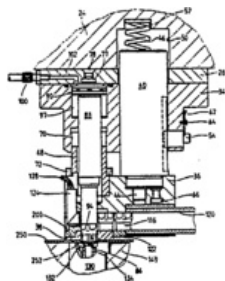
1991-02-06 1991-02-06

A method for assembling exterior parts of a motorcar wherein assembling accuracy errors of a motor car body are determined by measuring positions of a plurality of reference points of said motorcar body. Correction data is calculated relating to respective assembling positions of plural kinds of the exterior parts which form an external shape of the motorcar, the calculation being performed on the basis of measured data obtained in the previous step, while maintaining a correlative relationship among said parts, to eliminate correlative misalignment among said parts due to the assembling accuracy errors of said motorcar body. Each of said parts is then assembled by respective assembling robots to respective assembling position which has been corrected in accordance with the calculated correction data.



A method of attaching a female element having an annular riveting portion to a panel and the installation apparatus. The method includes driving a punch through the female element into a panel supported on a die member forming an unsupported cone-shaped panel portion in the cavity of the die member. The punch includes an axially extending piercing end which pierces a small opening in the cone-shaped panel portion and an arcuate drawing portion which is driven against and through the panel opening, drawing the panel portion into a tubular shape engaging the external surface of the riveting portion. Finally, the riveting portion is driven against a center post of the die member, radially outwardly deforming the free end of the riveting portion and forming a mechanical interlock with the tubular panel portion. In the preferred embodiment of the die member, the center post includes an axial bore and is spring biased through an opening in the bottom of the die cavity to receive the slug pierced from the panel by the punch. The center post is then resiliently biased downwardly to mate with the die cavity during radial deformation of the riveting portion of the female element.

(From US4831698 A)



16. Method of joining steel products, method of processing junction surfaces of steel products, and reinforcing member

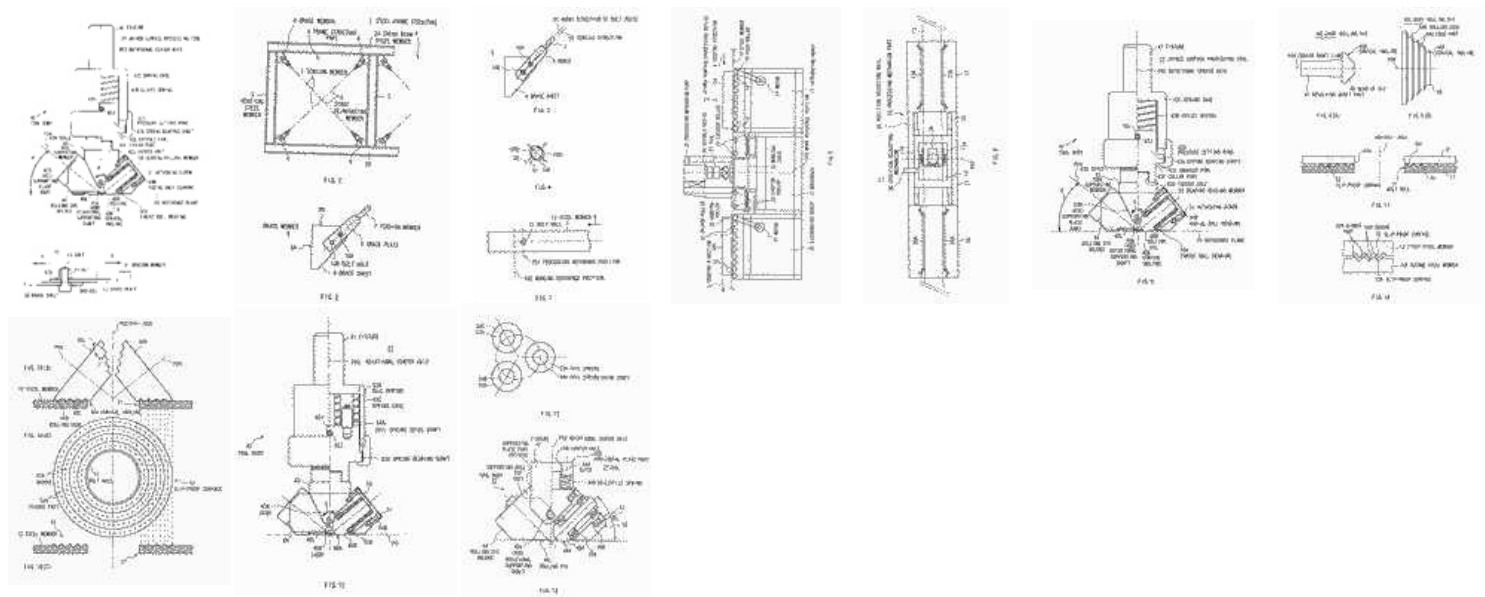
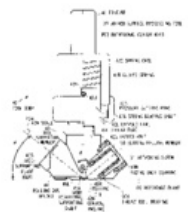
WO200038878

