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(54) **DISPLAY SYSTEM WITH POSITION FUNCTIONS**

ANZEIGESYSTEM MIT POSITIONSFUNKTIONEN

SYSTÈME DE PRÉSENTOIR DOTÉ DE FONCTIONS DE POSITIONNEMENT

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(56) References cited:
EP-A1- 1 582 118
EP-A1- 2 175 407
WO-A1-98/10685
US-A1- 2005 149 414
US-B1- 6 364 124

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Description

[0001] The present invention relates to a display system with position functions for holding products, such as pairs of glasses, arranged in distinct positions. The present invention further relates to a method for holding products arranged in distinct positions.

[0002] Many display systems are known for showing pairs of glasses in the premises of for instance an optician. It is of vital importance to an optician to be able to present the pairs of glasses in an orderly manner so that the consumer can make a correct choice in agreeable manner. There is always a trade-off here between accessibility and security. There is also always a trade-off between this accessibility and security and the maintenance of such systems.

[0003] For instance known is from US 6,364,124, a burglar proof looking display stand for glasses based on a display panel with a number of racks for individual glasses that is capable of locating a pair of glasses to the rack and unlocking the same. From EP 1 582 118 A1, also a column device for safely holding glasses is known. From WO 98/10685, also a column device for safely holding glasses is known. All of devices as disclosed in these 3 documents function by locking in the bridge of the frame of the glasses.

[0004] A further display system is known from EP2175407 A1. In order to provide a display system which provides improvement relative to the existing systems, the present invention relates to a display system according to claim 1.

[0005] It is possible in advanced manner by means of position functions as intended according to the present invention to provide advantages relative to the prior art. It is for instance possible to have the display system collect information with the purpose of improving the arrangement of the products in the display system. Such information can also be used for individual opening or closing of the access to a product. The arrangement of the products can also be changed by means of such a system in highly labour-saving manner.

[0006] It hereby becomes possible to determine remotely in which position of the display system a specific product or pair of glasses is arranged. This determination can be performed at any desired moment, whereby 'live' insight can be acquired into the location, or the presence at a location, of each product individually.

[0007] The position function is a feedback function for feedback of information relating to the product. Such a feedback function for instance provides the option of showing information relating to the product to shop staff or to a member of the public. A customer at an optician can hereby obtain an indication, for instance in the case of all glasses of a desired brand, in the form of for instance a lamp or a particular indication on a screen. According to the present invention it is thus possible to provide the desired indication per product 'live' on the basis of the placing thereof.

[0008] In a further preferred embodiment the position function is a blocking function for the purpose of blocking removal of the product. It hereby becomes possible to safeguard products per location or per product. When all glasses of a specific expensive brand have to be separately safeguarded, it is possible to instruct the display system to block these glasses. If an interested customer is present, these glasses can be unblocked individually or per group. A particular aspect of the present invention is that it is possible, irrespective of the chance location of a product, to safeguard the product on the basis of an 'expensive brand' characteristic.

[0009] In a further preferred embodiment the position function relates to a removable placeability or interchangeability of the position assemblies for the purpose of free interchange of position assemblies, and/or wherein each position assembly is provided with a position assembly identifier for identification of the position assembly by the display system and/or a server which can be linked to the display system.

[0010] A position assembly can malfunction and will therefore have to be replaced. It may also be the case that the dimensioning of a position assembly has to be changed, individually or per group. It may further be the case that a determined colour or appearance of the position assembly is required for a specific sales promotion.

[0011] The unique identification of the position assemblies according to the present embodiments makes the position assembly freely interchangeable. According to the present invention it is thereby possible to determine the location of the products on the basis of the combination of the identification of each position assembly and the identification of the products. The feedback to customers and members of staff can be provided wholly on the basis of these two identifiers. When the price has to be shown on the basis of these identifiers, the two identifiers are provided to a server and the price is fed back to the correct position assembly, irrespective of the position of the position assembly in the display assembly.

[0012] Each position assembly is provided with a detection unit for detecting a remotely readable product identifier, such as preferably an RFID scanner for reading an RFID label or a barcode reader for reading a barcode. The function of reading the product identification can be provided by means of this detection unit.

[0013] The display system more preferably comprises processing means for processing data relating to the product identifier, more preferably an interface for exchanging data with a server via a network. Processing of information and exchange of data with the server can hereby be performed.

[0014] The display system comprises per position assembly a feedback member for providing a sensorily perceptible feedback such as a visual feedback by means of light signals or image or sound by means of preferably a respective light source, screen or loudspeaker. The said feedback can hereby be realized.

[0015] The display system more preferably comprises:

- a blocking assembly co-acting with the assembly for providing a blocking against removal of the product from the position assembly, wherein the blocking assembly has at least a closed position and a removal position,
- an actuation assembly for actuating the blocking assembly for the purpose of switching the blocking assembly between the closed position and the removal position, wherein each blocking assembly is preferably be actuable separately of further blocking assemblies, or groups of blocking assemblies is actuable separately. The security of the products can be realized by means of such a blocking assembly in a manner as indicated above.

[0016] In a further preferred embodiment the actuation assembly comprises a drive motor, or the actuation assembly comprises a manual drive, and the blocking assembly more preferably comprises a longitudinally movable pin for closing a carrier, the actuation assembly more preferably comprises a carrier with a protective element for protecting the bridge of a pair of glasses. Specific elaborations of examples of the security are hereby provided.

[0017] In a further preferred embodiment the actuation assembly has in the closed position a blocking resistance which is at least twice as great as the blocking resistance of an applied drive motor, preferably wherein the blocking resistance is provided by an eccentric drive member which in the closed position blocks a pin of the blocking assembly. A very high level of security can hereby be realized with a small drive power of a drive motor.

[0018] The position assembly can more preferably be placed removably in the display system comprising a plurality of the position assemblies. A greater flexibility in the design, or the overall appearance, of a display assembly can hereby be realized.

[0019] The position assembly more preferably has an easily recognizable appearance and can be placed removably in the display system comprising a plurality of the position assemblies. A specific embodiment is hereby realized within the design freedom and the ability to change the appearance of the display assembly.

[0020] In afurther preferred embodiment, the display system comprises an RFID label or the barcode label for fastening to a respective product.

[0021] A further aspect of the present invention relates to a method according to claim 10.

[0022] The method more preferably comprises steps for removal or placing of the products on the basis of a feedback of the display system. It hereby becomes possible to rearrange the products in the display system on the basis of the feedback. When a member of staff begins feedback, a feedback sequence is started. After removal of the first product, for instance on the basis of a lamp flashing, a lamp is activated at the position where this product must be placed. A product possibly present there is then taken out and the intended product is placed. A lamp is then activated at the position where the product which has just been removed must be placed, and this sequence is repeated until all products have been placed at the correct position. Such an arrangement sequence is only one example of sequences that are possible by means of a system according to the present invention.

[0023] In a further preferred embodiment the method comprises steps for causing the display system to block or release products on the basis of information read by the display system from product identifiers. An example hereof has been given in the foregoing.

[0024] A further preferred embodiment of the method comprises steps for inputting query information relating to feedback on the basis of information from product identifiers. It is for instance possible, on the basis of for instance a customer query, to have all products of one or more brands indicated with a flashing green lamp.

[0025] A method more preferably comprises steps for showing product information on the basis of information read by the display system from product identifiers. It is further possible to have all products provided with information on a screen, such as the price, size, weight or lens variants.

[0026] In a further preferred embodiment, the system comprises a server for collecting, storing and processing information read from the product identifiers, provided with means for controlling the display system for the purpose of displaying feedback, blocking and unblocking position assemblies and identifying distinct position assemblies.

