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(54) **DOCUMENT FILE RING MECHANISM WITH IMPROVED BASE PLATE**

RINGMECHANISMUS MIT VERBESSERTER GRUNDPLATTE FÜR AKTENORDNER

MÉCANISME À ANNEAU POUR CLASSEUR À PLAQUE DE BASE AMÉLIORÉE

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(73) Proprietor: **Niko, Kovinarsko podjetje, d.d.
Zelezniki
4228 Zelezniki (SI)**

(72) Inventors:
• **JEREB, Rok
4220 Skofja Loka (SI)**
• **CUFAR, Ivan
4228 Zelezniki (SI)**
• **POKORN, Miran
4220 Skofja Loka (SI)**

(74) Representative: **Borstar, Dusan
Nova ulica 11
1230 Domzale (SI)**

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Description

[0001] The present invention belongs to the field of bookbinding and requisites for clipping and storage of documents, i.e. among requisites adapted for sorting and organizing documents, especially of such kind, which comprise corresponding means for inserting through appropriate openings, by which the stored documents are furnished, namely among two-part clipping assemblies, which includes a stable part having at least two stable pins, as well as a pivotable part, which also includes at least two pivotable pins.

[0002] Starting from a file ring mechanism, which comprises a base plate having two stable pins firmly attached thereto as well as a clamping set, which is actuated by means of appropriate lever and comprises two pivotable pins, which are firmly interconnected to each other by means of an intermediate section, which is supported by a spring, and may be pivoted and pressed towards the stable pins on the basis of swiveling said lever, wherein said base plate is adapted to be attached to the inner side of a cardboard cover of a document file used for archiving of appropriately perforated sheets, the present invention is resolving problem about creating such mechanism, which could without increasing the manufacturing costs be efficiently prevented against undesired influences of each corresponding cardboard cover, to which such mechanism is attached, in particular against the risk of corrosion on the base plate of such mechanism due to permanent contact with hygroscopic cardboard cover.

[0003] Those skilled in the art are aware of numerous known ring mechanisms for document files. Two of them, which are among others used for attaching onto inner side of the cardboard cover, are described in EP 0 775 058 B1 in EP 1 606 122 B1.

[0004] Each of them comprising a base plate, which is essentially a pre-formed rectangular plate having rounded corner areas and various cavities, ribs and grooves intended for establishing appropriate rigidity. The base plate is made of a steel strip, which is as such preliminary protected against corrosion by means of galvanic treatment or coating with anti-corrosion paint, upon which such strip is exposed to forming and cutting operations by means of appropriate forming tools in corresponding presses.

[0005] Two fixed pins are attached to said base plate in the area adjacent to the first of two longer edges of the plate, and free ends of said pins are slightly curved in a direction towards the second longer edge of the plate. Two bearings are foreseen in the area adjacent to said second longer edge of the plate, in which two sections of the clamping set are embedded, wherein said clamping set in addition to said sections also comprises an intermediate portion, which is arranged eccentrically with respect with said sections, as well as two pivotable pins, the free ends of which are slightly curved towards said free ends of the stable pins. Moreover, a cantilever is foreseen at least approximately in the central region of

the base plate and extends approximately perpendicularly with respect to the plane of the base plate, wherein an actuating lever is pivotally attached to said cantilever and is furnished with appropriate pressing member, which is adapted to cooperate with said intermediate portion of the clamping set. Consequently, by pivoting the actuating lever in one direction the clamping set is then pivoted within said bearings in one direction, so that the pivotable pins are moved apart from the stable pins, while by pivoting the actuating lever in the opposite direction the clamping set is also pivoted in the opposite direction, by which the free ends of the pivotable pins are pressed towards the belonging free ends of the stable pins.

[0006] As mentioned, such mechanism is attachable to the inner side of each available cover of a document file. The majority of document files, which are at present used for the purposes of archiving paper documents, consist of a pair of covers, which are connected to each other by means of an intermediate area, wherein said intermediate area is manufactured uniformly with said covers and wherein by widely used and competitive document files both covers including said intermediate area consist of cardboard. The base plate is usually attached to the cover in a non-detachable manner, in particular by means of riveting, so that the ring mechanism is arranged in the central region of the cover adjacent to the intermediate area. To this aim, the base plate is furnished with bores, through which the base plate of the file mechanism is then riveted to each corresponding cover of a document file. All known base plates are furnished with said bores in regions, which are located in the same plane like the circumferential edges of the base plate. Consequently, upon attaching the base plate onto the inner side of each corresponding cover, said circumferential edges are in contact with the cover along the complete circumference of the base plate. As mentioned, when the base plate is manufactured, said circumferential edges are exposed to cutting, by which the surface protection layer on the steel strip is damaged and interrupted. Upon that, said circumferential edges are actually no more protected against corrosion. The document files with covers consisting of cardboards are during the use exposed to risk of moisture variations in the material of covers, to which the ring mechanism is attached. The cardboard is usually hygroscopic i.e. sensitive to moisture variations of the surrounding air and can accept an essential quantity of moisture. The moisture, which is present within the material of the cover, may during the use of each document file establish excellent pre-conditions for corrosion and also for progression thereof in the area of said circumferential edges of the base plate, which are due to the nature of the manufacturing process as such practically unprotected against corrosion. The applicant is aware that the corrosion might be efficiently avoided by means of eliminating said pre-conditions, where for example instead of cardboard some other materials could be used for the purposes of manufacturing covers, or said circumferential edges could be subsequently protected against

corrosion upon finalization of the base plate. However, such measures seem not to be feasible in the practice, since applying any other materials would essentially increase manufacturing expenses, and an additional operation of anti-corrosion protection of the edges of the base plate in a mass production would also drastically increase the costs, which would never be accepted on the market. Practically all important manufacturers are exposed to this same problem, and eliminating said problem without increasing manufacturing expenses would establish an essential competitive advantage of such improved product.