1998-12-25

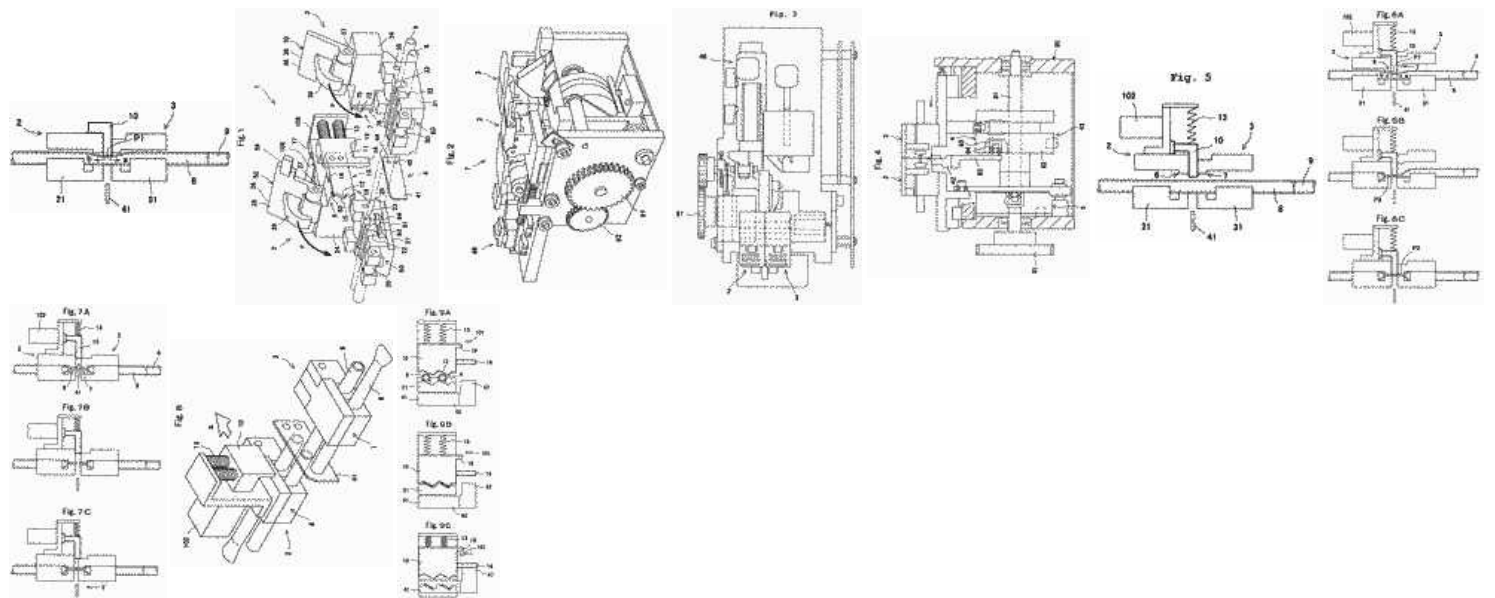
KIYOKAZU KOBAYASHI
TAKASHIMA*

2000-07-06 2000-07-06

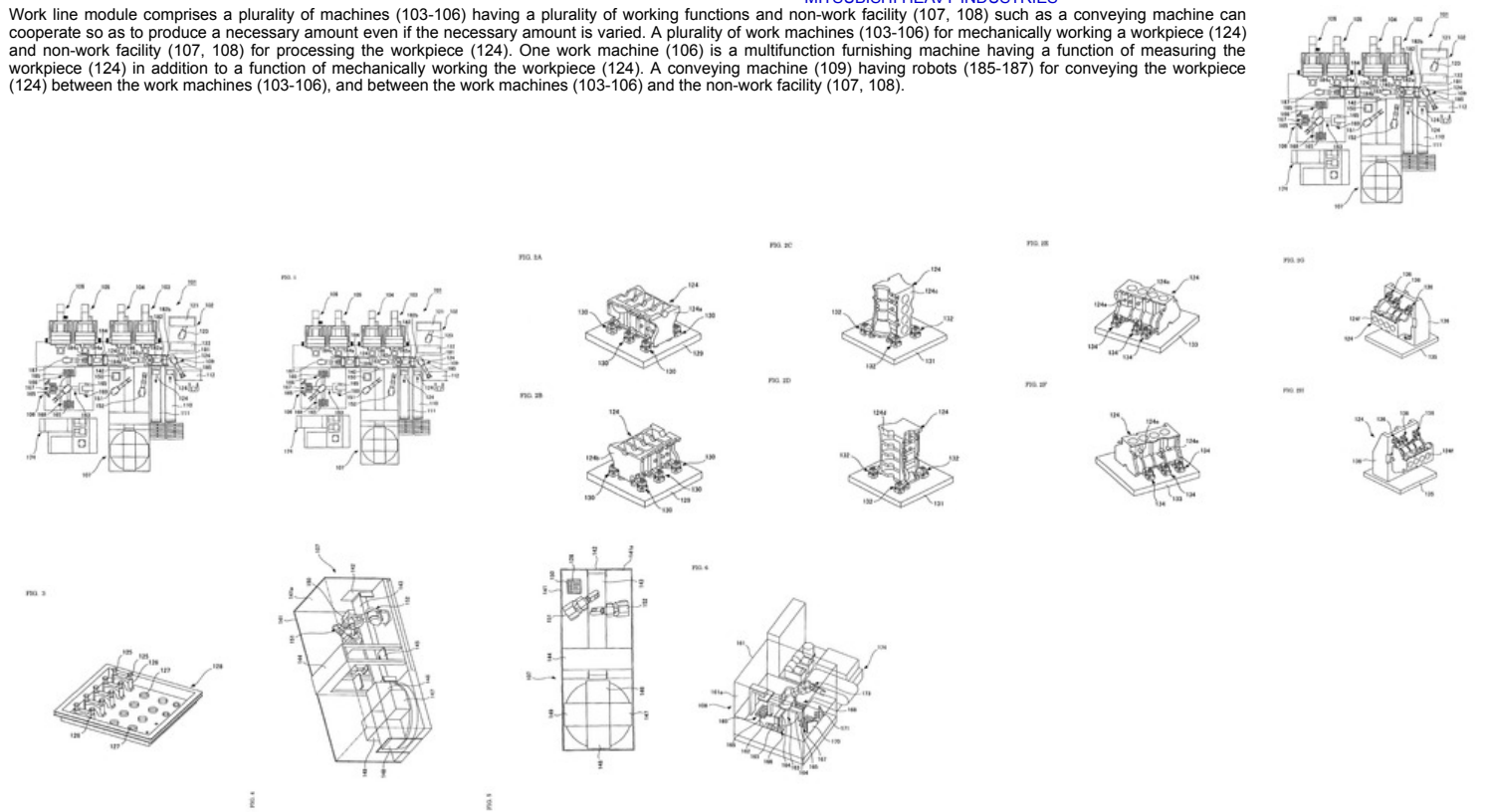
The present invention enables to firmly assemble a steel-frame structure. To form a steel-frame structure or to join two steel members being reinforcing members thereof, a slip-proof surface having one or plural concentric higher parts and grooves is formed on the joined surface of one side or both sides of the steel members, and these two steel members are clamped by a connecting member that passes through connecting holes in the state where the first and the second slip-proof surfaces are mutually engaged or not engaged. Thus, joining force between the joined surfaces is increased. <IMAGE>