Definitions.

[0027] A position function is a function which is distinguishably available for a position, wherein the user can use or set the function distinguishably for a position.

[0028] A display system is a system for showing products. A display system is also defined as comprising stock holders suitable for holding products in stock without them being directly visible, for the purpose of holding larger quantities while using relatively little space. The purpose hereof is that the whole stock of products to be shown can be held in recordable manner. After a product has been 'checked in', unrecorded disappearance from the system can be automatically detected after a predeterminable time period.

[0029] Further advantages, features and details of the present invention will be described in greater detail hereinbelow on the basis of one or more preferred embodiments with reference to the accompanying figures. Similar, though not necessarily identical, components of different preferred embodiments are designated with the same reference numerals.

Fig. 1 is a perspective overview of a preferred embodiment according to the present invention in the form of a detail of a position assembly holder having a number of position assemblies therein.

Fig. 2 is a schematic system overview of a display system with a server and additional components.
Fig. 3 is a perspective rear view of a preferred embodiment of a position assembly.
Fig. 4 is a perspective rear view of the assembly according to Fig. 3.
Fig. 5 is a perspective front view of the assembly according to Fig. 3.
Fig. 6-9 are perspective views of construction parts of a position assembly according to Fig. 3.

[0030] A first preferred embodiment (Fig. 1) according to the present invention relates to a display assembly comprising a position assembly holder 1. This in turn comprises a number of position assemblies 2. The position assemblies are provided with LED lighting elements 4 and LCD screens 5. In this embodiment the LCD screens are provided with the option of a price specification. Displays with more product specifications are possible in similar manner. Display assembly 2 is further provided with an RFID antenna module 6. By means of this antenna module, which is shown schematically in Fig. 1, it is always possible to read an RFID label attached to the sidepiece 9 of glasses 10 for the whole period of time the glasses remain in position assembly 2.

[0031] Arms 11 of the position assembly can be placed removably on the position assembly. Arms 11 are provided with a rubber guard 12 to protect the bridge of the pair of glasses 10. The arms are also provided with a security catch, or locking pin 13, slidable therethrough in the longitudinal direction. In the shown position this locking pin 13 is closed. When pin 13 is slid to the rear, the upper side of the carrying position of the bridge of the pair of glasses is opened, whereby it can be taken out or placed.

[0032] Fig. 2 shows how the display assembly is coupled by means of a network bus 15 to a server with a local database 14. By means of a tablet 17 or a computer 16, or a further control (not shown) arranged on the display assembly, the system can be operated within the concept of the present invention.

[0033] Shown in more detail in Fig. 3 and 4 is the internal mechanism of the position assembly and related components. The blocking assembly 21 functions for the purpose of blocking the pin 13. Motor 22 drives the pin blocking 24 by means of its shaft 23. Pin blocking 24 is provided with a surface 25 running eccentrically relative to shaft 23 for the purpose of restraining the rear side of pin 13. Pin 13 is arranged under bias of a spring (not shown) in arm 11. It is hereby held constantly under bias against surface 25. Owing to the shape of surface 25 it is impossible without rotation driving of motor 22 to move the pin rearward when the pin blocking is situated in the position as shown in Fig. 4. When the pin blocking is rotated the pin will be able to move rearward so that the pair of glasses can be taken out of the arm on the front side.

[0034] Position assembly 2 further comprises a central processing unit with a memory and a network connector. It hereby becomes possible to activate the lamps on the front side, the screen and the motor. It further hereby becomes possible to receive instructions from the server to release a pair of glasses and display feedback information on the screen or the LED. For replacement purposes the arm is provided with a snap protrusion 41.

[0035] The present invention has been described in the foregoing on the basis of several preferred embodiments. These preferred embodiments are not limitative for the scope of protection of this document. The rights sought are defined in the appended claims.

Claims

1. Display system for displaying glasses with position functions for holding products (10) being pairs of glasses, arranged in distinct positions, comprising:

    - at least one position assembly holder (1) for holding a plurality of position assemblies (2),
    - the plurality of position assemblies (2) each arranged to hold one pair of glasses at the position,

    wherein:

    - each of the plurality of position assemblies (2) is provided with at least two position functions, the at least two position functions comprising a detection function and a feedback function providing the detection function and the feedback function per position, wherein
    - each of the plurality of position assemblies (2) comprises:

        - for the detection function, a detection unit (6) arranged in the position assembly for detecting continously a remotely readable product identifier (8) of the one pair of glasses for the whole period of time of remaining held in the position assembly,
        - for the feedback function, a feedback member (4,5) for feedback information relating to the continuously detected product identifier of the pair of glasses held in the position assembly.

2. Display system as claimed in claim 1, wherein the feedback member (4,5) provides a sensorily perceptible feedback, such as a visual feedback by means of light signals or image or sound by means of preferably a respective light source(4), such as an LED, such as a multicolor LED, screen (5) or loudspeaker.

3. Display system as claimed in claim 1 or 2, wherein a further position function comprises a blocking func-

tion for the purpose of blocking removal of the product, for the blocking function, the position assembly (2) comprises a blocking assembly (21) co-acting with the position assembly (2) for providing a blocking against removal of the product from the position assembly (2).

4. Display system as claimed in one or more of the foregoing claims, wherein each position assembly (2) is provided with a position assembly identifier for identification of the position assembly (2) by the display system and/or the server linkable to the display system.

5. Display system as claimed in one or more of the claims 1-4, wherein in the position assembly (2) the detection unit (6) for detecting the remotely readable product identifier, is an RFID scanner for reading an RFID label or a barcode reader for reading a barcode.

6. Display system as claimed in one or more of the claims 1-5, comprising processing means for processing data relating to the product identifier, more preferably an interface for exchanging data with a server via a network.

7. Display system as claimed in one or more of the claims 3-6, wherein each blocking assembly (21) has at least a closed position and a removal position, and comprising:

- an actuation assembly for actuating the blocking assembly (21) for the purpose of switching the blocking assembly (21) between the closed position and the removal position, wherein each blocking assembly (21) is actuable separately of further blocking assemblies, or groups of blocking assemblies are actuable separately.

8. Display system as claimed in claim 7, wherein the actuation assembly comprises a drive motor (22), or wherein the actuation assembly comprises a manual drive, more preferably wherein the blocking assembly comprises a longitudinally movable pin (24) for closing a carrier, the actuation assembly more preferably comprises a carrier with a protective element for protecting the bridge of a pair of glasses.

9. Display system as claimed in one or more of the claims 4-8, wherein each position assembly (2) is placeable removably in the display system comprising the plurality of the position assemblies (2), preferably wherein each position assembly (2) has an easily recognizable appearance and is placeable removably in the display system comprising a plurality of the position assemblies (2).

10. Method of holding products being pairs of glasses, each arranged in a distinct position assembly (2) of a plurality of position assemblies (2) of a display system according to one or more of the preceding claims, comprising steps of:

- holding a product with the product identifer in a distinct position of a respective position assembly (2) of the display system,
- using one of the at least two position functions provided for the distinct position of the display system wherein
- the one of the at least two position functions comprises the detection function for detecting a remotely readable product identifier (8) by means of a detection unit (6) for detecting the remotely readable product identifier, and
- the second of the at least two position functions comprises the feedback function for feedback of information relating to the product identifier for this comprising a feedback member (4,5).

11. Method as claimed in claim 10, comprising steps for removal or placing of the products on the basis of a feedback of the display system.