[0007] The present invention relates to a document file ring mechanism according to one or several of the following claims with improved base plate which is adapted for non-detachable attaching, in particular riveting to a document file comprising a pair of covers, which are interconnected by means of an intermediate section and which including said intermediate section consist of a hygroscopic material in particular cardboard. Such said ring mechanism comprises an appropriately rigid and essentially rectangular base plate consisting of a previously against the corrosion protected steel strip of a pre-determined thickness and having circumferential edges located in the same plane and formed by a pair of longer longitudinal edges and by a pair of shorter transversal edges. Moreover, in the area adjacent to the first one of the longitudinal edges two stable pins with slightly towards the second longitudinal edge curved end portions are fixed on the base plate, while in the area adjacent to the second one of said longitudinal edges of the base plate two bearings are foreseen for the purposes of embedding of two sections of a clamping set, which in addition to said sections also comprises an eccentrically with respect to said bearings arranged intermediate section and also two pivotable pins having free end portions slightly curved towards said free end portions of the stable pins. Still further, approximately in the central region of the base plate, there is a cantilever (15) foreseen, which protrudes approximately perpendicularly with respect to the main plane of the base plate and is adapted for pivotal attachment of an actuating lever together with a pressing member, which is adapted to cooperate with said intermediate section of the clamping set, so that by pivoting said actuating lever in one direction the clamping set is swiveled within the bearings in one direction e.g. for the purposes of displacing the pivotable pins apart from the stable pins, while by pivoting the actuating lever in the opposite direction said clamping set is swiveled in the opposite direction and the free end portions of the pivotable pins are then pressed towards the free end portions of the stable pins. Said base plate is furnished with bores, which are intended for attaching the ring mechanism onto the inner side of each corresponding cover of the document file and which are adapted to receive rivets or any other suitable elements for establishing a functional interconnection between the ring mechanism and each corresponding cover of the document file.

[0008] In accordance with the invention, each bore which is available on the base plate and is intended for the purposes of attachment thereof and consequently the complete ring mechanism of the document file onto the inner side of each corresponding cover of said document file, is surrounded with a flat depression, wherein all available depressions together with each belonging bores are located in the same first plane, which corresponds to the surface on the inner side of the cover of the document file where the ring mechanism is attached and which is located at a pre-determined distance apart from the second plane, in which the circumferential edges of the base plate of the ring mechanism of the document file are located, which are formed by a pair of longer longitudinal edges and a pair of shorter transversal edges.

[0009] The distance between the first plane in which depressions are rest onto the surface on the inner side of the cover of the document file and the second plane in which the circumferential edges of the base plate of the ring mechanism are located, corresponds to 0,25 to 2,5 of the thickness of the steel strip, of which the base plate is manufactured. In a preferred embodiment, said distance between said first and second plane corresponds to 0,5 to 1,5 of the thickness of the steel strip, of which the base plate is manufactured.

[0010] A ring file mechanism will be described on the basis of an embodiment, which is shown in the attached drawing, wherein

Fig. 1 is a perspective view of a document file in its closed state;

Fig. 2 is a detail A according to Fig. 1;

Fig. 3 is a side view of a document file;

Fig. 4 is a top view of the document file according to Figs. 1 and 2;

Fig. 5 is a perspective view of a ring mechanism of the document file; and

Fig. 6 is a perspective view of a ring mechanism of the document file from another direction.

[0011] A ring mechanism 1 according to the invention is adapted for mounting into a document file 2, which is intended for archiving not-shown paper documents and consists of a pair of covers 21, 22, which are connected to each other by means of an intermediate section 23, wherein said intermediate section 23 is formed integrally with said covers 21, 22, and wherein said covers 21, 22 including said intermediate section 23 consist of a hygroscopic material, in particular of cardboard. In the shown embodiment the ring mechanism is attached to the inner side 220 of the corresponding cover 22 in a non-detachable manner, preferably by means of riveting.

[0012] The ring mechanism 1 comprises a base plate 10, which is normally a rectangular pre-formed plate having rounded corner areas and is usually formed with cavities, ribs and grooves, by means of which a desired rigidity of the base plate 10 is achieved. Such plate 10 generally consists of a steel strip of a pre-determined

thickness t , which is as such initially protected against the corrosion, namely galvanic-treated or coated by appropriate layer of an anti-corrosion paint, and after that exposed to cutting and forming in corresponding tools, which are mounted within appropriate presses. The circumferential edges 105 of such base plate 10, which are due to the nature of manufacturing unprotected against the corrosion, includes a pair of longer longitudinal edges 101, 102 as well as a pair of shorter transversal edges 103, 104.