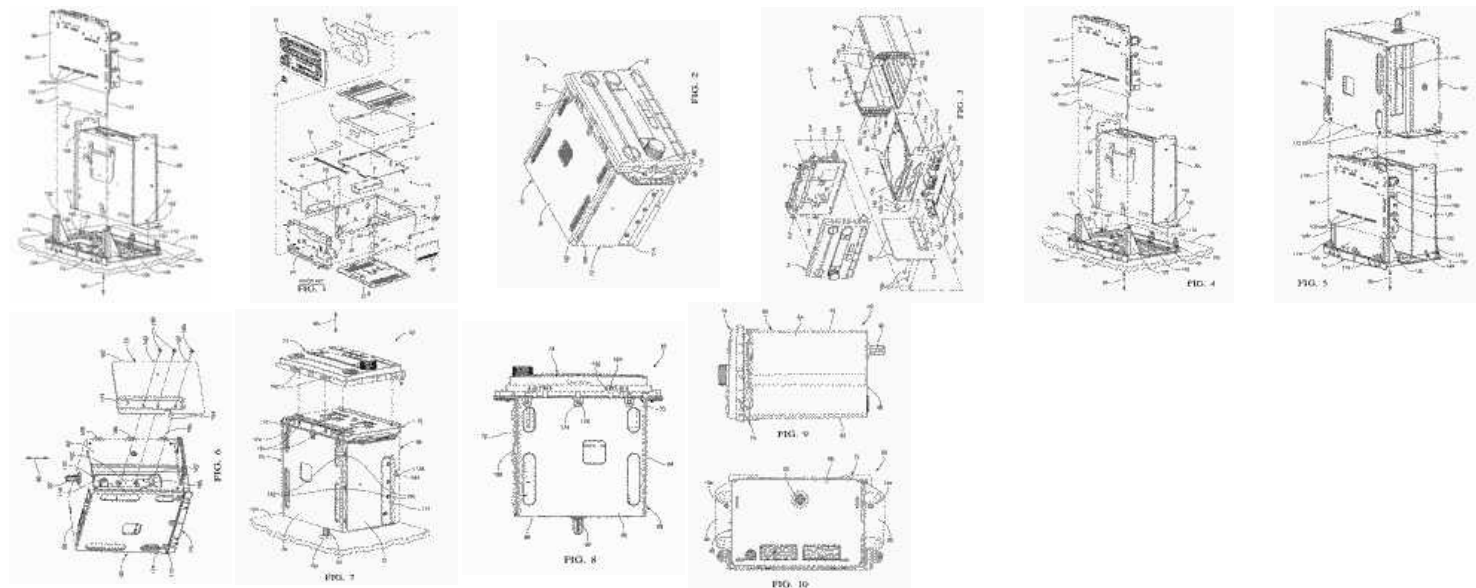
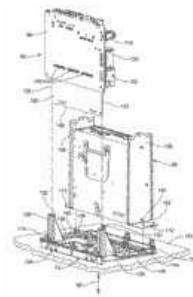
A tube connecting apparatus capable of stably and reliably connecting tubes in which liquid is contained and sealed is provided. A tube connecting apparatus 1 equips a first tube-holding assembly 2 and a second tube-holding assembly 3, each holding tube 8, 9 in which blood is contained and sealed in a parallel state. A first clamp 6 and a second clamp 7, each pressing the tubes to a flat state, is provided at the first tube-holding assembly 2 and the second tube-holding assembly 3. A tube-pushing member 10 which presses the tubes to a flat state is disposed movably to and integrally with the first clamp 6 at a side of the second clamp 7. The tube connecting apparatus 1 has a cutting mechanism 4, disposed between the first clamp 6 and the second clamp 7, for melting and cutting the tubes, and has a movement mechanism which moves the first tube-holding assembly 2 and the second tube-holding assembly 3 such that end portions to be connected contact closely each other. <IMAGE>