12. Method according to claims 10 or 11, comprising steps for causing the display system to block or release products on the basis of information read by the display system from the product identifiers, further preferably comprising steps for inputting query information relating to feedback on the basis of information from the product identifiers.

13. Method as claimed in one or more of the foregoing claims 10-12, comprising steps for showing product information on the basis of information read by the display system from the product identifiers.

14. Display system as claimed in one or more of the claims 1-9 comprising the RFID label or the barcode label for fastening to a respective product.

15. Display system as claimed in one or more of the claims 4-9 comprising the server for collecting, storing and processing information read from the product identifiers provided with means for controlling the display system for the purpose of displaying feedback, blocking and unblocking position assemblies and identifying distinct position assemblies.

Patentansprüche

1. Anzeigesystem zum Anzeigen von Brillen mit Positionsfunktionen zum Halten von Produkten (10) bei denen es sich um Brillen handelt, die in unterschiedlichen Positionen angeordnet sind, mit:

- mindestens einen Positionsbaugruppenhalter (1) zum Halten mehrerer Positionsbaugruppen (2),
- die Vielzahl von Positionsbaugruppen (2), die jeweils angeordnet sind, um eine Brille an der Position zu halten, wobei:

  - jede der Anzahl von Positionsbaugruppen (2) mit mindestens zwei Positionsfunktionen versehen ist, wobei die mindestens zwei Positionsbaugruppen eine Erfassungsfunktion und eine Rückmeldefunktion umfassen, die die Erfassungsfunktion und die Rückmeldefunktion pro Position bereitstellen, wobei
  - jede der mehreren Positionsbaugruppen (2) umfasst:

    - für die Erfassungsfunktion eine Erfassungseinheit (6), die in einer Position zum Erfassen eines fernlesbaren Produktidentifikators (8) der einen Brille für den gesamten Zeitraum des Verbleibens in der Positionsanordnung angeordnet ist,
    - für die Rückmeldefunktion ein Rückmeldeelement (4, 5) für Rückmeldeinformationen in Bezug auf den kontinuierlich erfasste Produktidentifikator der in der Positionsbaugruppe gehaltenen Brille.

2. Anzeigesystem nach Anspruch 1, **dadurch gekennzeichnet, dass** das Rückmeldeelement (4,5) eine sensorisch wahrnehmbare Rückmeldung, beispielsweise eine visuelle Rückmeldung mittels Lichtsignalen oder Bild oder Ton mittels vorzugsweise einer jeweiligen Lichtquelle (4), beispielsweise eine LED, beispielsweise eine Mehrfarben-LED, ein Bildschirm (5) oder ein Lautsprecher.

3. Anzeigesystem nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** eine weitere Positionsfunktion eine Sperrfunktion zum Sperren des Entnehmens des Produkts mittels einer mit der Baugruppe (2) zusammenwirkenden Sperranordnung (21) zum Bereitstellen umfasst eine Blockierung gegen Entnahme des Produktes aus der Positionsbaugruppe (2).

4. Anzeigesystem nach einem oder mehreren der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** jede Positionsbaugruppe (2) mit einer Positionsbaugruppenidentifikation zur Identifikation der Positionsbaugruppe (2) durch das Anzeigesystem und/oder den Server verbindbar versehen ist zum Anzeigesystem.

5. Anzeigesystem nach einem oder mehreren der Ansprüche 1 bis 4, wobei an der Positionsanordnung (2) die Erfassungseinheit (6) zum Erfassen eines fernlesbaren Produktidentifikators ein RFID-Scanner zum Lesen eines RFID-Etiketts oder eines RFID-Etiketts ist Barcodeleser zum Lesen eines Barcodes.

6. Anzeigesystem nach einem oder mehreren der Ansprüche 1 bis 5, umfassend Verarbeitungsmittel zum Verarbeiten von Daten, die sich auf der Produktidentifikator beziehen, bevorzugter eine Schnittstelle zum Austauschen von Daten mit einem Server über ein Netzwerk.

7. Anzeigesystem nach einem oder mehreren der Ansprüche 3 bis 6, wobei die Blockieranordnung (21) mindestens eine geschlossene Position und eine Entnahmeposition aufweist und Folgendes umfasst:

  - eine Betätigungsanordnung zum Betätigen der Blockieranordnung (21) zum Umschalten der Blockieranordnung zwischen der Schließstellung und der Entnahmestellung, wobei jede Blockieranordnung (21) separat von weiteren Blockieranordnungen oder Blockiergruppen betätigbar ist Baugruppen sind separat ansteuerbar.

8. Anzeigesystem nach Anspruch 7, wobei die Betätigungsanordnung einen Antriebsmotor (22) aufweist oder wobei die Betätigungsanordnung einen manuellen Antrieb aufweist, wobei die Blockieranordnung einen in Längsrichtung beweglichen Stift (24) zum Schließen eines Trägers aufweist die Betätigungsanordnung besonders bevorzugt umfasst einen Träger mit einem Schutzelement zum Schutz der Brücke einer Brille.

9. Anzeigesystem nach einem oder mehreren der Ansprüche 4 bis 8, wobei jede Positionsbaugruppe (2) entfernbar in dem Anzeigesystem plazierbar ist, das mehrere Positionsbaugruppen (2) umfasst, wobei die Positionsbaugruppe (2) vorzugsweise ein leicht erkennbares Aussehen hat und entfernbar platzierbar ist in dem Anzeigesystem, das eine Mehrzahl von Positionsbaugruppen (2) aufweist.

10. Verfahren zum Halten von Produkten, bei denen es sich um Brillen handelt, die in einer getrennten Positionsbaugruppe (2) einer Mehrzahl von Positionsanordnungen eines Anzeigesystems nach einem oder mehreren der vorhergehenden Ansprüche angeordnet sind, mit folgenden Schritten:

  - Halten eines Produkts mit dem Produktidentifikator an einer bestimmten Position einer jeweiligen Positionsbaugruppe (2) des Anzeigesystems,
  - Verwenden einer der an zwei Positionen vor-

gesehenen Funktionen für die unterschiedliche Position des Anzeigesystems, wobei
- die eine der mindestens zwei Positionsfunktionen die Erfassungsfunktion zum Erfassen eines fernlesbaren Produktidentifikators (8) mittels einer Erfassungseinheit (6) zum Erfassen des fernlesbaren Produktidentifikators umfassen, und
- die zweite der mindestens zwei Positionsfunktionen umfasst die Rückmeldefunktion zur Rückmeldung von produktbezogenen Informationen hierzu umfassend einem Rückmeldeelement (4,5).

11. Verfahren nach Anspruch 10, umfassend Schritte zum Entfernen oder Platzieren der Produkte auf der Basis einer Rückmeldung des Anzeigesystems.

12. Verfahren nach den Ansprüchen 10 oder 11, umfassend Schritte zum Blockieren oder Freigeben von Produkten durch das Anzeigesystem auf der Basis von Informationen, die von Produktidentifikatoren gelesen werden, sowie Schritte zum Eingeben von Abfrageinformationen in Bezug auf Rückmeldung auf Basis von Informationen der Produktidentifikatoren.

13. Verfahren nach einem oder mehreren der vorhergehenden Ansprüche 10-12, umfassend Schritte zum Anzeigen von Produktinformationen auf der Basis von Informationen, die vom Anzeigesystem aus den Produktidentifikatoren gelesen werden.

14. Anzeigesystem nach einem oder mehreren der Ansprüche 1 bis 9 mit dem RFID-Etikett oder dem Barcode-Etikett zur Befestigung an einem jeweiligen Produkt.