[0013] Two stable pins 11, 12 are attached to the base plate 10 in the area adjacent to the first of said longitudinal edges 101, 102, and free end portions 11', 12' thereof are slightly curved towards the second longitudinal edge 102 of the base plate 10. In the area adjacent to the second one of said longitudinal edges 101, 102 of the base plate there is a pair of bearings 13', 13'', in which corresponding sections 141, 142 of a clamping set 14 are embedded, wherein said set 14 in addition to said sections 141, 142 also comprises an intermediate section 143, which is arranged eccentrically with respect to said bearings 13', 13'', as well as two pivotable pins 144, 145, which are in the area of their free end portions 144', 145' slightly curved towards the free end portions 11', 12' of the stable pins 11, 12.

[0014] Moreover approximately in the central region of the base plate 10 there is a cantilever 15, which protrudes at least perpendicularly with respect to the plane of the base plate 10 and on which an actuating lever 16 together with a pressing member 17 is pivotally attached, which is adapted to cooperate with said intermediate section 143 of the clamping set 14. Such, by pivoting said actuating lever 16 in one direction the clamping set 14 is swiveled in one direction within the bearings 13', 13'', by which the pivotable pins 144, 145 are e.g. displaced apart from the stable pins 11, 12, while on the contrary by pivoting said actuating lever 16 in the opposite direction the clamping set 14 is swiveled in the opposite direction, by which the end portions 144', 145' of the pivotable pins 144, 145 are pressed towards the end portions 11', 12' of the stable pins 11, 12.

[0015] Said base plate 10 is furnished with bores 181, 182, 183, 184, which are intended for attachment of the base plate 10 onto the inner side 220 of each corresponding cover 22 of the document file 2 and are adapted to receive not-shown rivets or any other suitable means for establishing a required interconnection between the ring mechanism 1 and each corresponding cover 22. In the context of the invention, the number nor the position of said bores 181, 182, 183, 184 are not exposed to any limitations, and the sole purpose thereof is enabling said interconnection between said ring mechanism 1 and each corresponding cover 22. Each of said bores 181, 182, 183, 184 is surrounded with a flat depression 181', 182', 183', 184' arranged at least in the adjacency thereof, by which all these depressions 181', 182', 183', 184' are all typically adapted to be rest onto the cover 22 in the same plane $E1$ and are therefore co-planar. When

the ring mechanism 1 is assembled with the cover 22, the plane $E1$ corresponds to the surface of the inner side 220 and spaced at a distance δ apart from the plane $E2$, in which the circumferential edges 105 on the bottom surface of the base plate 1 are located. All depressions 181', 182', 183', 184' on the base plate 10, in which the bores 181, 182, 183, 184 are located, are therefore formed below the circumferential edges 105, and that upon assembling the ring mechanism 1 and the cover 2 said circumferential edges 105 are maintained at the distance apart from the surface on the inner side 220 of the cover 22. Consequently, the circumferential edges 105 are no more exposed to influences of the hygroscopic material of the cover 22 and are no more in contact with the moisture contained within the material of the cover 22, by which the sensitiveness thereof to corrosion is avoided or at least essentially reduced.

[0016] The invention also provides that the distance δ between the plane $E1$, where said depressions 181', 182', 183', 184' are rest onto the inner side 220 of the cover 22, and the plane $E2$, where the circumferential edges 105 of the base plate 10 of the ring mechanism 1 are located, corresponds to a value between 0,25 and 2,5 of the thickness t , preferably between 0,5 and 1,5 t , wherein t is the thickness of the steel strip, from which the base plate 10 is manufactured.

Claims

1. Document file ring mechanism with an improved base plate (1) which is adapted for non-detachable attaching, in particular riveting to a document file (2) comprising a pair of covers (21, 22), which are interconnected by means of an intermediate section (23) and which, including said intermediate section (23), are made of a hygroscopic material in particular cardboard, wherein said ring mechanism (1) comprises an appropriately rigid and essentially rectangular base plate (10) made of a steel strip of a pre-determined thickness (t), previously protected against corrosion, being located in a plane $E2$, and having circumferential edges (105) located in the same plane ($E2$) and formed by a pair of longer longitudinal edges (101, 102) and by a pair of shorter transversal edges (103, 104), and wherein, in the area adjacent to the first one of the longitudinal edges (101, 102), two stable pins (11, 12) with end portions (11', 12') slightly curved towards the second longitudinal edge (102) are fixed on the base plate (10), while in the area adjacent to the second one of said longitudinal edges (101, 102) of the base plate (10) two bearings (13', 13'') are foreseen for the purposes of embedding of two sections (141, 142) of the clamping set (14), which in addition to said sections (141, 142) comprises an intermediate section (143) eccentrically arranged with respect to said bearings (13', 13'') and also two

pivotable pins (144, 145) having free end portions (144', 145') slightly curved towards said free end portions (11', 12') of the stable pins (11, 12), and wherein approximately in the central region of the base plate (10) a cantilever (15) is located, which protrudes approximately perpendicularly with respect to the main plane of the base plate (10) and is adapted for pivotal attachment of an actuating lever (16) together with a pressing member (17), which is adapted to cooperate with said intermediate section (143) of the clamping set (14), so that by pivoting said actuating lever (16) in one direction the clamping set (14) is swiveled within the bearings (13', 13'') in one direction for the purposes of displacing the pivotable pins (144, 145) apart from the stable pins (11, 12), while by pivoting the actuating lever (16) in the opposite direction said clamping set (16) is swiveled in the opposite direction and the free end portions (144', 145') of the pivotable pins (144, 145) are then pressed towards the free end portions (11', 12') of the stable pins (11, 12), and wherein said base plate (10) further includes bores (181, 182, 183, 184), which are intended for attaching the ring mechanism (1) onto the inner side (220) of each corresponding cover (22) of the document file (2) and which are adapted to receive rivets or any other suitable elements for establishing a functional interconnection between the ring mechanism (1) and each corresponding cover (22) of the document file,