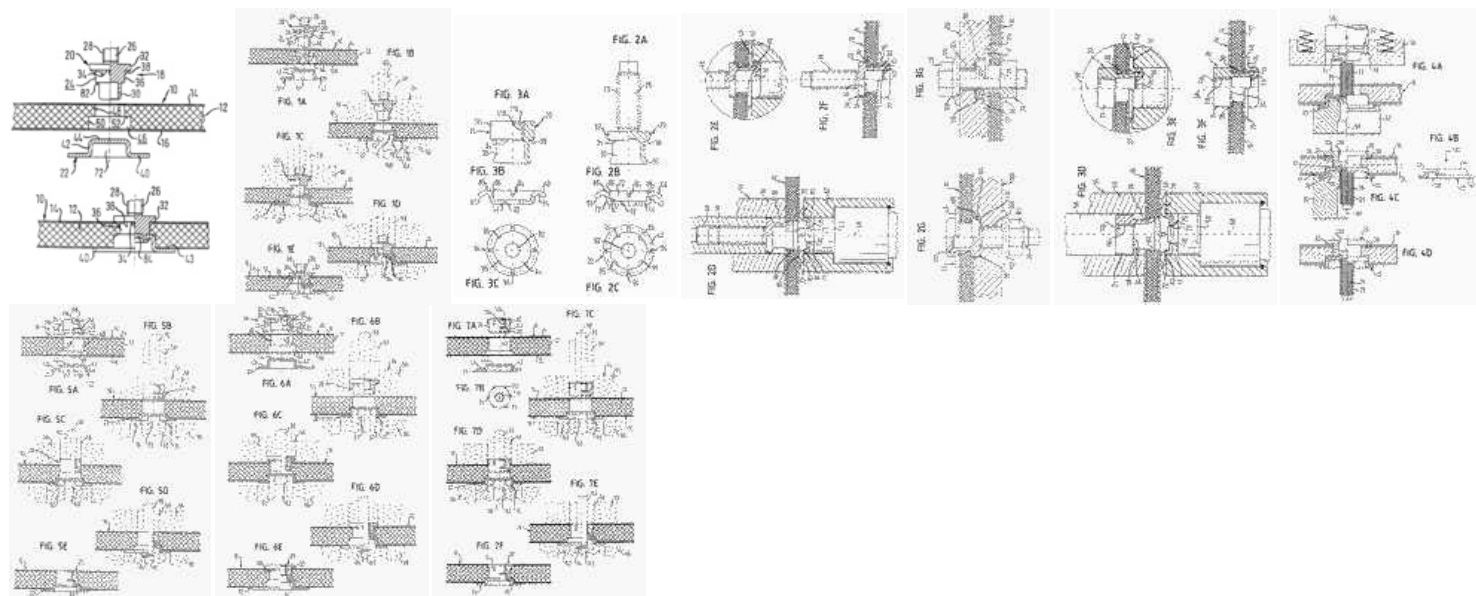
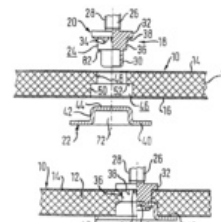
Work line module comprises a plurality of machines (103-106) having a plurality of working functions and non-work facility (107, 108) such as a conveying machine can cooperate so as to produce a necessary amount even if the necessary amount is varied. A plurality of work machines (103-106) for mechanically working a workpiece (124) and non-work facility (107, 108) for processing the workpiece (124). One work machine (106) is a multifunction furnishing machine having a function of measuring the workpiece (124) in addition to a function of mechanically working the workpiece (124). A conveying machine (109) having robots (185-187) for conveying the workpiece (124) between the work machines (103-106), and between the work machines (103-106) and the non-work facility (107, 108).