15. Anzeigesystem nach einem oder mehreren der Ansprüche 4 bis 9, umfassend den Server zum Sammeln, Speichern und Verarbeiten von aus den Produktidentifikatoren gelesenen Informationen, versehen mit Mitteln zum Steuern des Anzeigesystems zum Zwecke des Anzeigens von Rückmeldungen, Sperren und Entsperren von Positionsbaugruppen und Identifizieren unterschiedlicher Positionsbaugruppen.

Revendications

1. Système d'affichage pour afficher des paires de lunettes avec des fonctions de positionnement pour maintenir des produits (10) étant paires de lunettes , disposés dans des positions distinctes, comprenant:

- au moins un ensembles de position support (1) pour maintenir une pluralité d'ensembles de position (2),
- la pluralité d'ensembles de position (2) agencés chacun pour maintenir une paire de lunettes à la position, dans laquelle:

- chacun des nombres d'ensembles de position (2) est doté d'au moins deux fonctions de position, les au moins deux ensembles de position comprenant une fonction de détection et une fonction de rétroaction fournissant la fonction de détection et la fonction de rétroaction par position, dans lequel
- chacun de la pluralité d'ensembles de position (2) comprend:

- pour la fonction de détection, une unité de détection (6) disposée dans une position pour détecter un identifiant de produit lisible à distance (8) de la paire de lunettes pendant toute la durée de maintien dans l'assemblage de position,
- pour la fonction de rétroaction, un élément de rétroaction (4, 5) pour des informations de rétroaction relatives à l'identifiant de produit détecté en continu de la paire de lunettes maintenue dans l'ensemble de position.

2. Système d'affichage selon la revendication 1, dans lequel l'élément de rétroaction (4,5) fournit une rétroaction sensoriellement perceptible, telle qu'une rétroaction visuelle au moyen de signaux lumineux ou d'une image ou d'un son au moyen de préférence d'une source lumineuse respective (4), comme une LED, comme une LED multicolore, un écran (5) ou un haut-parleur.

3. Système d'affichage selon la revendication 1 ou 2, dans lequel une autre fonction de position comprend une fonction de blocage dans le but de bloquer le retrait du produit au moyen d'un ensemble de blocage (21) coopérant avec l'ensemble (2) pour fournir un blocage contre le retrait du produit de l'ensemble de position (2).

4. Système d'affichage selon l'une ou plusieurs des revendications précédentes, dans lequel chaque ensemble de position (2) est pourvu d'un identifiant d'ensemble de position pour l'identification de l'ensemble de position (2) par le système d'affichage et/ou le serveur pouvant être lié au système d'affichage.

5. Système d'affichage selon l'une ou plusieurs des revendications 1 à 4, dans lequel, au niveau de l'ensemble de position (2), l'unité de détection (6) pour détecter un identifiant de produit lisible à distance,

est un scanner RFID pour lire une étiquette RFID ou un lecteur de codes-barres pour lire un code à barres.

6. Système d'affichage selon l'une ou plusieurs des revendications 1 à 5, comprenant des moyens de traitement pour traiter des données relatives à l'identifiant de produit, plus préférentiellement une interface pour échanger des données avec un serveur via un réseau.

7. Système d'affichage selon l'une ou plusieurs des revendications 3 à 6, dans lequel l'ensemble de blocage (21) a au moins une position fermée et une position de retrait, et comprenant:

- un ensemble d'actionnement pour actionner l'ensemble de blocage (21) dans le but de commuter l'ensemble de blocage entre la position fermée et la position de retrait, dans lequel chaque ensemble de blocage (21) peut être actionné séparément d'autres ensembles de blocage, ou groupes de blocage les ensembles peuvent être actionnés séparément.

8. Système d'affichage selon la revendication 7, dans lequel l'ensemble d'actionnement comprend un moteur d'entraînement (22), ou dans lequel l'ensemble d'actionnement comprend un entraînement manuel, plus préférablement dans lequel l'ensemble de blocage comprend une goupille mobile longitudinalement (24) pour fermer un support, l'ensemble d'actionnement comprend plus préférentiellement un chariot avec un élément de protection pour protéger le pont d'une paire de lunettes.

9. Système d'affichage selon l'une ou plusieurs des revendications 4 à 8, dans lequel chaque ensemble de position (2) peut être placé de manière amovible dans le système d'affichage comprenant une pluralité des ensembles de position (2), de préférence dans lequel l'ensemble de position (2) a un aspect facilement reconnaissable et peut être placé de manière amovible dans le système d'affichage comprenant une pluralité des ensembles de position (2).

10. Procédé de maintien de produits étant des paires de lunettes, disposées dans un ensemble de positions (2) distinctes d'une pluralité d'ensembles de positions d'un système d'affichage selon une ou plusieurs des revendications précédentes, comprenant des étapes:

- maintenir un produit avec l'identifiant de produit dans une position distincte d'un ensemble de positions (2) respectif du système d'affichage,
- utiliser l'une des deux fonctions de position prévues pour la position distincte du système d'affichage dans laquelle
- l'une des au moins deux fonctions de position comprend la fonction de détection pour détecter un identifiant de produit lisible à distance (8) au moyen d'une unité de détection (6) pour détecter l'identifiant de produit lisible à distance, et
- la deuxième des au moins deux fonctions de position comprend la fonction de rétroaction pour la rétroaction d'informations relatives au produit pour celle-ci comprenant un élément de rétroaction (4,5).

11. Procédé selon la revendication 10, comprenant des étapes de retrait ou de mise en place des produits sur la base d'un rétroaction du système d'affichage.

12. Procédé selon les revendications 10 ou 11, comprenant des étapes pour amener le système d'affichage à bloquer ou libérer des produits sur la base d'informations lues par le système d'affichage à partir d'identifiants de produit, comprenant en outre de préférence des étapes pour entrer des informations de requête concernant rétroaction sur la base des informations provenant des identifiants des produits.

13. Procédé selon l'une ou plusieurs des revendications 10 à 12 précédentes, comprenant des étapes pour afficher des informations sur le produit sur la base d'informations lues par le système d'affichage à partir des identifiants de produit.

14. Système d'affichage selon l'une ou plusieurs des revendications 1 à 9, comprenant l'étiquette RFID ou l'étiquette de code à barres pour la fixation à un produit respectif.

15. Système d'affichage selon l'une ou plusieurs des revendications 4 à 9, comprenant le serveur de collecte, de stockage et de traitement des informations lues à partir des identifiants de produit, pourvu de moyens pour contrôler le système d'affichage dans le but d'afficher un rétroaction, un blocage et débloquer des ensembles de positions et identifier des ensembles de positions distincts.