characterized in that

each bore (181, 182, 183, 184), which is available on the base plate (10) and is intended for the purposes of attachment thereof and consequently the complete ring mechanism (1) of the document file (2) onto the inner side (220) of each corresponding cover (22) of said document file (2), is surrounded with a flat depression (181', 182', 183', 184'), wherein all available depressions (181', 182', 183', 184') together with each belonging bores (181, 182, 183, 184) are located in a same first plane (E1), which corresponds to the surface on the inner side (220) of the cover (22) of the document file (2) where the ring mechanism (1) is attached, said first plane (E1) being located at a pre-determined distance (δ) apart from the second plane (E2), in which the circumferential edges (105) of the base plate, formed by a pair of longer longitudinal edges (101, 102) and a pair of shorter transversal edges (103, 104) (10) of the ring mechanism (1) of the document file (2) are located.

2. Document file ring mechanism according to Claim 1, **characterized in that** the distance (δ) between the first plane (E1) in which depressions (181', 182', 183', 184') are rest onto the surface on the inner side (220) of the cover (22) of the document file (2) and the second plane (E2) in which the circumferential edges (105) of the base plate (10) of the ring mechanism (1) are located, corresponds to 0,25 to 2,5 of the thickness (t), wherein (t) annotates the thickness of the steel strip, of which the base plate (10) is manufactured.

3. Document file ring mechanism according to Claim 2, **characterized in that** the distance (δ) corresponds to 0,5 to 1,5 of the thickness (t) of the steel strip, of which the base plate (10) is manufactured.

Patentansprüche

1. Ringmechanismus (1) mit verbesserter Grundplatte für Aktenordner, der zum unlösbaren Verbinden, insbesondere zum Nieten an einen Aktenordner (2) ausgestaltet ist, aufweisend ein Paar Deckel (21, 22), welche mittels eines Zwischenabschnitts (23) verbunden sind und welche einschließlich des Zwischenabschnitts (23) aus einem hygroskopischen Material, insbesondere Karton hergestellt sind, wobei der Ringmechanismus (1) eine angemessen steife und im Wesentlichen rechteckige Grundplatte (10) aufweist, die aus einem Stahlstreifen einer vorbestimmten Dicke (t) hergestellt ist, die vorher vor Korrosion geschützt in einer Ebene (E2) positioniert ist und Umfangskanten (105) aufweist, die sich in derselben Ebene (E2) befinden und durch ein Paar längere Längskanten (101, 102) und durch ein Paar kürzere Querkanten (103, 104) gebildet sind, und wobei in dem Bereich, der der ersten der Längskanten (101, 102) benachbart ist, zwei feste Stifte (11, 12) mit Endabschnitten (11', 12'), die in Richtung zur zweiten Längskante (102) gebogen sind, auf der Grundplatte (10) befestigt sind, während in dem Bereich, der der zweiten der Längskanten (101, 102) der Grundplatte (10) benachbart ist, zwei Lager (13', 13'') zum Einbetten von zwei Abschnitten (141, 142) des Spannsatzes (14) vorgesehen sind, welcher zusätzlich zu den Abschnitten (141, 142) einen Zwischenabschnitt (143), der in Bezug auf die Lager (13', 13'') exzentrisch angeordnet ist und auch zwei drehbare Stifte (144, 145) mit freien Endabschnitten (144', 145') aufweist, die in Richtung der freien Endabschnitte (11', 12') der festen Stifte (11, 12) leicht gebogen sind, und wobei ungefähr im Mittelabschnitt der Grundplatte (10) eine Auslegerfeder (15) angebracht ist, die in etwa senkrecht zur Hauptebene der Grundplatte (10) vorsteht und für die schwenkbare Befestigung eines Betätigungshebels (16) zusammen mit einem Anpresselement (17) ausgestaltet ist, das ausgestaltet ist, um mit dem Zwischenbereich (143) des Spannsatzes (14) zusammenzuwirken, so dass durch Schwenken des Betätigungshebels (16) in eine Richtung der Spannsatz (14) innerhalb der Lager (13', 13'') in einer Richtung geschwenkt wird, um die schwenkbaren Stifte (144, 145) von den festen Stif-

ten (11, 12) wegzubewegen, während durch Schwenken des Betätigungshebels (16) in die entgegengesetzte Richtung der Spannsatz (14) in die entgegengesetzte Richtung geschwenkt wird und die freien Endabschnitte (144', 145') der schwenkbaren Stifte (144, 145) dann in Richtung zu den freien Endabschnitten (11', 12') der festen Stifte (11, 12) gedrückt werden,

und wobei die Grundplatte (10) darüber hinaus mit Bohrungen (181, 182, 183, 184) versehen ist, die zum Befestigen des Ringmechanismus (1) an der Innenseite (220) des jeweils entsprechenden Deckels (22) des Aktenordners (2) gedacht sind, und die ausgestaltet sind, um Nieten oder sonstige geeignete Elemente zum Schaffen einer funktionalen Verbindung zwischen dem Ringmechanismus (1) und dem jeweils entsprechenden Deckel (22) des Aktenordners aufzunehmen, dadurch gekennzeichnet, dass