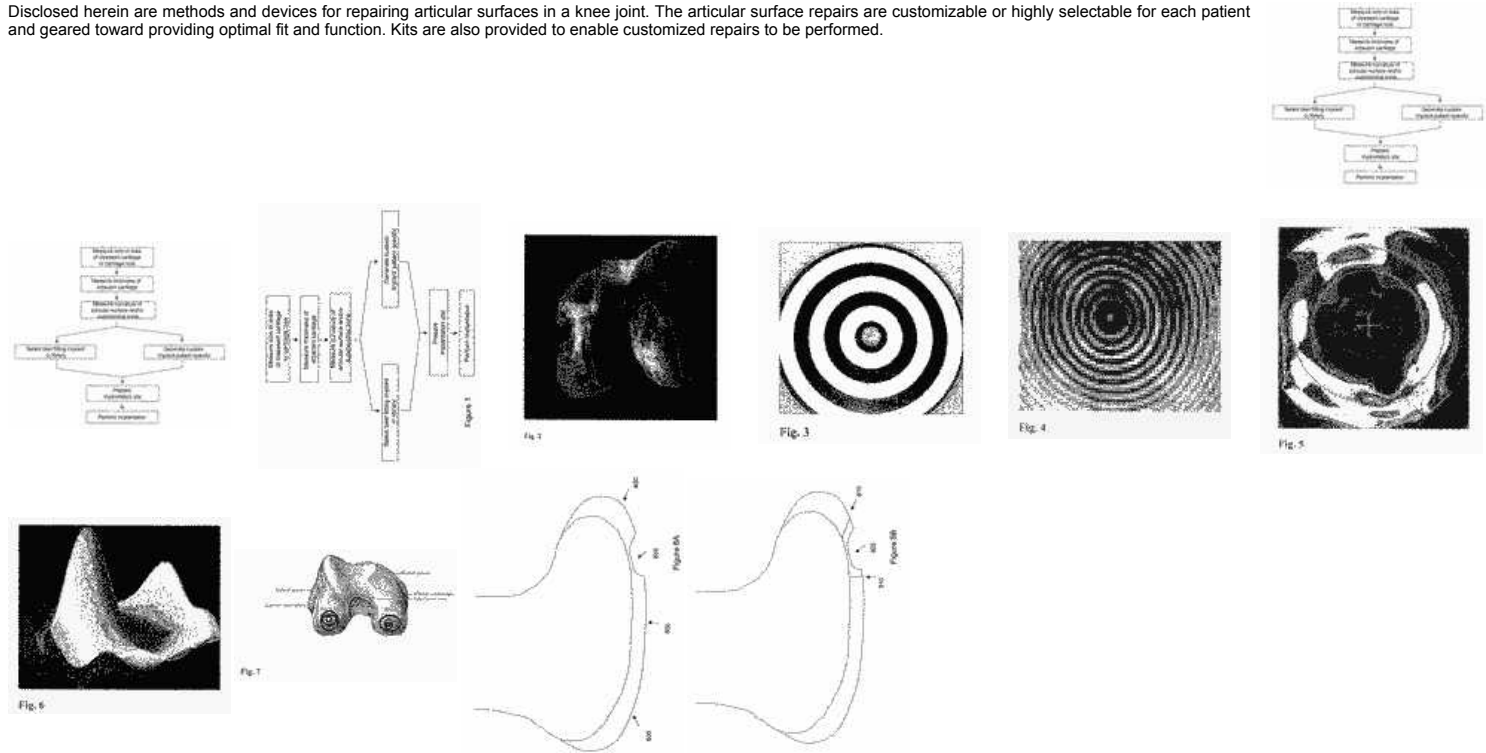
A lightweight radio/CD player for vehicular application is virtually "fastenerless" and includes a case and frontal interface formed of polymer based material that is molded to provide details to accept audio devices such as playback mechanisms (if desired) and radio receivers, as well as the circuit boards required for electrical control and display. The case and frontal interface are of composite structure, including an insert molded electrically conductive wire mesh screen that has been pre-formed to contour with the molding operation. The wire mesh provides EMC, RFI, BCI and ESD shielding and grounding of the circuit boards via exposed wire mesh pads and adjacent ground clips. The PCB architecture is bifurcated into a first board carrying common circuit components in a surface mount configuration suitable for high volume production, and a second board carrying application specific circuit components in a wave soldered stick mount configuration. The major components and subassemblies are self-fixturing during the final assembly process, eliminating the need for dedicated tools, fixtures and assembly equipment. The major components and subassemblies self-interconnect by integral guide and connection features effecting "slide lock" and "snap lock" self-interconnection. The radio architecture includes improved push buttons employing 4-bar living hinge linkage and front loaded decorative trim buttons.