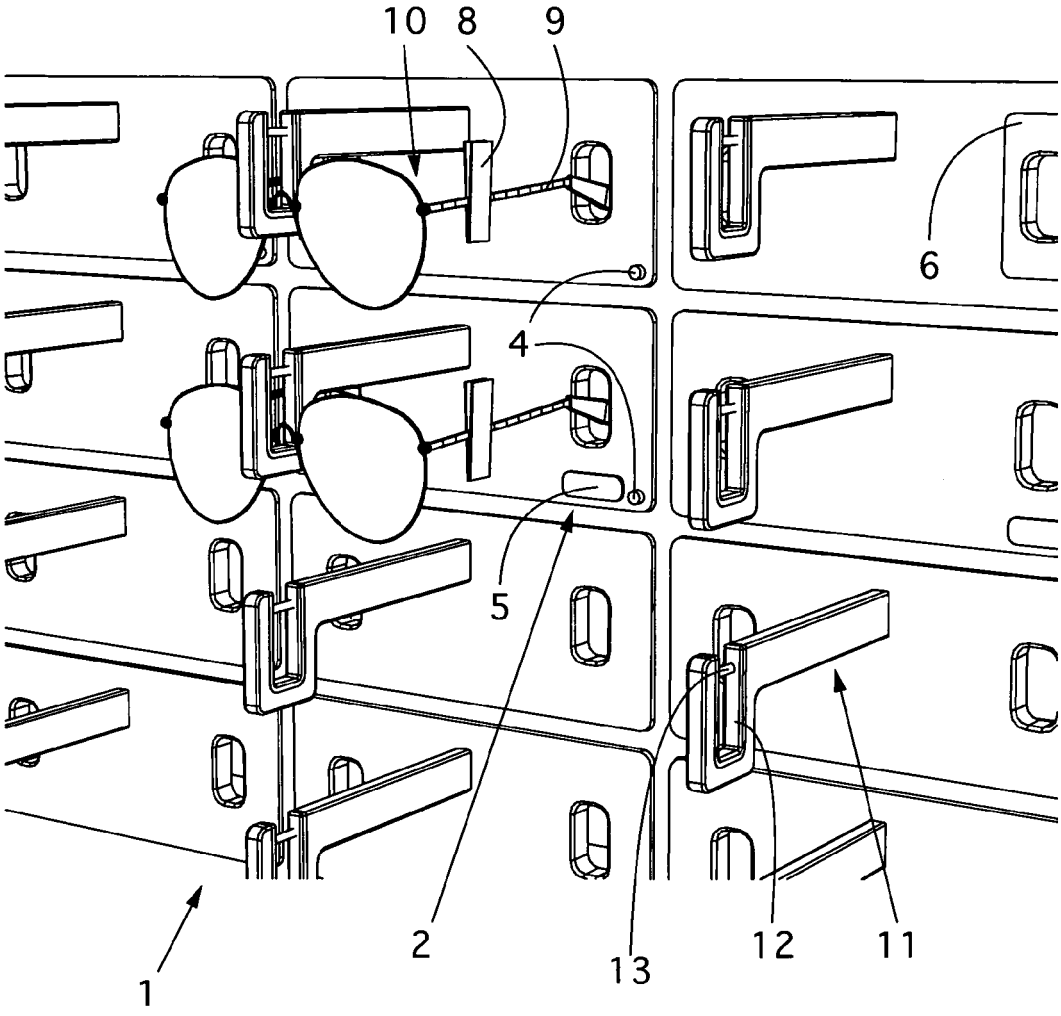

Fig. 1

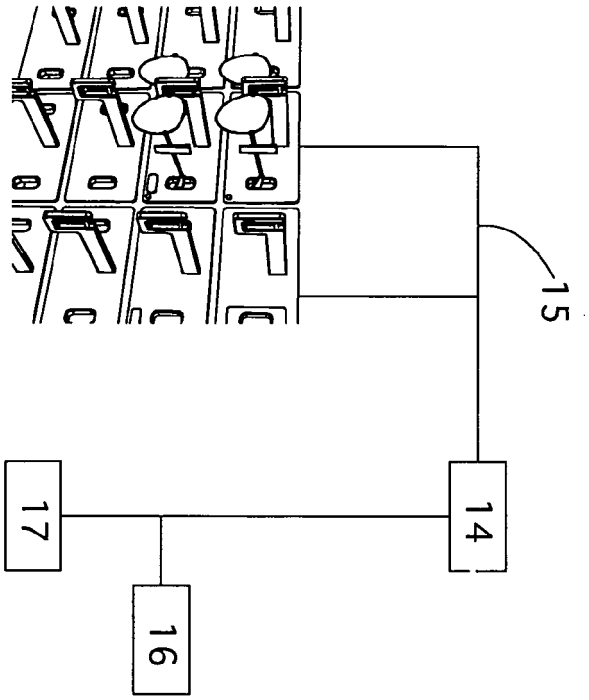

Fig. 2

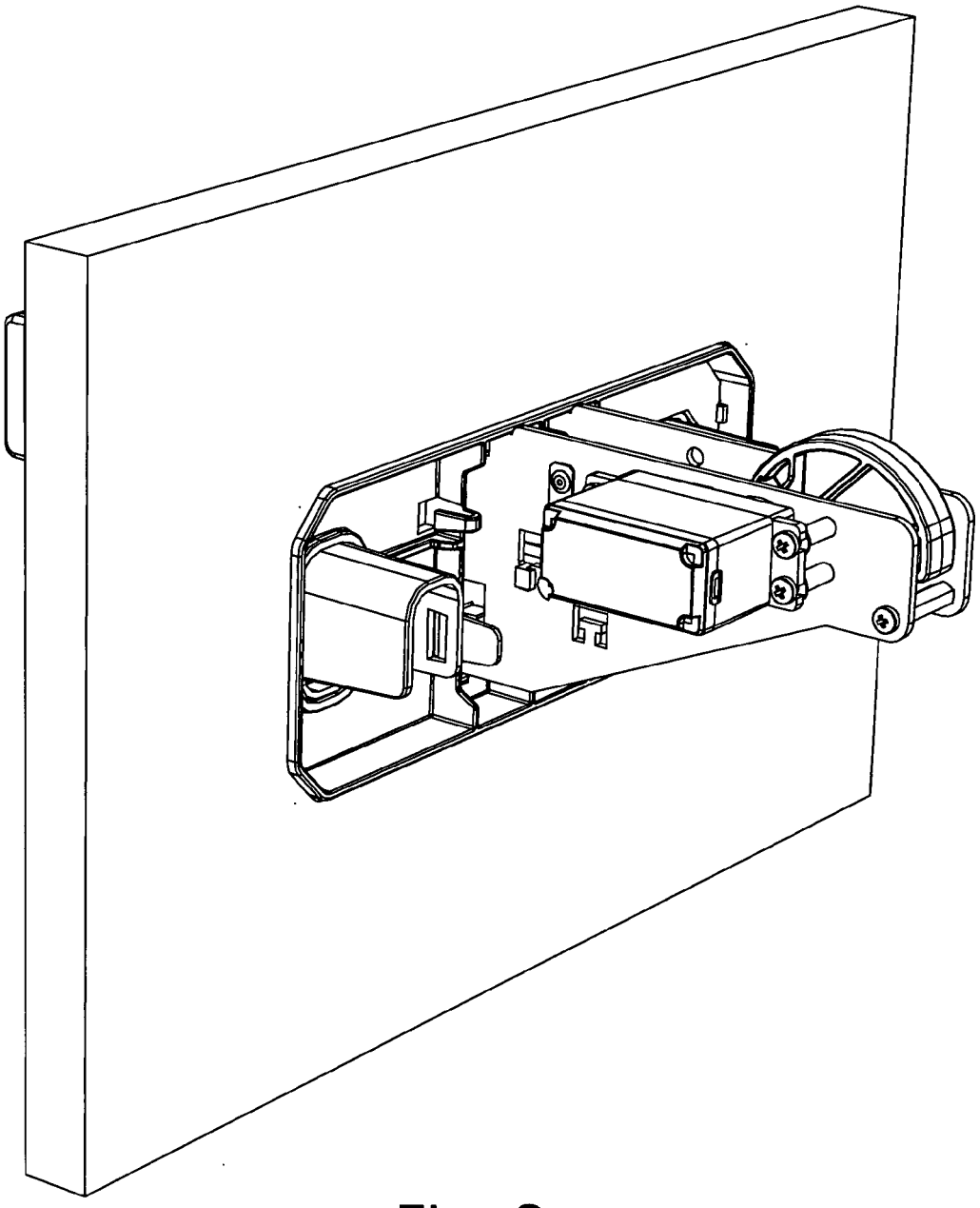

Fig. 3