jede Bohrung (181, 182, 183, 184), die sich an der Grundplatte (10) befindet und für deren Befestigung und folglich der Befestigung des gesamten Ringmechanismus (1) des Aktenordners (2) an der Innenseite (220) des jeweils entsprechenden Deckels (22) des Aktenordners (2) gedacht ist, von einer flachen Vertiefung (181', 182', 183', 184') umgeben ist, wobei sich alle vorhandenen Vertiefungen (181', 182', 183', 184') zusammen mit den jeweils dazugehörigen Bohrungen (181, 182, 183, 184) in derselben ersten Ebene (E1) befinden, die der Oberfläche auf der Innenseite (220) des Deckels (22) des Aktenordners (2) entspricht, wo der Ringmechanismus (1) angebracht ist, wobei sich die erste Ebene (E1) in einem vorbestimmten Abstand (δ) von der zweiten Ebene (E2) entfernt befindet, in der sich die Umfangskanten (105) der Grundplatte (10) befinden, die aus einem Paar längerer Längskanten (101, 102) und einem Paar kürzerer Querkanten (103, 104) des Ringmechanismus (1) des Aktenordners (2) bestehen.

2. Ringmechanismus für Aktenordner gemäß Anspruch 1, **dadurch gekennzeichnet, dass** der Abstand (δ) zwischen der ersten Ebene (E1), in der die Vertiefungen (181', 182', 183', 184') auf der Fläche an der Innenseite (220) des Deckels (22) des Aktenordners (2) aufliegen, und der zweiten Ebene (E2), in der sich die Umfangskanten (105) der Grundplatte (10) des Ringmechanismus (1) befinden, dem 0,25-fachen bis 2,5-fachen der Dicke (t) entspricht, wobei (t) die Dicke des Stahlstreifens betrifft, aus dem die Grundplatte (10) hergestellt ist.
3. Ringmechanismus für Aktenordner gemäß Anspruch 2, **dadurch gekennzeichnet, dass** der Abstand (δ) dem 0,5-fachen bis 1,5-fachen der Dicke (t) des Stahlstreifens entspricht, aus der die Grundplatte (10) hergestellt ist.

Revendications

1. Mécanisme à anneaux de classeur de documents avec une plaque de base (1) améliorée qui est adaptée à une fixation non détachable, en particulier à un rivetage sur un classeur (2) de documents comprenant une paire de couvertures (21, 22), qui sont interconnectées au moyen d'une section intermédiaire (23) et qui, incluant ladite section intermédiaire (23), sont constituées d'une matière hygroscopique, en particulier un carton, dans lequel ledit mécanisme à anneaux (1) comprend une plaque de base (10) rigide de façon appropriée et essentiellement rectangulaire constituée d'une bande d'acier d'une épaisseur (t) prédéterminée, protégée au préalable contre la corrosion, étant située dans un plan (E2) et ayant des bords circonférentiels (105) situés dans le même plan (E2) et formés par une paire de bords longitudinaux (101, 102) plus longs et par une paire de bords transversaux (103, 104) plus courts, et dans lequel, dans la zone adjacente au premier parmi les bords longitudinaux (101, 102), deux broches fixes (11, 12) avec des parties d'extrémités (11', 12') légèrement incurvées vers le deuxième bord longitudinal (102) sont fixées sur la plaque de base (10), tandis que dans la zone adjacente au deuxième parmi lesdits bords longitudinaux (101, 102) de la plaque de base (10), deux supports (13', 13'') sont prévus aux fins d'intégration de deux sections (141, 142) de l'ensemble de fixation (14), qui, outre lesdites sections (141, 142), comprend une section intermédiaire (143) agencée de façon excentrique par rapport auxdits supports (13', 13'') et également deux broches pivotantes (144, 145) ayant des parties d'extrémité libres (144', 145') légèrement incurvées vers lesdites parties d'extrémités libres (11', 12') des broches fixes (11, 12), et dans lequel, approximativement dans la région centrale de la plaque de base (10), un cantilever (15) est situé, qui fait saillie approximativement perpendiculairement par rapport au plan principal de la plaque de base (10) et est adapté à une fixation en pivot d'un levier d'actionnement (16) en même temps qu'un élément de pression (17), qui est adapté à coopérer avec ladite section intermédiaire (143) de l'ensemble de fixation (14), de sorte qu'en faisant pivoter ledit levier d'actionnement (16) dans un sens, l'ensemble de fixation (14) est tourné à l'intérieur des supports (13', 13'') dans un sens aux fins de déplacement des broches pivotantes (144, 145) à l'écart des broches fixes (11, 12), tandis qu'en faisant pivoter le levier d'actionnement (16) dans le sens opposé, ledit ensemble de fixation (14) est tourné dans le sens opposé et les parties d'extrémité libres (144', 145') des broches pivotantes (144, 145) sont ensuite pressées vers les parties d'extrémités libres (11', 12') des broches fixes (11, 12), et dans lequel ladite plaque de base (10) inclut en