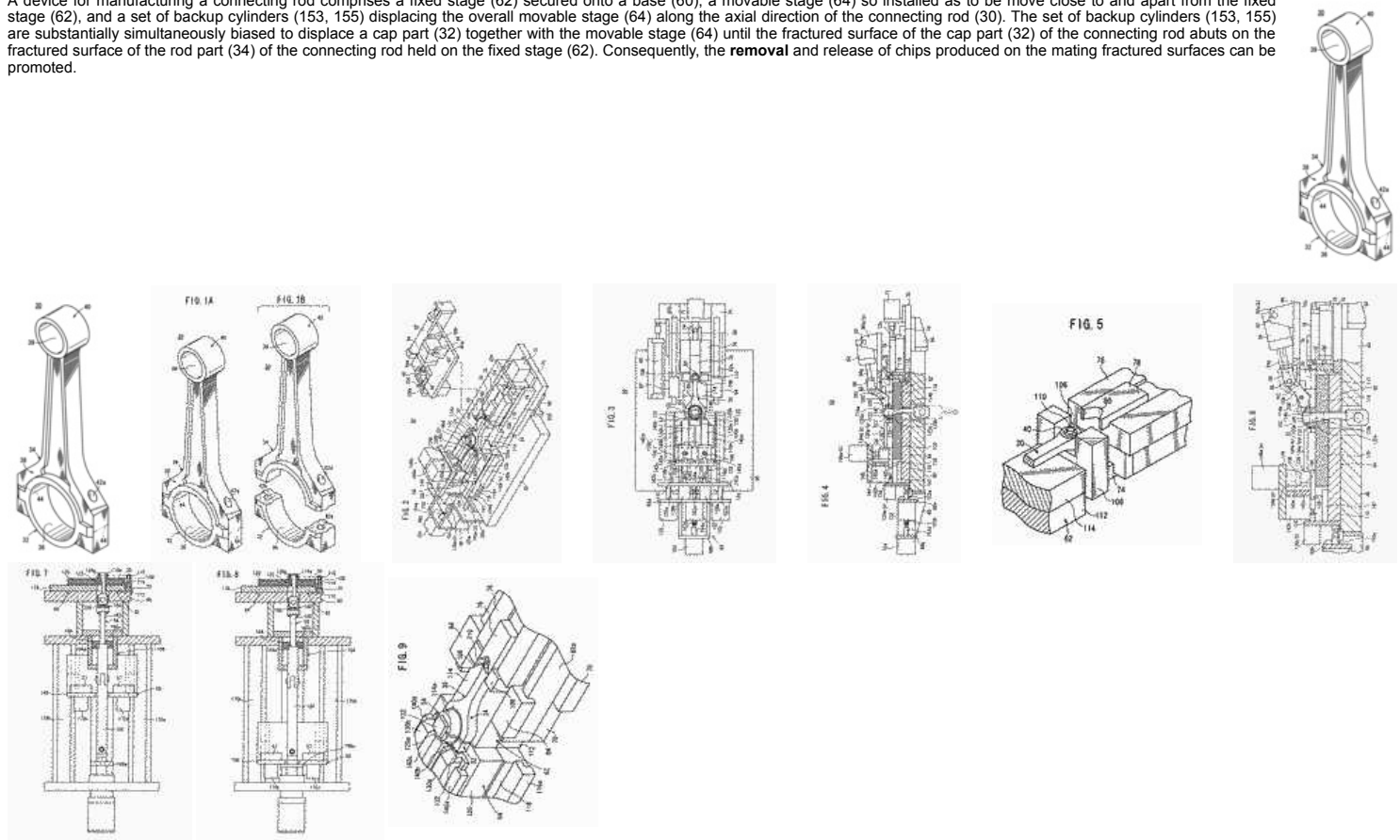
A functional element arrangement which includes a functional element which is to be mounted on a component, especially but not exclusively on a brittle or non-rigid component made of a material containing cavities or pores, e.g. plastic, wood, metal foams, plastic or metal filled with hollow bodies, or another relatively soft material, selectively embodied as a sandwich construction or as a composite material e.g. in the form of a single layered or multilayered structure comprising, for example, two layers of sheet metal or plastic and a core made of one of the above-mentioned materials. The invention is characterized in that it is provided with an auxiliary assembly element which enables the functional element to be blocked using forming techniques when it is mounted on the component in a riveting process or a stamping and riveting process. The invention is further characterized in that, preferably, at least one device is provided to ensure rotational security between the functional element and the component and/or between the auxiliary assembly element and the component. The invention also relates to a functional element, an auxiliary assembly element, an assembled component and various methods for producing assembled components.