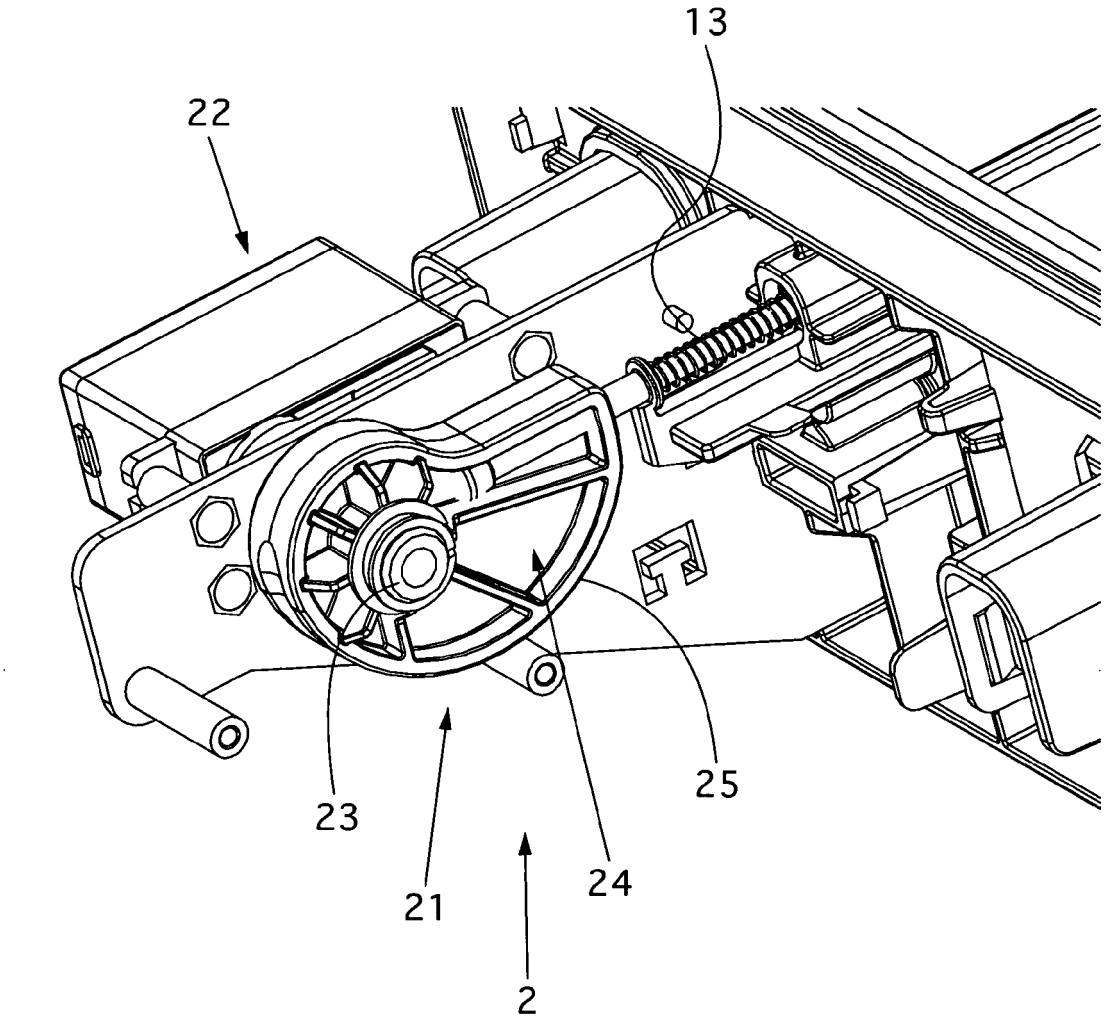

Fig. 4

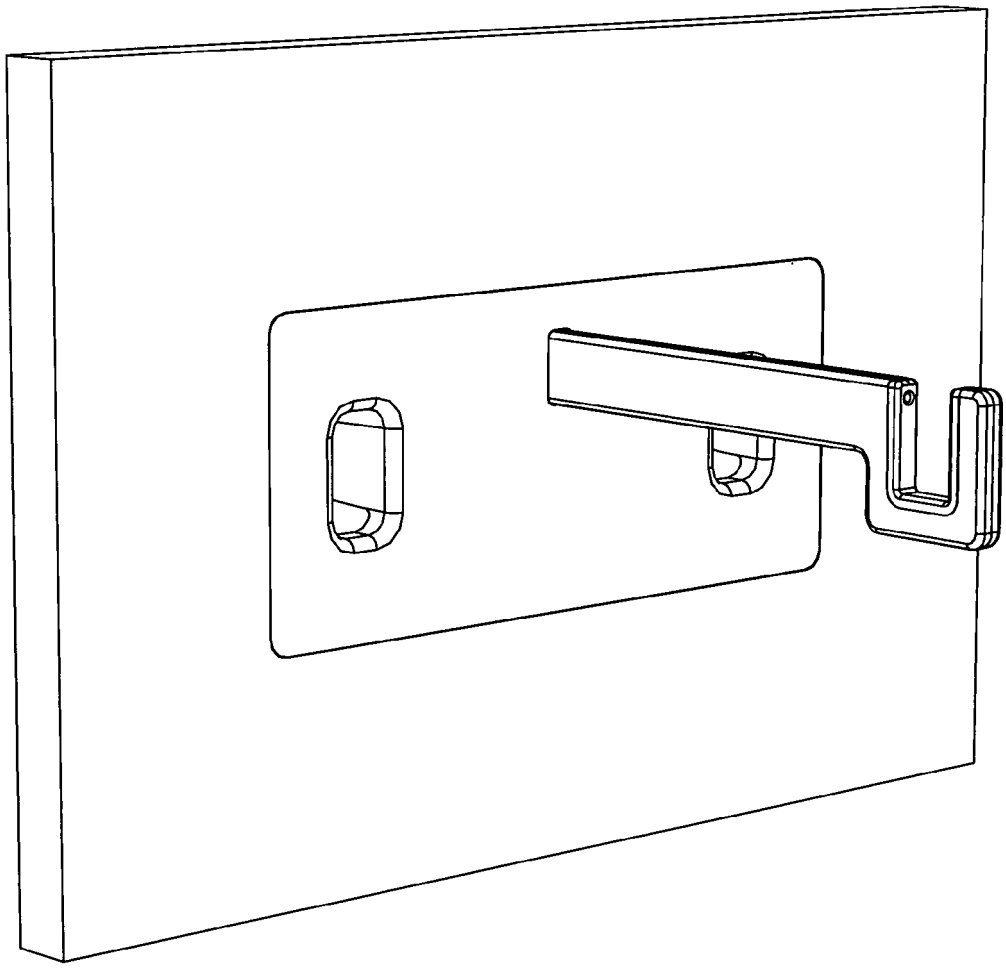

Fig. 5

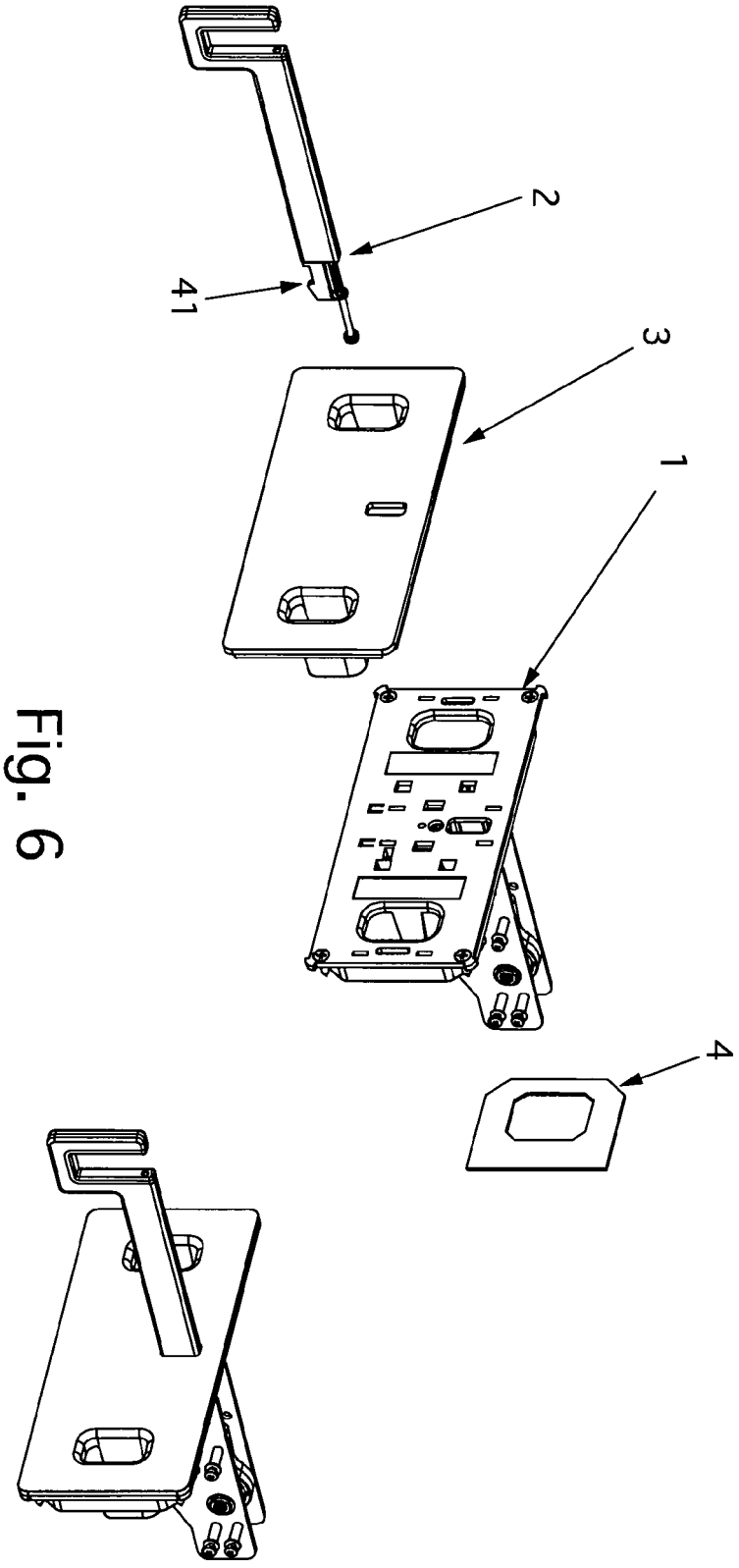

Fig. 6