autre des alésages (181, 182, 183, 184), qui sont destinés à fixer le mécanisme à anneaux (1) sur le côté intérieur (220) de chaque couverture (22) correspondante du classeur (2) de documents et qui sont adaptés à recevoir des rivets ou tous autres éléments appropriés pour établir une interconnexion fonctionnelle entre le mécanisme à anneaux (1) et chaque couverture (22) correspondante du classeur de documents,

caractérisé en ce que

chaque alésage (181, 182, 183, 184), qui est disponible sur la plaque de base (10) et est destiné aux fins de fixation de celle-ci et par voie de conséquence du mécanisme à anneaux (1) complet du classeur (2) de documents sur le côté intérieur (220) de chaque couverture (22) correspondante dudit classeur (2) de documents, est entouré avec un renforcement plat (181', 182', 183', 184'), dans lequel tous les renforcements (181', 182', 183', 184') disponibles, avec tous les alésages (181, 182, 183, 184) correspondants sont situés dans un même premier plan (E1), qui correspond à la surface sur le côté intérieur (220) de la couverture (22) du classeur (2) de documents où le mécanisme à anneaux (1) est fixé, ledit premier plan (E1) étant situé à une distance (δ) prédéterminée à l'écart du deuxième plan (E2), dans lequel les bords circonférentiels (105) de la plaque de base (10), formés par une paire de bords longitudinaux (101, 102) plus longs et une paire de bords transversaux (103, 104) plus courts, du mécanisme à anneaux (1) du classeur (2) de documents sont situés.

2. Mécanisme à anneaux de classeur de documents selon la revendication 1, **caractérisé en ce que** la distance (δ) entre le premier plan (E1) dans lequel des renforcements (181', 182', 183', 184') reposent sur la surface sur le côté intérieur (220) de la couverture (22) du classeur (2) de documents et le deuxième plan (E2) dans lequel les bords circonférentiels (105) de la plaque de base (10) du mécanisme à anneaux (1) sont situés, correspond à 0,25 à 2,5 fois l'épaisseur (t), dans lequel (t) dénote l'épaisseur de la bande d'acier, à partir de laquelle la plaque de base (10) est fabriquée.
3. Mécanisme à anneaux de classeur de documents selon la revendication 2, **caractérisé en ce que** la distance (δ) correspond à 0,5 à 1,5 fois l'épaisseur (t) de la bande d'acier, à partir de laquelle la plaque de base (10) est fabriquée.