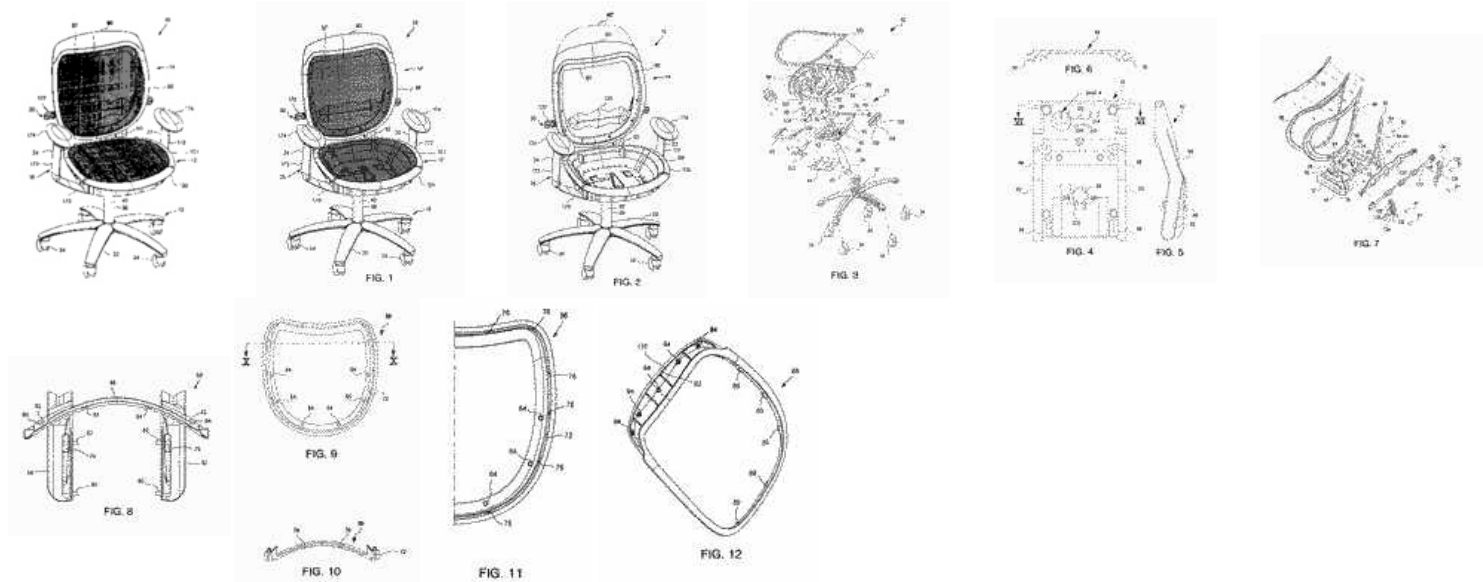
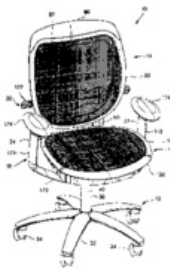
Disclosed herein are methods and devices for repairing articular surfaces in a knee joint. The articular surface repairs are customizable or highly selectable for each patient and geared toward providing optimal fit and function. Kits are also provided to enable customized repairs to be performed.