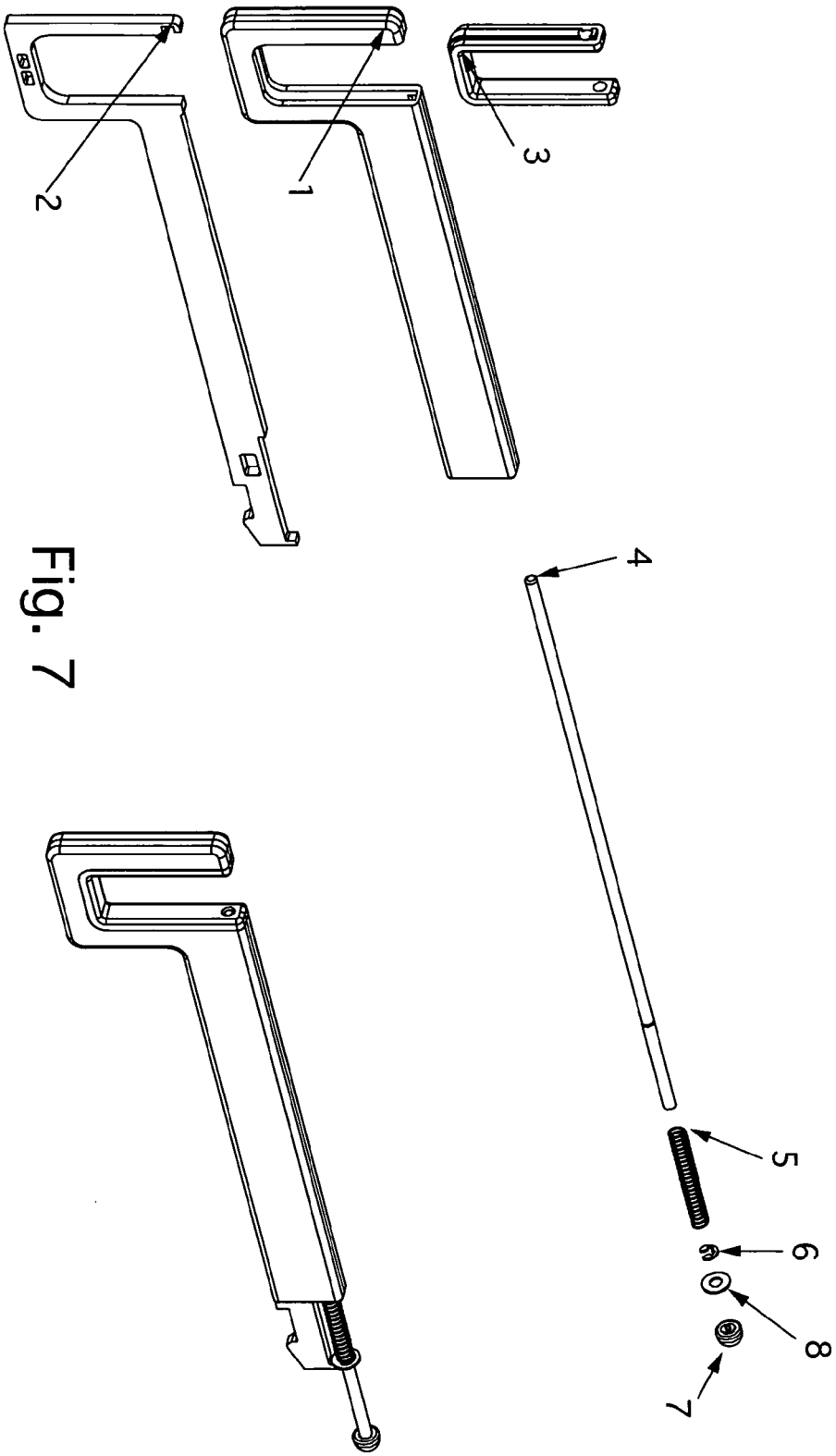

Fig. 7

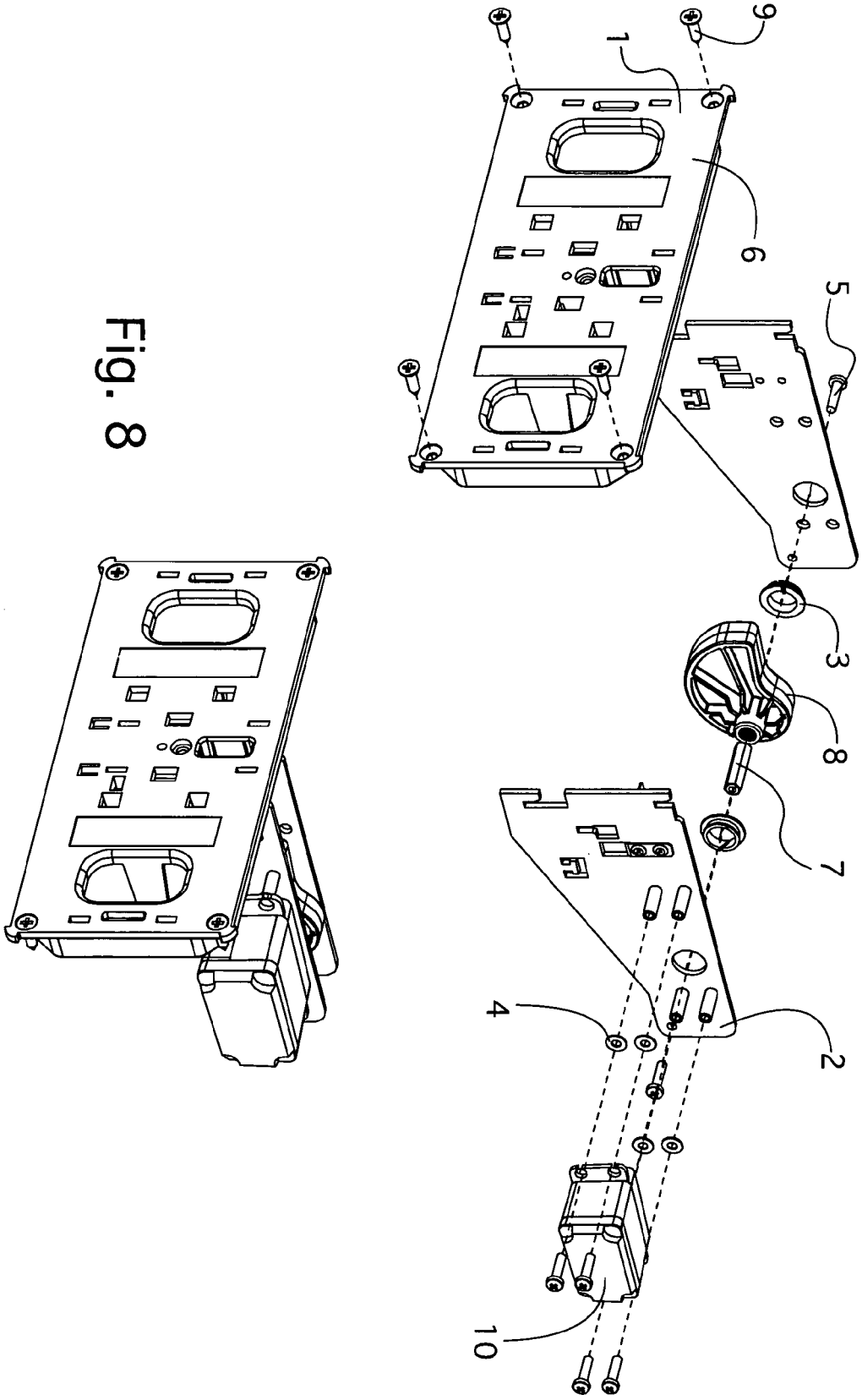

Fig. 8

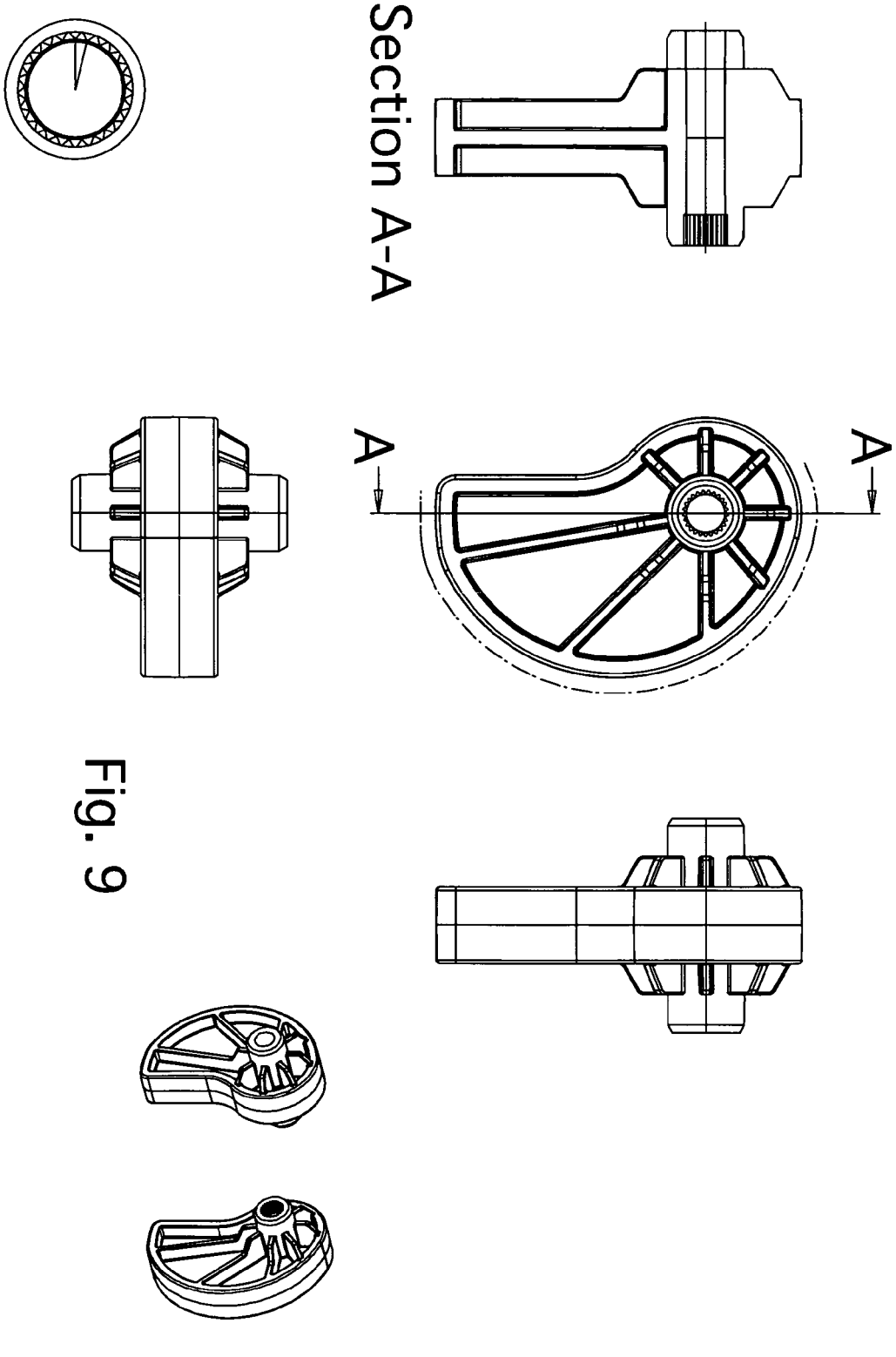

Fig. 9

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 6364124 B **[0003]**
- EP 1582118 A1 **[0003]**
- WO 9810685 A **[0003]**
- EP 2175407 A1 **[0004]**