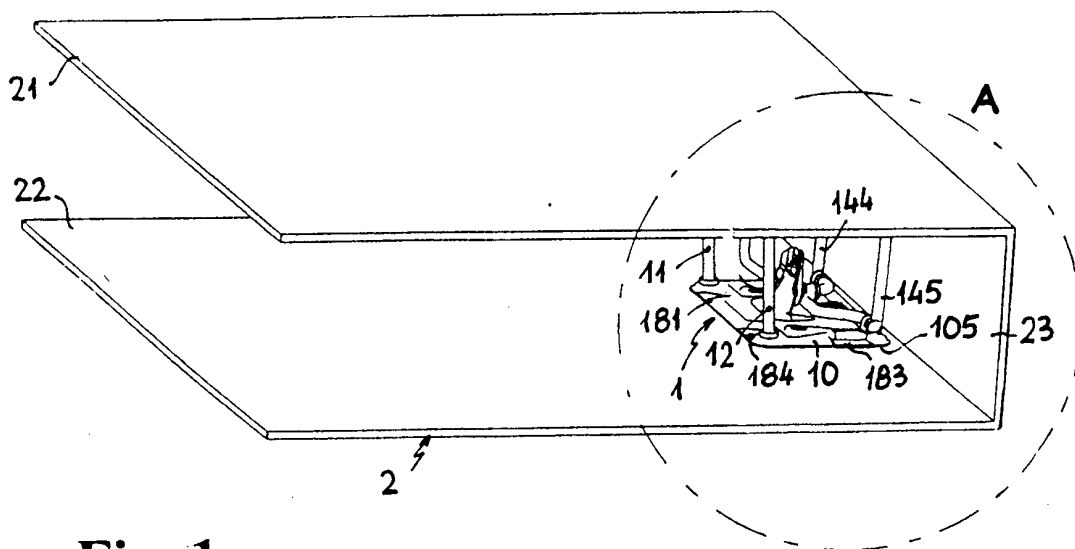


Fig. 1

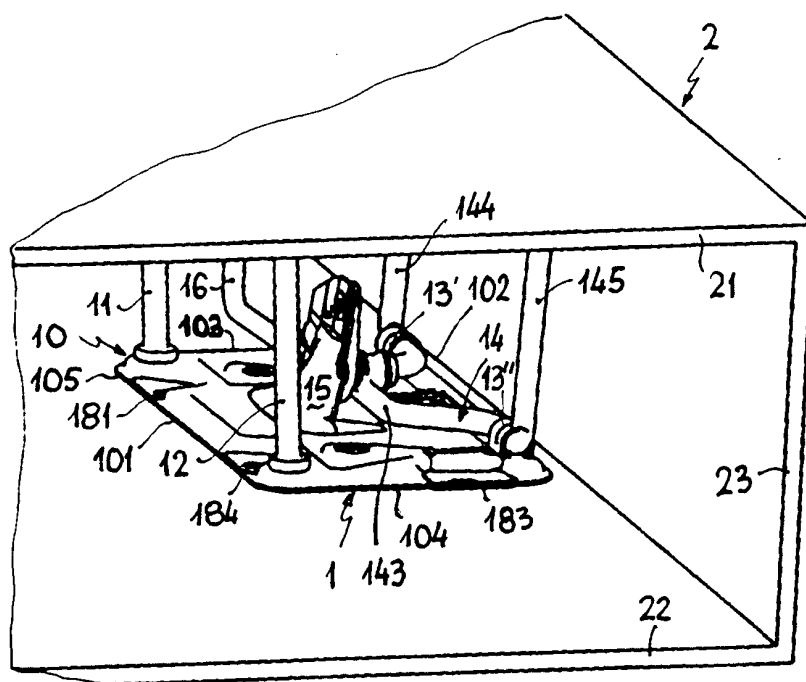


Fig. 2

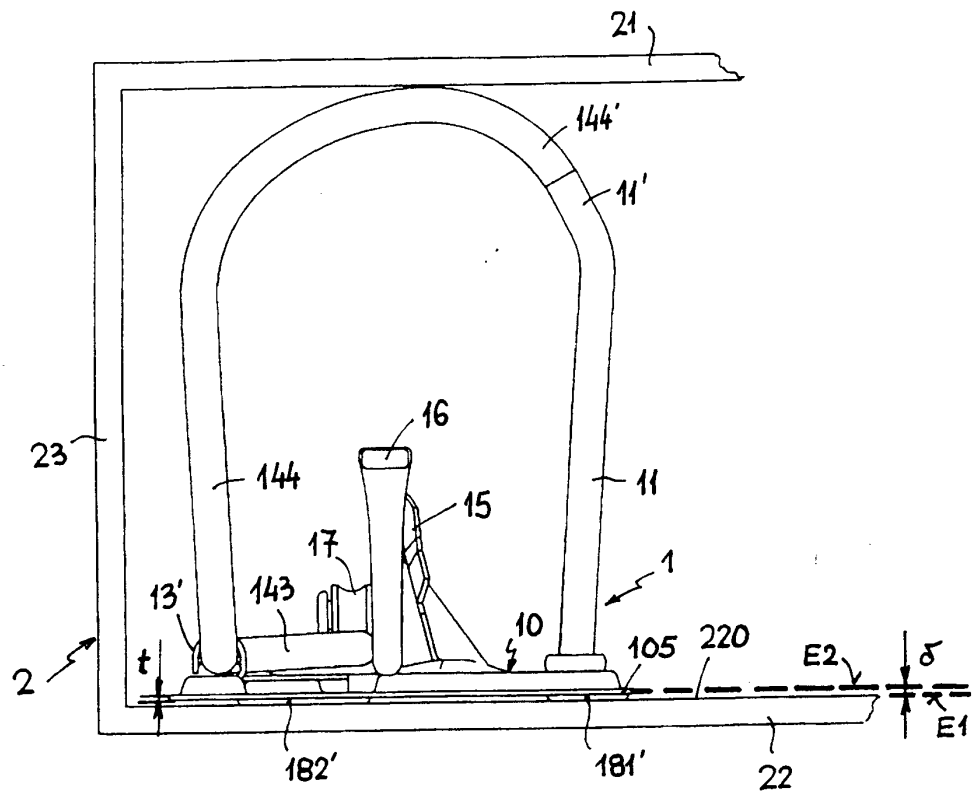


Fig. 3

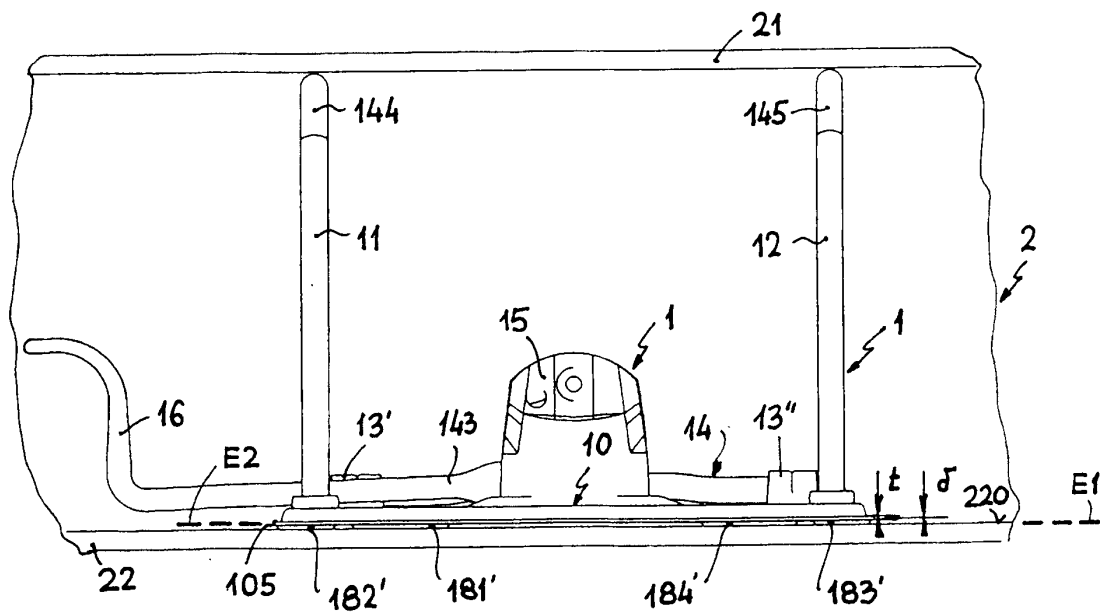


Fig. 4