A device for manufacturing a connecting rod comprises a fixed stage (62) secured onto a base (60), a movable stage (64) so installed as to be move close to and apart from the fixed stage (62), and a set of backup cylinders (153, 155) displacing the overall movable stage (64) along the axial direction of the connecting rod (30). The set of backup cylinders (153, 155) are substantially simultaneously biased to displace a cap part (32) together with the movable stage (64) until the fractured surface of the cap part (32) of the connecting rod abuts on the fractured surface of the rod part (34) of the connecting rod held on the fixed stage (62). Consequently, the removal and release of chips produced on the mating fractured surfaces can be promoted.

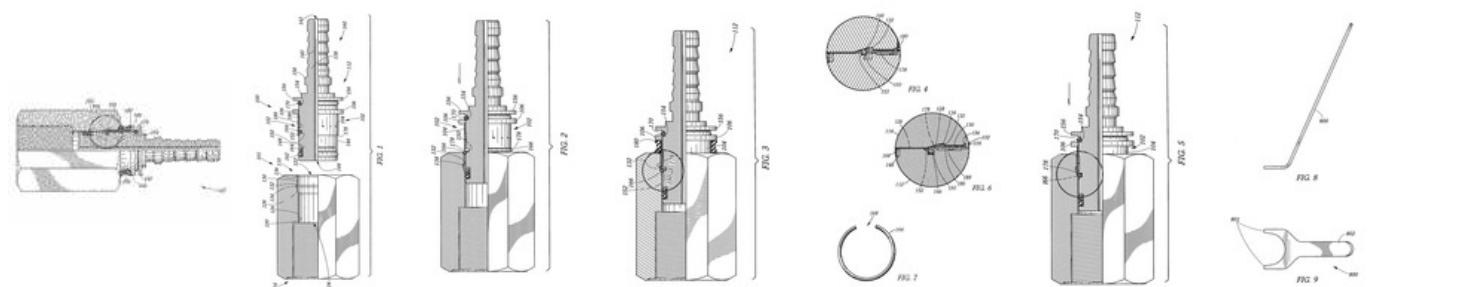
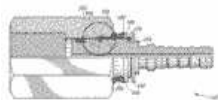


A chair having an adjustable resilient back recliner mechanism (20), a pair of adjustable armrests (22,24), modular upper back portions and an adjustable lumbar support. The chair includes a tension control (118) that adjusts the tension in the recliner mechanism. The tension control is cam-operated to permit adjustment throughout the entire range of adjustability with only limited rotational movement of a control knob. The chair includes a recline limit control (28) that adjusts the limit of rearward movement in the recliner mechanism. The limit control includes a cable operated stop that interact with a **stepped** trackway on the seat. The chair further includes a height control (160) for adjusting the seat height including a push-button located in the tension control knob. The armrests (22,24) include height and angle adjustment mechanisms. The lumbar support (30) includes a lumbar cam (122) that is rotatably mounted to a lumbar pad (120). The lumbar cam (122) includes a plurality of lobes that vary in radius so that rotation of the cam causes variation in the contour of the lumbar region. The chair back includes a fabric carrier with an upper back portion mounting platform that permits attachment of any of a variety of modular upper back portions.



24.	Quick connect coupling stabilization apparatus, systems and methods	US20070145742	2006-10-13	AIR SYSTEM COMPONENTS AQUATIC DEXTER AXLE ELKHART EASTERN SHEET METAL CINCINNATI OH EIFELER MASCHINENBAU EPICOR INDUSTRIES GATES* GATES MECTROL HART & COOLEY RUSKIN SCHRADER BRIDGEPORT INTERNATIONAL SCHRADER ELECTRONICS SELKIRK TOMKINS INDUSTRIES	2007-06-28 2007-06-28
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A quick to connect and quick to disconnect fluid coupling (100) includes a clip (166), a male stem (112) having an annular clip groove adapted to receive the clip, a female port (110) having a step groove adapted to receive the clip upon insertion- of the stem into the port, and a sleeve (102) slideably disposed about the stem adapted to about the clip and minimize shuttling of the stem within the port. The sleeve may be biased toward the clip by a dust seal (70) abutting a shoulder of the sleeve distal from a lead-in end of the sleeve abutting the clip. Also, the sleeve may radially retain the clip, compressed in an annular groove of the stem, and/or the sleeve abutting the clip may stabilize the clip and axially align the clip with the stem, for insertion of the stem into the port.



Installation/processing tools may be used to install one or more expandable structures in a workpiece. An installation/processing tool may include an expansion mandrel, a processing tool (104), and an expansion assembly (110) having an expansion jaw movable between a collapsed configuration and an expanded configuration. An expandable portion (111) of the expansion jaw is sized to fit within a passageway of an expandable member. When the mandrel is moved through the expansion assembly (110), the expansion jaw is moved between the collapsed and expanded configurations to cause expansion of the expandable member. The installation/processing tool can also be used to cold work a workpiece.