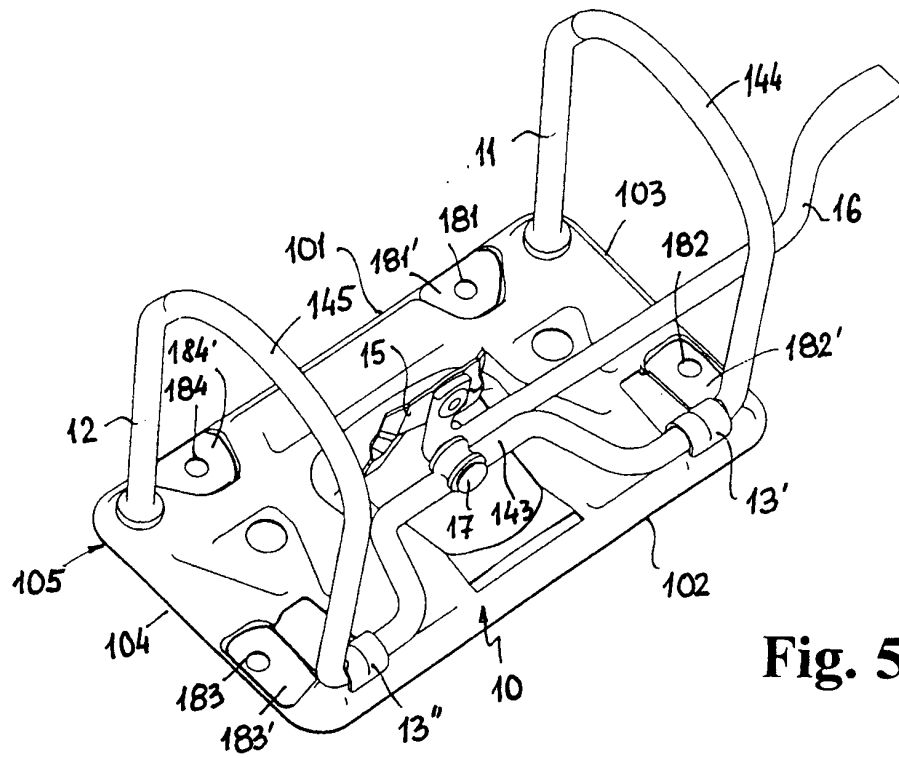


Fig. 5

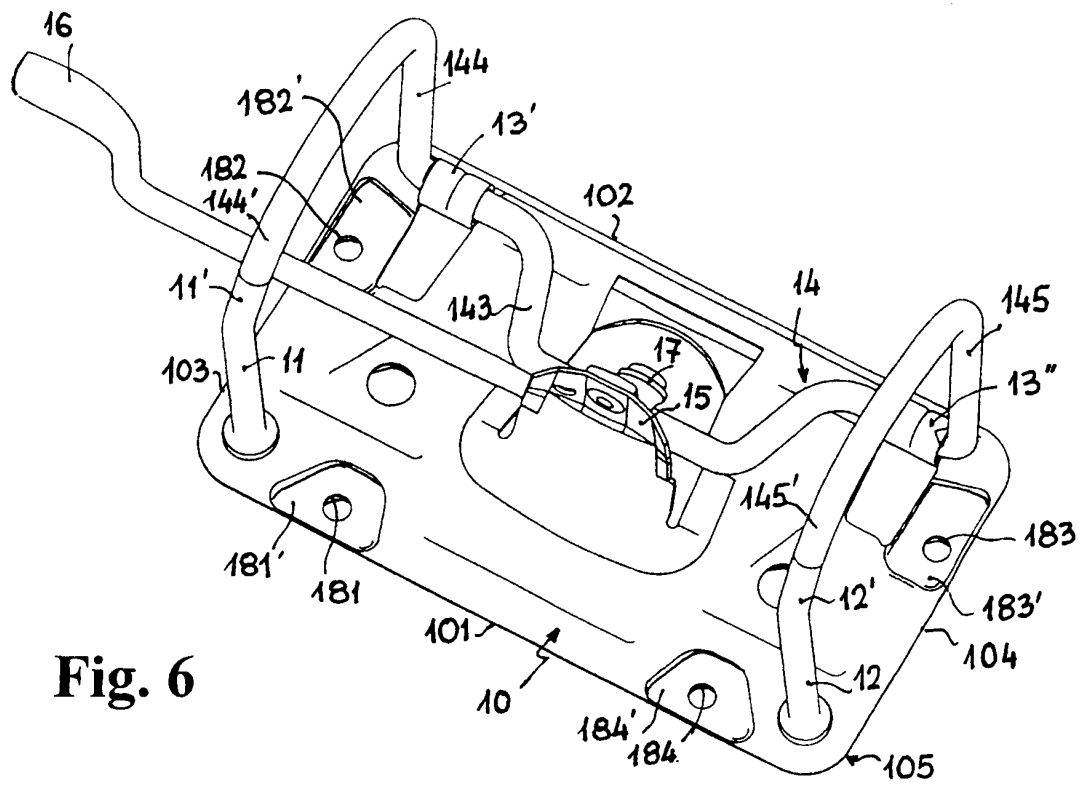


Fig. 6

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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